ACTA OECONOMICA

ACADEMIAE SCIENTIARUM HUNGARICAE

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O. GADÓ

RELATIONS BETWEEN THE 1968 ECONOMIC PLAN AND THE ECONOMIC REGULATORS

The article surveys the interrelations between the economic regulators to be implemented under the new system of economic control and management introduced in 1968 and the national economic plan for 1968. The author analyses the influence of the regulators on the relation between consumption and accumulation, their realization according to plan, on the growth rate of industry and on changes in its pattern from the point of view of efficiency as well as on the marketing of products in various directions.

It is a basic characteristic of the new system of economic control and management introduced in Hungary on January 1st, 1968 that the national economic plan will no longer set the targets for the enterprises. However, the Government wishes to influence the market and the enterprises by means of a series of regulatory measures in order that their activity results in the realization of the national economic plan.

The role of the regulators is to give — within certain definite limits — the decisions taken at the enterprise level a direction conforming to the national plan, and to stimulate or restrict the activities of enterprises as the case may be. This will be realized, provided that

a) a technical connection is ensured between the plan computations and those on which the regulators are based, and

b) the regulators really prompt the enterprises to follow the main directions set by the plan.

In this way the regulators promote the realization of the economic policies underlying the plan. But a regulatory system, once in operation, also will react on the formulation of economic policies, mainly in respect of medium-term decisions and plans.

The problems of establishing a suitable connection between the plan and the regulators not only arise from the varying efficiency and flexibility of the regulators but are in many respects due to differences in the problems presenting themselves in the various fields of regulation. It should, however, be clear that the regulation cannot cover all questions of detail.

To establish a harmony between the plan and the regulators would generally be a complicated and problematic task in the case of any annual plan. In the first year of launching a new system of economic control this is

particularly true. The regulatory measures should generally be fixed and made to operate over some longer period and it is thus hardly possible to reach always full harmony in numerical terms between the computations serving as a basis for the regulators and the requirements of the individual years within a longer period. When drawing up the annual plan, the regulators in operation must react in this sense on the requirements, to establish the harmony in this manner. This also holds for the relation between the 1968 annual plan and the regulators.

In principle, when drawing up an annual plan one can rely on the effects of the regulatory system in operation and in order to coordinate the regulators with the requirements of the concrete plan only some minor modifications will be necessary. In the preparation of the annual plan for 1968, there was, however, no such "basis" to be relied upon since the elaboration of the whole system took place simultaneously, parallelly with the drawing up of the plan. The regulators were established in accordance with the economico-political objectives laid down for the years 1968—70 in the third five-year plan (covering 1966—70) taking into consideration also the experiences gained in the course of the first two years.

All elements of the new mechanism are now being realized simultaneously — and this is an important difference between the Hungarian reform and those introduced or to be implemented in the other socialist countries — but as regards the extent of application and the combined effects of the individual elements, some objective and even certain subjective factors must be taken into account. No theoretical model can be realized in practice in a pure form. Realities and objective processes will always have to be taken into consideration; in putting a theoretical model into practice many compromises will therefore have to be made. The aim of the latter is, however, to enable that the results expected from the new measures should be attained without any detrimental effect on the development of the national economy.

There are some among the regulatory elements of the mechanism which primarily serve the maintenance of equilibrium and may later be relaxed. This is an incomparably better solution than to put a brake ulteriorly on processes which had started but proved undesirable as regards their direction or pace of progress. As regards the proportions between efforts at equilibrium on the one hand and stimulation on the other, the authorities which worked out the regulators have endeavoured to establish correct proportions.

The principal objective of economic policy in the 1968 plan is to secure a successful start and efficient progress of the reforms, ensuring at the same time that the requirements of economic equilibrium are also met. The plan provides for a balanced rate of growth which is slightly more modest than in the previous years, aims at establishing quiet and stable relations on the markets of both consumer and investment goods.

In estimating the possibilities of growth and in working out the economic regulators on the basis of these estimates, it seemed expedient to aim at restricting — in harmony with the possibilities (investment) and the objectives of the living level policy, but more forcefully in respect of investment — the growth rate of demand (inputs), while promoting and stimulating the growth of supply and the transformation of the economic structure into a more efficient one better conforming to needs. A combination of such measures may promote the establishment of global and partial market equilibrium and ensure, at the same time, a smooth transition from the old to the new system of management.

Let us examine in the following some of the most essential relationships between the annual plan for 1968 and the regulatory measures of the new mechanism, in respect of

a) the consumption/accumulation ratio; and

b) the targets relating to the growth rate, pattern and marketing of the output of industry.

a) The consumption/accumulation ratio

According to the plan, in 1968 both the global social product and national income will grow by 5—6 per cent which essentially corresponds to the rate of growth in recent years and is somewhat higher than the corresponding targets of the 1966—1970 five-year plan.

The production of national income and its rate of growth are basically influenced by the entirety of the economic regulators which prompt the enterprises to exploit to a higher degree their productive capacities, to adapt their production pattern to the requirements of economic efficiency and to economize on resources, enabling them at the same time to develop their capacity. Of course, the investments realized on the basis of central decisions and those financed out of credits also have a not negligible effect on the creation of national income. Beside the central investments and the budgetary outlays it is primarily the system of economic regulators that will determine the major proportions of the allocation of national income (and especially of the allocation of its increment). From this point of view, the system of income regulation is of the highest importance.

The system of income regulation

It is generally known that the new economic mechanism is intended to exert its stimulating effect by prompting the enterprises to *maximize their profits*. Enterprise profits represent the amount of receipts left after deduction of the costs of production, a 5 per cent charge on assets — both fixed and circulating — and the 25 per cent (non-deductible) wage tax and social insurance contribution.

According to the new system of income regulation, the enterprises will divide their actual profits into two parts on the basis of the proportion of assets engaged to wages paid, and these two parts will be taxed at different rates. In order to make the tax system suit its purpose in every respect, the division of profits outlined above will be carried out with wages taken into account with a double (exceptionally even with a fourfold) weight.

Wages paid are, of course, accounted for among costs. However, taxes will be levied (and the above division based upon) not the profits appearing in the bookkeeping. The latter must be, namely, increased by an amount corresponding to the increase in average wages and salaries over the 1967 level as fixed for each enterprise. (The amount to be added has, obviously, to be deducted from costs.)

The part of profits proportionate to assets engaged is *uniformly taxed at a linear rate* of 60 per cent. The amount net of taxes goes into a *development fund* which serves to finance the investment of the enterprise. (The proportion of amortization allowances left with the enterprise also constitutes a source of this fund.)

The part proportionate to the twofold amount of wages is subject to a *uniform, graded progressive tax* the rate of which depends on the ratio between that part of profits and the total amount of wages. The remainder serves to form the *sharing fund* of the staff out of which the increases in average wages, the profit shares and bonuses etc. are financed.

The official rules prescribing the division of profits between the development objectives of the enterprise and the personal incomes are primarily intended to secure the realization of the planned proportions between accumulation and consumption. In addition, the division provides a tool to operate the various types of material incentives. *The aim of the two types of taxes* is to prevent that the new profit rates arising from the new price relations — which go into effect on January 1, 1968 — result in sudden major changes in personal income relations, while in respect of the development funds it is secured from the beginning that the differences in profitability under the new price system enable a differentiation between enterprises. In the course of development, differentiation between enterprises will be more marked in respect of both personal incomes and development possibilities.

The system of income regulation ensures the harmony with the objectives of the national economic plan not only through the factors mentioned above; there are also *other elements in the regulatory system* which will contribute to securing equilibrium and adequate material incentives. Without attempting to give a complete survey of these elements, it is deemed necessary to list here some characteristics, mainly those which involve a departure from the practice followed up to now or which represent to an extent a special solution.

Consumption

The sharing fund to be formed will appear only in part in the form of purchasing power in the current year, since, according to the rules, the enterprises will be allowed during the year to pay out from this fund only bonuses for the performance of tasks set in advance, awards for outstanding performances, innovation fees, bursaries and aids. Profit shares (or items of a similar character) can be paid out — as before — only *after approval of the annual balance sheet* (i.e. on 1968 profits in 1969 only).

It may be assumed that the enterprises will, in the interest of the collective, endeavour to use *only as much of the sharing fund for wage increases* as is necessary to provide an incentive for individual performance and to eliminate disproportions in wages which hinder a rational labour economy. But beyond that, the enterprises will rather endeavour to use the profit-sharing fund to provide incentives in the form of extra-wage, variable payments: bonuses, awards, profit sharing etc.

The distribution of shares in profits belongs to the competence of the enterprise. The regulatory system stipulates only that from this point of view the staff should be classified into three groups (senior executives; junior executives; workers and clerical staff etc.) with the amount that can be paid out in the form of shares in profits limited at 80, 50 and 15 per cent of the annual wage fund of the respective group. This differentiation reflects the degree of contribution to achieving higher profits as well as the greater responsibility for the activities of the enterprise. The acknowledgement of greater responsibility is also expressed in the rule that in case the enterprise should incur losses, the wages of those in the third group are fully guaranteed by the enterprise (and indirectly by the state), while in the case of the second group this guarantee covers only 85 per cent, and in that of the first group only 75 per cent. Distribution within the groups is entirely free, not restricted by individual limits.

In 1968, to avoid possible distortions due to the transition to new price and cost relations, the possible wage increases are *limited at four per cent*, while it is expected that the level of the sharing funds to be formed will reach 9 to 10 per cent of total wages, out of which about 2 to 2.5 per cent should be used for increasing wages. This rise in wages expresses the desired relation between economy-wide increase in productivity and wages, as envisaged in the plan.

The national economic plan reckons with a 1.5 to 2 per cent *increase in employment* which corresponds roughly to the rise in recent years. In this respect the regulatory system does not provide for any special measures, starting from the principle that the enterprises can best decide themselves on the most profitable combination of the various inputs and it would not be justified to treat live labour inputs separately from this point of view.

In the course of the preparatory work some experts were rather worried about the possibility of the new mechanism prompting the enterprises to rid themselves of redundant labour by mass dismissals. Experiences rather indicate that efforts are made by the enterprises to employ the existing staff in a more efficient manner. Enterprises refrain from increasing employment where this does not lead to greater profits, but there is no probability of major dismissals. In connection with this problem, it should also be borne in mind that for years now there was rather a labour shortage in Hungary, a fact that also acts towards a more efficient employment of labour.

In connection with the planning of consumption, a novel special problem is posed by the fact that under the new mechanism *prices* (with consumer prices among them) *will not be as rigid as before.* Actually, part of them will not be fixed officially any longer but will emerge as a result of agreement between sellers and buyers. At the same time, in the interest of the success of the new mechanism efforts should be taken to make the prices of consumer goods and services in the aggregate better express the value relations, since the principle of allocation according to work performance will be the better ensured the less incomes are redistributed by making consumer prices deviate from value proportions. However, the realization of value-proportionate prices *will take a longer period, presumably even 10—15 years,* owing to the special features of our price system — particularly the low level of the charges for basic services — and to the pattern of production.

However, to enable the price system to function in a more flexible manner, it was necessary *to make also consumer prices more proportionate to inputs at least within certain groups of commodities.* To this end, the 1967 turnover tax system was simplified by radically reducing the variations in tax rates as well as the nomenclature; as a consequence, there have been considerable shifts in consumer prices within the individual commodity groups. It has been particularly characteristic of clothing articles that relative consumer prices have changed with some products becoming cheaper and others more expensive but on the balance these resulted in a price reduction for the population as a whole. In addition, part of the officially fixed prices (those of sugar, butter etc.) have been reduced and others (e.g. furniture prices) have been raised. *The combined balance of these measures brings about a 1 per cent reduction in the consumer price level.* Since the free play of supply and demand will be enabled, *it should be expected that the consumer price level will rise by about 2 per cent in the course of the year.* Thus, the combined effect of the changes at the beginning and in the course of the year should be *a rise of about 1 per cent in the general level of consumer prices.*

Taking these price increases also into consideration, the plan envisages *a 3 per cent rise in per capita real income* which will thus surpass already in 1968 the level originally planned for 1970.

To enable the fundamental political objectives in respect of the standard of living to be realized not only globally but also for the major population groups, the flexibility of the price mechanism is planned to be increased only gradually. At the beginning, *the prices of basic commodities and services have therefore been either officially fixed or set a ceiling.* This refers to about 50 per cent of all commodities and services. As for the rest, either official limits have been set with a latitude of ± 5 per cent (this applies to about 25 per cent of all commodities and services) or price formation has been left entirely to the interplay of market forces. In the domain of producer goods, the role of official prices will be smaller and that of free prices greater.

All that has, of course, created a complicated situation for planning, the more so as when launching the new system, *an even greater emphasis than hitherto has been placed on safeguarding an equilibrium in the internal market and a rise in the population's level of living.* Therefore, when working out the production and allocation estimates of the plan, in addition to ensuring a 7 per cent increase in the volume of domestic trade, *considerable commodity reserves have been secured for trade* already in 1967 to meet possible increases in purchasing power due either to greater incentives and/or higher achievements.

Accumulation

In respect of accumulation — and especially as regards investments — the 1968 plan is providing not for an increase but for *the maintenance of the level attained in 1967.* This slight braking of progress is due to the efforts aimed at eliminating certain shortcomings of the old system of investments. It is an absolute aim to bring about an equilibrium — and, if possible, even an oversupply — in the market of investment goods. This seems to be secured already in respect of machinery; within a few years the earlier, sometimes considerable, disequilibrium in the field of construction is also likely to cease. In this way, the proportion between consumption and accumulation will slightly shift in favour of consumption, though on the whole this will not substantially affect the 78 to 22 ratio taken as a basis for the third five-year plan (1966—70).

The achievement of the above, absolutely necessary target involves, however, a set of further problems.

— *The continuation of the investment projects in course should be secured in the best possible way.* Owing to the great number of investments in course, this narrows down the scope of new enterprise initiatives. This transitory restriction aimed at facilitating the transition to the new system should, nevertheless, be considered as highly a positive measure since, by putting more quickly into operation the investments now under way, additional national income can be assured, and by reducing the number of investments in process also the possibility of starting new projects may be increased.

— The major projects in course being state-financed, *the formation of own means serving accumulation in the enterprises could be fixed only within narrower limits*, primarily by centralizing part of the depreciation allowance amounts. This means that in the course of the first year and — even in the first couple of years — it will not be possible to achieve at a stroke the final proportions of decision spheres and resources of financing envisaged under the new mechanism.

— At the same time, *some continuity must also be ensured for the state-financed major individual investment projects* — primarily not because of financial reasons but in order to secure satisfactory utilization of the building capacity. As a matter of fact, no ups and downs are admissible in this process; it should be endeavoured to keep the activity at a stable level or to allow later to rise slowly. This again means that while it has been said above that there were too many projects in process in comparison to desirable proportions, it must now be stated that for a proper foundation of investment activity in the coming years some major *individual investment projects must be launched also in 1968*, though their number and the inputs available for that year are considerably narrowly limited in the annual plan.

The system of economic regulators supports these objectives by the following measures.

— From among the investment projects in course on the basis of earlier government decision but relegated — owing to their magnitude — under the new system, to the scope of enterprise decision, *the state budget will continue* to finance only those which have reached 80 per cent of completion, while state support amounting to 40 per cent of costs will be granted to those between 20 and 80 per cent of completion. It will be the duty of the enterprises to continue, complete and finance these projects, the only exception being the projects under 20 per cent of completion, which may be stopped.

— *Partial repayment obligation will be introduced even in connection with budget-financed investments.* The purpose is to avoid that certain enterprises obtain an unjustified income from state allocations. The part to be repaid is called *state loan* (as opposed to the bank credit which is raised on the enterprise's own initiative and serves to finance investments which they are under no obligation to realize).

— For self-financed investment purposes the enterprise creates its resources *in the development fund*. The latter is formed partly out of profits, partly from the amounts set aside in the form of *depreciation allowance*. However, in order to ensure the continuity and equilibrium referred to above, the enterprises are not allowed to dispose of more than 55 to 60 per cent of total depreciation allowances; the difference will over the next three years be collected by the state for budgetary purposes. The part to be retained by the enterprises will vary. Differentiation is based here on the investments

made over the last four years. If e.g. an enterprise had invested above the average level and thus it may be assumed that its fixed assets are relatively up-to-date, it will be obliged to pay over three consecutive years 20 per cent (at the utmost) out of the 60 per cent into a blocked account to be utilized by it in 1971—75. On the other hand, an enterprise which had invested below the average level will be allowed to retain even more than 60 per cent of the depreciation allowances (at most 90 per cent). It should be pointed out that from 1968 *new amortization rates have been introduced*, which better reflect the degree of physical depreciation and — in some cases — also obsolescence. Owing to these new rates, amortization costs will rise by about one third.

— On January 1, 1968, *the enterprises had to revaluate their fixed assets at prices prevailing at that date*. This takes place — as the corrections already of major disproportions in earlier valuations had been performed — by means of about 500 centrally established price indices. Decision has been taken also on later corrections: should the prices of investment goods change, the central bodies will annually issue similar price indices and the enterprises will be under obligation to revaluate their fixed assets accordingly (though only in global and not in individual terms). In the course of the present revaluation *the enterprises will establish the net value of their fixed assets individually in consideration of their remaining life-time (i.e. the net value expressing in this way the degree of depreciation)*. These values will, presumably, be suited to serve later as a basis for the charge on assets enganged, which is in principle more sound than to base the charge on the gross purchase value. The same asset values may also provide a basis for differentiation in respect of the part of depreciation allowance to be retained.

According to the calculations relating to 1968, the proportions of the various forms of *investment financing* will be the following:

	Economy as a whole	Industry and construction
	percentages	
Budgetary	54.1	57.0
Enterprise funds	32.4	23.7
Bank credits	13.5	19.3
	100.0	100.0

(The higher proportion of enterprise financing in the column of the economy as a whole is due to the fact that here the development funds of the local councils are also included, from which a considerable part of infrastructural investments is being financed, although these funds receive considerable contribution also from the state budget and the Government prescribes

— to the extent of the contribution, at most — the concrete investments to be made by these bodies.)

There are two types of *investment credit granted by the banks:*

a) Medium-term credits (2 to 3 years) to be considered as advance payments on the development fund to be created — granted without examining the individual projects.

b) Long-term credits (6 to 10 years) on individual investment projects where the bank will scrutinize both the rentability of the project and the possibility of repayment. A return of 7 per cent on investment inputs is the minimum requirement here.

With both types of credit, repayment will take place from the development fund.

The Government has — in harmony with the objectives of the plan — issued what is called *directives for credit policy* to the banks. The directives set the upper and lower limits to credits to be granted in the current year to the individual branches of the economy (industry, agriculture, etc.) and also the maximum proportion of long-term credits within these limits. For 1968, building materials and the food industry were given separate credit conditions within the industry limits, owing to the importance of their development and the relatively unfavourable position of these industries as regards profitability. (Otherwise it may be feared that the important development projects of these industries would be pushed back in the competition for credits.) *State preferences are, however, ensured to prevail not only by setting separate limits.* It has also been determined to which industries or for what objectives may longer credits be granted and thus these enterprises may compete for credits on equal terms with those undertaking repayment within a shorter period of time.

In 1968, an *interest* of 8 per cent will generally be charged on medium-term credits; on long-term credits the interest will be 5 per cent while the investment project is in course and 7 per cent after its completion. (But there is no charge on fixed assets where interest is being paid.) The preferences of the state find their expression also in the rates of interest applied.

Thus, the investment objectives of the national economic plan and the regulatory measures ensure the *harmony of the major proportions.* No attempt was made to ensure the harmony at the industry etc. level in an administrative way, since this would have involved a degree of differentiation in the regulators leading to confusion and nonsensical from the economic point of view. However, by means of credits and by establishing the repayment conditions for state loans, the bank system is in a position to harmonize in a flexible manner the realization of plan objectives with credit granting based on enterprise profitability. A financial policy which is in harmony with the

plan makes it desirable to give in the subsequent period *preference to the investment projects assuring a quick return*. It should not hinder the global development of the economy if the starting of some investment project — which may otherwise seem highly important for the industry in question — suffers a delay of some years because of its ranking on the basis of repayment possibilities and profitability. *The investment projects decisive for the development of the economy as a whole (the so-called state investments) have been given priority treatment in the plan precisely to enable the application of the method of ranking outlined above to all other projects.*

The equilibrium of the credit balance requires that the *banking organization should analyse the harmony between credit resources and credits outstanding.* The situation will no longer exist where credits were granted on the basis of one-sided plan instructions, independently of the development of resources. This does, of course, not mean that the bank would stop the payment of credits once voted or the money supply of investment projects in course — this would harm the whole economy — but that also the resource side will have to be considered, when granting credits. An estimate of the prospective trend of the enterprise deposits and other sources must be obtained *and in case the resources would not develop in accordance with the plan, ways will have to be found to restore equilibrium even if they should affect items outside the scope of investments.*

In connection with the *increase in stocks*, constituting the other part of accumulation, several — partly contradictory — phenomena may be expected of the new mechanism. Since the system of direct allocation of materials has been almost entirely abolished and trade among productive enterprises — trade in what may be called capital goods — made almost entirely free, in the course of time novel relations between enterprises may be expected to emerge. The enterprises will strive to carry stocks of the most advantageous size and will work out their purchasing contracts accordingly. The role of trading enterprises acting as intermediaries between the producers will partly expand and partly contract. Under the new system of foreign trade, also the stocks of goods destined for export will increase in productive enterprises.

All that will involve *major changes in the composition of enterprise stocks.* In addition to the rules already mentioned, which secure to a considerable extent freedom for the trade in products, the development of stocks will be influenced by the following measures.

— On stocks — not financed out of credits — *a 5 per cent charge will be payable*, while the rate of interest on credits *will be at least 3 per cent higher.*

— The bank will be relatively liberal in granting credits to finance enterprise activities as long as the enterprise *is solvent*, a pre-condition being that working assets circulate regularly, without any undue accumulation of stocks. Should the process of circulation slow down, the bank will more

thoroughly investigate the operation of the enterprise and will grant credits only at a higher rate of interest, if at all.

— *The enterprises are under obligation to finance their working asset requirements from the same development fund which serves investment financing.* Thus, if an enterprise increases its stocks, it has to reckon with the fact that less will remain for investment purposes. This does, of course, not mean that the bank would not meet transitory credit needs in the form of *short-term* credits to be repaid from sales returns. Also advance payments on the development fund are made in the form of *medium-term* credits to finance lasting working asset requirements.

— When *appraising their products in stock* (finished and intermediary products, goods in process), the enterprises must not include their fixed overhead costs, which should be charged wholly against profits. Thus, in a given case, enterprise profits are most sensitively affected by the unnecessary accumulation of goods. This should, however, not exclude the possibility that enterprises start the production of some commodity without any fix orders booked, simply at their own risk, if they deem it necessary and expedient to do so, in order to increase their profit, taking into consideration the market requirements and striving to meet them in a flexible way.

b) The growth rate and marketing of industrial output

The growth rate of industrial output

The national plan provides for a 6 to 7 per cent increase in industrial output.

The growth rate of production will not surpass that of earlier years; it will be rather lower. In view of the structure of the Hungarian economy — i.e. of the fact that the bulk of materials used must be imported — *the growth rate of production is in many respects determined by the increase in the capacity to export.* As a matter of fact, if progress is to be achieved with the balance of payment kept in equilibrium, the increase of the production of goods exportable at a profit sets a limit to import possibilities. This will be particularly true in 1968 when domestic (especially private) demand may be expected to become rather marked and quiet conditions in the domestic market will be indispensable for the success of the reform.

It follows that while it belongs *to the tasks of the regulatory system to stimulate the increase of output and the carrying out of structural changes which further efficiency, efforts should be simultaneously made to maintain equilibrium by restricting demand or keeping it at least within the planned limits. The major instruments of demand regulation are*

— *the state budget*, in respect of state administration and the social-

cultural institutions financed from the budget, as well as in respect of major investments;

— *the credit system*, in respect of investments, private housing, as well as the formation of production and trading stocks in enterprises;

— *the system of income regulation*, in respect of the wages and salaries payable to workers and employees;

— *the interest in profits*, in respect of employment (i.e. the enterprise is interested in increasing employment only as long as this results in adequate additional profits);

— *the system of official price regulation and the special foreign-trade regulators* (see below).

The growth of output is stimulated through the system of income regulation — as was referred to above. In the system of income regulation, *immediate interests* — the part to be used for the personal income of the staff — are somewhat separated from more *perspectivic interests* — the part to be transferred to the development fund of the enterprise. (The latter part will in later years again contribute to increasing incomes through the investments to be made with the aid of the fund.) It must, however, be admitted that the contradictions that may be presumed to arise between immediate profits and long-term profitability are not yet satisfactorily solved under the system. An attempt to solve the contradiction is embodied in the stipulation that the profit shares of the highest enterprise executives (2 to 5 in number) appointed by the competent ministry will be determined by the minister himself, who will take into account not only the profits of the current year but also the work carried out in the interest of results to be achieved in later years (technical development, renewal of fixed assets, preliminary activities to introduce new products, etc.).

The firm as an enterprise will, of course, also *take risks*. The aim of risk-taking should be to increase profitability but there may be periods when it will result in lower profits and even losses. In such cases, in order to avoid an immediate reduction in incomes or the prolongation of the carrying out of continuous development decisions, the enterprises may have recourse on their *reserve fund*. The accumulation of this reserve fund out of net profits is compulsory until a certain level is reached and when it is drawn upon in case of losses of the type outlined above, it must be filled up again within two or three years. True, in the first years the main task will rather be the accumulation of the reserve fund; nor is it likely that major risks will be taken in this period. Hitherto such risks have been borne almost exclusively by the state through the state budget. In industries where such risks are part of the business (as e.g. regular changes in purchasing prices, periodical clearance sales, etc.), the enterprises may form a normal *risk-bearing fund* of a cost-element character, essentially independent of the reserve fund mentioned.

The new mechanism is implemented *simultaneously with a general price reform*. In the formation of prices inputs, the value judgement of the market and state preferences had equal roles. The initial prices have been officially worked out, independently of the fact whether from January 1, 1968 they will be fixed, or free prices or allowed to move between upper and lower limits. Of course, from the above factors *the value judgement of the market could be least taken into account* and this makes it likely that relative prices will change to the extent the market will affect the level and relative proportions of prices. While an upward movement of consumer prices had to be rather restricted in the beginning, owing to considerations of standard-of-living policy, the changes may still be expected considerably to influence the efforts of enterprises to adapt the pattern of their production to the requirements of increased profitability.

The incentives may, however, also be influenced by *possible contradictions* between producer prices (or, rather, the differences in the rate of profits contained in them) and the uniform income regulation (profit taxation). The danger persists all the more since the price reform and income regulation have been simultaneously established and the prices of the lower stages of production had been worked out even earlier, in the primary stages of preparing the reform — the simultaneous introduction could otherwise not have been secured. It is possible, therefore, that incentives in the raw-material producing and the processing (manufacturing) industries will not have equal force. To some extent, this has been taken into account by the system of profit taxation where certain industries were given a fourfold wage coefficient instead of the generally applied double weight. However, profit regulation cannot aim at counterbalancing the incentives resulting from the price system, or at paralyzing the consequences of the price ratios. Instead, the solution was rather chosen to let the contradictions become manifest, and that *prices should be corrected to the necessary extent, since not even official prices are intended to be dealt with rigidly in the future.*

The marketing of output in general

Enterprises will *care themselves* for the marketing of their output in the same way as they will draw up their production plans on the basis of market research. This does by far not mean that from now on every productive enterprise will engage in trade. In the process of reproduction, the trading company performs, as a separate unit, socially necessary functions for both the producer and the user (consumer) and, in the final analysis, saves costs for them with its specialized activity. However, it is only in the above cases that independent trade is justified and in respect of several industries or products it will be more expedient to establish direct connections between producers and users.

In respect of marketing forms, the enterprises may *choose from among a wide range of legal instruments*. It is highly probable that the delivery contracts (which mean essentially selling with a later delivery date) will continue to be predominant but commission agreements, joint ventures, so-called enterprise contracts for longer terms, etc., will also play an important role. However, there is an essential state-imposed limitation: *the enterprises must not enter into agreements detrimental to a third party*, they must not divide the market between themselves, must not exclude anyone from the range of the clients to be served. This rule — similarly to the reform in general — is *intended to promote competition among enterprises*, since we are of the opinion that the advantages of development arising from competition are generally greater than the additional costs necessarily involved.

A survey of the selling organization resulted in the decision that the *trusts* comprising and directing the whole activity of the enterprises *should* — with a few exceptions — *be dissolved*. Though the enterprises may join to organize some activity in common (organizations of this type may even be brought into being by ministerial decree) but within this "*union*" the organization of the common activities takes place on the basis of agreements between and *decisions taken by the enterprises*. The joint organization is not "in control" of the enterprises and not even a legal entity, it cannot enter into contracts in its own name, etc.

It has already been pointed out that the system of official product allocation has been generally abolished. However, the existing allocation system could not be abolished already in the first year without risking a disruption of the market due to unsatisfied demand (price rises, additional imports, etc.). Therefore, *it was necessary to retain some kind of central regulation in respect of a relatively small part of production but which is sensitive*, especially from the point of view of imports. However, with the exception of meat products, this is no longer the old, all-embracing official allocation system. Within the framework of the annual plan, the Government will establish a list of articles (that for 1968 includes 67 commodities) for which quotas are allocated to a part of individual users or import quotas set.

A special case of relationship between enterprises is that of *cooperation*. This will occur primarily in the engineering industry where it may be extensive and of high importance. To avoid the abrupt termination of cooperation between enterprises from one day to the other — which would be detrimental to the flow of output — the competent minister may compel the cooperating enterprises to give six months' notice in case they wish to stop cooperation.

The marketing of consumer goods continues to take place through the retail trade network supervised by the Ministry of Home Trade and the local councils, as well as through the cooperatives. Also the network of wholesale enterprises remains unaffected. It will, however, be possible for trading com-

panies to enter into direct contracts with producers and also the producers will be entitled to establish independent direct selling systems. Competition seems easiest to be realized in trade, even with the existing forms of organization.

Foreign trade

Foreign trade activity will tend to develop fundamentally as a function of the relations to emerge between production and input, depending on whether producers and users will push or restrict their imports and exports under the effect of the price level, domestic demand and supply, and other factors. Though foreign trade activity should be influenced also by means of special foreign trade regulators, the harmony between foreign trade targets embodied in the national plan and the expected *foreign trade activity can be judged only in the light of the plan as a whole.*

In other words, if a certain level of production is envisaged in the plan, this necessarily involves a certain amount of imports, whereas only that part of production can realistically be planned to be exported which will remain after satisfying domestic demand. This interrelation may certainly be influenced to some extent by special regulators (primarily by prices, customs duties, etc.), but cannot be fundamentally changed.

The role of foreign trade in the Hungarian economy is substantial and a proper participation in the international division of labour is a fundamental factor in the development of the economy. For 1968, the national plan envisages an 8.2 per cent increase in exports and an 8.6 per cent one in imports (including, of course, agricultural exports and imports as well). As up to now, 72 per cent of Hungarian foreign trade will be transacted with CMEA countries.

It is a profound change in respect of foreign trade activity that *producers* will — in their capacity of both sellers and buyers — *directly experience the effects of trends in foreign markets.* They will buy the foreign exchange to be used for imports and sell that obtained from exports, for forints at a rate established by means of a uniform foreign-trade coefficient. The magnitude of this coefficient corresponds to the average ratio between the aggregate domestic price of goods exported and the price obtained abroad in foreign currency (dollars and roubles). It is expected that — with the effects of the new mechanism making themselves felt and a more efficient structure emerging — it should be possible later on to lower this coefficient.

In order to bring about these fundamental changes *some enterprises, mainly in the engineering industry, were granted the right to manage their exports independently, and even to import directly in exceptional cases.* But even the enterprises which were not granted this right *have entered into agreements of various types* (commission business, pool, joint venture, etc.) with the specialized foreign trade companies which ensure the realization of the objectives

outlined above, — namely to make the effects of foreign market trends directly felt. Foreign-trade companies will in future only exceptionally make transactions on their own account, primarily in cases where the products of a great number of small domestic producers have to be sold abroad.

Thus, the accounting of exports takes place on the basis of a coefficient expressing the average ratio between domestic and foreign prices. However, the equilibrium of the balance of foreign trade requires deals to be concluded also at rates worse than the average — this is a property common to all averages. The state will transitorily subsidize such export activities by means of so-called *state refunding*. State refunding has the following characteristics.

— It refers to *the total exports of an individual producer, not to the individual product*. In this way it will prompt the producer to arrange the pattern of his exports in a way that will be advantageous both to his firm and to the economy as a whole.

— The *rate of refunding creates, in general, equal conditions for domestic and foreign sales;* it subsidizes the producer approximately up to the domestic price level.

— The *rate of refunding is fixed for several years ahead, in some cases with a diminishing tendency* in order to prompt the efforts at a more efficient export pattern.

Thus by establishing the extent of refunding, the productive enterprises are rendered generally neutral as regards the choice between domestic and foreign demand. In the cases when, due to some special point of view, an exception must be made, sales may be channelled in the desired direction by further preferential or restrictive measures.

The main safeguard of realizing planned exports will, accordingly, be the proper regulation of domestic demand for home products. This is all the more so as, on the one hand, the rate of state refunding is restricted by efforts at efficiency and, on the other hand, the requirement of balance-of-payments equilibrium must be brought into harmony with the primary requirement of the internal equilibrium of the state budget, the stable domestic value of the currency. The new mechanism is expected to reduce — as a result of enterprise development activities — the part of exports to be subsidized and the relative extent of refunding as well.

Foreign-trade deals can be transacted only in the possession of a concrete export or import licence. This licence system is not intended to become a tool of manipulation and restriction but is aimed — beyond keeping the authorities informed — to provide a means for the foreign-trade authorities to channel both exports and imports in the proper direction. Particular care is taken that obligations under interstate agreements are met.

The issuing of licences is *in close connection with foreign exchange management as well*. The rule is maintained that all exporters must sell the foreign

currency obtained to the National Bank of Hungary, from which the importers can buy, on the basis of the import licence, the foreign currency needed to pay for imports. On the basis of the import licence the Bank will generally sell without any other condition the foreign currency specified in the licence, though in some cases it may be stipulated that the enterprise is under obligation to deliver at a later date a definite amount of foreign exchange. In other cases the foreign currency may be put at the disposal of the enterprise in the form of a credit repayable in foreign currency (e.g. in the case of certain types of investment).

When influencing imports by means of the regulatory measures, the principle is asserted *that imports should not constitute an unbearable competition to domestic production*, i.e. they should promote the substitution of imports by profitable domestic products. This principle is enforced with the aid of customs duties and various financial measures.

In view of the country's actual situation and the immediate tasks of foreign trade, it is necessary to deviate deliberately from the uniform coefficient in the case of certain imports. When determining the extent and scope of the deviation, it is an essential requirement that its stimulating or restricting effect should compel the enterprises to increase the efficiency of foreign trade. This *amounts in practice to restricting in certain respects the immediate assertion of market effects on producers. A simultaneous assertion* of all market effects would actually place an unbearable burden on the economy. Therefore, in the critical fields we will have to content ourselves with a solution that allows enterprises to feel *only the changes in foreign trade prices* due to the changes in market situation. In a later stage of development it will be possible to demolish the present, artificially inserted, so-called financial bridges.

In 1968, in order to maintain an equilibrium, imports had nevertheless to be *restricted* in respect of certain products or product groups *also by means of administrative measures* (e.g. quotas). These import regulations cover, however, only a small part of all imports. As a matter of fact, it has been taken into consideration that increases in imports do not necessarily entail a deterioration in the balance of trade since in a considerable part of cases import outlays are even recovered directly or indirectly in foreign exchange.

The 1968 plan envisages, with the aid of the regulators surveyed above, to attain an adequate balance of foreign trade and to establish a balanced and stable situation also in the domestic market, which is an important condition also of the success of the new mechanism.

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The new system of control and management introduced in the Hungarian People's Republic on January 1, 1968, the increase in the scope of decision and responsibility of the enterprises signifies also an important economic

and social change. The initiative and the responsibilities of their staffs will increase, but so will their share in the results; a direct connection will be established between the trend in living level in general and the production results of the individual enterprise collectives. State control will create a situation in the controlled market where enterprises are economically compelled to use their capacities to the optimum extent, to increase the efficiency of their production pattern and to realize the objectives set in the national economic plan. In the course of working out the regulatory measures, it was endeavoured to bring into harmony the objectives of equilibrium and those of economic incentives. The shifting of the whole economy to new methods may undoubtedly involve initial difficulties, but we are convinced that with the new methods the country's progress can be accelerated, the forces and possibilities inherent to the socialist society can be brought into quicker motion.

НАРОДНОХОЗЯЙСТВЕННЫЙ ПЛАН НА 1968 ГОД И ЭКОНОМИЧЕСКИЕ РЕГУЛЯТОРЫ

О. ГАДО

В статье представляется, как влияет банковская и кредитная система нового хозяйственного механизма, вступившая в силу с 1-го января 1968 года, на хозяйственную деятельность предприятий.

Автор статьи исходит из того, что в новом хозяйственном механизме в интересах повышения экономической эффективности центральное планирование связывается с рыночным механизмом. Центральное управление в кредитной системе означают утверждаемые правительством основные принципы кредитной политики: в их рамках конкретное кредитование производится на основании оценки рынка, и основной предпосылкой кредитования является кредитоспособность предприятия.

Основными принципами кредитной политики на год, или по мере необходимости на более короткий или длительный срок определяется общее направление кредитной политики, а также кредитные преференции и возможные кредитные рестрикции. Основные принципы кредитной политики тесно связаны с экономической политикой и, естественно, с бюджетом. Они подготавливаются Венгерским национальным банком на основании анализа внутреннего рынка, а также экспортно-импортной деятельности, с учетом ожидаемого развития, причем по ходу подготовительных работ прежде всего изучаются проблемы равновесия платежеспособности спроса и предложения товаров как на рынке потребителей и инвеститоров, так и на экспортно-импортном рынке. Политика долгосрочного кредитования, а также краткосрочного кредитования, предоставляемого для целей производства и сбыта, и кредитов для целей потребления населения определяется им на основании этого анализа, в сотрудничестве с остальными составными частями банковской системы. Проект основных принципов кредитной политики в широких масштабах обсуждается Советом по вопросам кредитной политики до заседания Правительства.

В новом хозяйственном механизме равновесие народного хозяйства, уравновешенное развитие экономики должны обеспечиваться центральным планом и вытекающей из него системой экономических регуляторов. Директивные указания кредитной политики представляют собой орудие оперативного экономического воздействия в руках правительства в целях разрешения напряженностей спроса и предложения, возникающих на короткую перспективу. Кредитная политика, таким образом, служит не для решения фундаментальных проблем экономического равновесия, а для уравновешивания быстро изменяющихся моментов рынка, а также для устранения больших или меньших диспропорций, которые невозможно предусмотреть. При этом кредитная политика служит в основном стимулированию экономического роста, экономически эффективному производству, использованию рыночных возможностей, удовлетворению рыночного спроса.

В рамках основных принципов кредитной политики предприятия и банк вступают в равные коммерческие отношения. Условием предоставления кредита является кредитоспособность предприятия. Для банка в кредитоспособности предприятия проявляется оценка рынка. Кредитоспособным является предприятие, систематически реализующее свои продукты, ведущее доходную хозяйственную деятельность, во-время выполняющее свои платежные обязательства, аккуратно погашающее свои кредиты. Запросы таких предприятий по предоставлению кредита, соответствующего рыночному спросу, удовлетворяются банком.

Краткосрочные кредиты погашаются предприятиями за счет реализуемой ими выручки, для погашения средне- и долгосрочных кредитов служит фонд развития предприятия. Прежде чем проголосовать о кредитах на капитальные вложения, банковская система рассматривает ожидаемую величину фонда развития предприятия (образуемого из облагаемой налогом прибыли) и, естественно, учитывает желательные направления развития народного хозяйства: последние содержатся в центральном плане. Однако и в этой области могут в широком кругу приниматься во внимание рыночные импульсы.

Банковская система в будущем не будет предоставлять кредит для целей производства, резервирования и накопления в качестве запасов таких продуктов, в связи с которыми можно безоговорочно определить, что в них не имеется потребности ни на внутренних, ни на внешних рынках. Для финансирования временных убытков имеется возможность в таких случаях, когда в течение года (или, возможно, несколько более длительного периода) возможно восстановление экономически эффективного производства на предприятии. Если такой возможности не представляется, то о судьбе предприятия принимается решение по ходу ликвидационного процесса, приводящего к реконструкции предприятия, к его слиянию с другим предприятием, к его закрытию и т. п.

Для лучшего решения новых задач в банковской системе произошли и организационные изменения: часть системы в будущем будет проводить, главным образом, работу, связанную с исследованием рынка, анализами и информационной деятельностью; другая же часть ее будет ответственно заниматься кредитными делами предприятий. Такое разделение труда в банковской системе служит тому, чтобы значительно улучшились как экономическая работа, так и опирающийся на нее процесс принятия решений по кредитным вопросам.

G. RÉVÉSZ

REGULATION OF ENTERPRISE PROFITS UNDER THE NEW SYSTEM OF ECONOMIC CONTROL AND MANAGEMENT*

As of January 1st, 1968, a new system of profit regulation has been implemented in Hungary. The first part of this article surveys the requirements to be raised in connection with profit regulation: those of harmony between the regulation and the national economic plan, uniformity and stability of the regulation, progressive taxation as well as the proper allocation of profits retained by the enterprise to the various funds. In the second part, the relations to be kept in view when establishing the factual rules of regulation are discussed. The system which has emerged from the preparatory work is described by the author on hand of actual examples and attention is focussed on some special features of the system meant to ensure enterprise interests to assert themselves.

As a result of the reform of the system of economic control, the economic independence of enterprises will considerably increase. Their activities will not be confined to carrying out the tasks of production and realization set by the controlling organs, by means of similarly fixed resources (manpower, wages, material inputs, etc.). The scope of enterprise decisions will include determination of the program (volume and pattern) of production and they will buy materials, market their products, increase or reduce their staff and labour force and develop the enterprise, not according to the instructions of the controlling bodies but as determined by the actual market conditions, on the basis of their own ideas and according to their possibilities.

All that goes hand in hand with a modification of the role of the national economic plan. The function of the plan as a means of achieving the annual targets in a direct, operative and administrative manner, will generally be abandoned. It will, however, obtain a much greater importance as a document expressing the economic strategy of society and its leading organs. The activities of the enterprises will be directed towards the realization of the objectives of the mostly medium-term, five-year plans with the aid of market guidance, income regulation and credit policy, that is, the so-called indirect measures of economic control.

Changes in the essence of enterprise independence and in the functions of the national economic plan affect the methods of regulating the alloca-

* The article was written before the actual introduction of the reform. — Ed. note.

tion and use of the surplus product as well as the personal incomes of workers and employees, and the interests of enterprises. A considerable part of the surplus product (net social income) realized in the enterprise will be collected by the state through various direct channels, in the form of taxes and social contributions determined as percentage of the wage bill; the charge on fixed assets determined as percentage of the value of assets; the turnover tax and diverse rents. The remaining part of the surplus products assumes the form of enterprise profits. The system of regulation and incentives centers precisely on the profits of the enterprise, as a complex indicator of enterprise activity.

The profits realized by the enterprise were up to now almost entirely collected by the state. In the future the profits will fall into three parts. The first will flow into the state budget in the form of a *profit tax*. The second part will be paid into a so-called *development fund* of the enterprise which, together with the depreciation allowances fund (or, rather, a defined part of it) will serve development purposes and the repayment of credits raised for development, in accordance with the enterprise's own decisions. From the third part the so-called *sharing fund* will be formed. From this the enterprise will cover beyond bonuses, awards, and the end-of-the-year profit shares also the wage and salary increases. In this latter respect the system of regulation fixes for a period of some length the average wage level which can be taken into account when settling the accounts with the state — the excess above this level is to be covered from the sharing fund. The higher the profits, the larger the funds that can be formed, the greater the possibility of raising personal incomes and developing the enterprise.

In this article, a picture will be given of the new system of profit taxation and enterprise-fund formation (in the following: profit regulation), the interrelations between the ideas contained in the plan and the profit regulation, the principles and methods of making the enterprises interested in the profits to be realized, the concrete methods of regulation as they have emerged in the course of preparatory work as well as the most problematic aspects of the system of regulation.

Profit regulation: The main requirements

Harmony between profit regulation and the national economic plan

The regulation of profits, as one of the most important elements in a planned, centrally controlled economy, cannot be independent of the national economic plans and of the basic economic concepts. Nor can the national economic plan neglect the tendencies arising from the established system of profit regulation.

Under the centralized system of economic control by means of plan instructions, the expansion of fixed and working assets and investment activities were based almost entirely on central decisions. Accordingly, money funds to be invested could be formed in the enterprises not at all or at most to a negligible extent. In the centralized model also the level of personal incomes of workers was subject to central regulation and instructions. The possibilities for raising wages and personal incomes were almost fully exhausted by the central measures affecting wage policy, the regulations relating to the wage fund, employment, average wages, the bonus fund, etc. These features were characteristic of nearly every socialist country, thus also of Hungary. Recent changes reflect a certain relaxation of the centralized system of management.

Under the new mechanism the level of personal incomes and the possibilities of developing the enterprise will be *considerably* influenced by enterprise profits. The interest of the enterprises will be focussed on this factor. However, from the aspect of profit regulation it cannot be specified what should be meant by "considerably". From this point of view at most the minimum share can be fixed which will still have some incentive power to impel the collective of the enterprise to improve their performance, and which seems sufficient in general for the management to be able to formulate efficient measures in respect of wages and bonuses, and the expansion of enterprise activity.

On the basis of the decisions of economic policy and plans, first of all the general magnitude of the part of profits to be left with enterprises must be centrally determined. When formulating such decisions it must, of course, be kept in view that under the new economic mechanism interest in profits will be the motive power of enterprise activities. If from each forint of profits earned by the enterprise the rules allocate only a fraction to the own funds, the engine will be set at too low a speed to exert sufficient traction power to pull along the collective.

Thus, when working out the plan concepts it should be centrally decided, with due consideration also to the incentive point of view, what proportion of the personal income of workers should depend — via the sharing fund — on the development of profits. The relative proportions within total investment possibilities between central (budgetarily financed) investments, those to be covered by the enterprises themselves and those to be realized from credits must also be determined centrally. On the basis of these and with a view also to the sums required to repay the credits from the development fund, a decision must be taken concerning the size of the development funds to be created and the relative proportions of the parts formed from depreciation allowances and from profits. The expected magnitude of the total enterprise profits must be estimated. The system of profit regulation must be made to

operate in a way (by fixing the percentage of profits to be left with the enterprise and that to be taxed away) that finally the sharing funds and development funds reach a volume conforming to the central intentions. (Of course, with enterprise profits higher than those envisaged, also larger funds may be formed.) With the system of profit taxation to be introduced the equilibrium of the state budget must also be secured. In addition to other sources of revenue, a proper amount of profits must be collected in order to make the financial sources for the implementation of central decisions available in the budget.

Interest in the level of profits

The system of profit regulation to be introduced should be instrumental in making the activities of enterprises conform to the national economic interests. The concrete method of achieving this will depend on what the enterprise profits actually express.

With the overall official price control prevailing under the system of economic management based on plan instructions, the inputs of individual enterprises (industries), their production (turnover) costs, were considered almost the only basis of producer prices (the prices affecting the returns of the enterprise). The price was equal to the costs acknowledged by the state plus a certain percentage of profits. In addition, under the system of management based consistently on plan instructions, also the pattern of production (turnover) was determined by the annual plan approved by the state organs. Under these conditions, a system of profit regulation will be justified creating an interest in profits additional to those fixed by the annual plan, and neutralizing the effect on profits of changes in prices and the pattern of production (by applying so-called corrections). As a matter of fact, under this system it is only the deviations from the planned profits that have an economic content since they express the inputs used in achieving the set targets, as compared to the normatives (of the plan). (Actually, the deviations from the plan may, of course, be due to a great extent to other factors, e.g. to the inner disproportions of the plan, to negotiations carried out in the course of planning, etc.)

The new economic mechanism will offer a relatively wide scope to the price-forming effects of the market — though in some fields with certain official limitations. But even where officially fixed prices will be set, the authorities intend to take into consideration the market relations, the value judgements of purchasers (users) and follow also the changes in the latter with a more frequent modification of the prices. Under the new system the tendency will thus assert itself that the products which are more useful to the user and whose effective demand surpasses the supply will realize relatively

higher prices (and contain thus relatively higher profits). In the case of exported and imported goods, on the other hand, a direct connection will be established — by the application of a generally uniform conversion coefficient — between the external prices in foreign exchange (the foreign exchange returns and outlays of the country) and the domestic sales receipts (costs) of the producer (trader). In this way it is intended to realize one of the objectives of the new price system, namely, that the relative prices should express the social utilities of the products.

But with such price proportions once made to prevail, the profit of the enterprise, as the difference between inputs and sales returns, will be an indicator of the social (national economic) utility of the whole activity of the enterprise. Then, it will be correct to demand that, in conformity with the interests of society, *an incentive should be provided to raise the level of enterprise profits*. Interest in the level of profits will stimulate a rational management of inputs as well as promote the activities aimed at satisfying effective demand to the greatest possible extent and in conformity with the requirements of the domestic and foreign markets. The system of profit regulation will provide an incentive to raise the level of profits if out of a higher profit the enterprise is entitled to retain a greater share in order to increase personal incomes and develop the enterprise.

The uniformity and stability of regulation

The above outlined interest in profits should be made tangible, according to the concepts formed up to now, in a double sense.

First, whenever an enterprise earns a higher profit than in the preceding year, also the volume of its funds should exceed that of the preceding year. The rules regulating the profits should be in force for a longer period of time, for some years, in order to avoid the well-known earlier practice according to which a year concluded with favourable results was followed by upward revised targets in the next. This involves the *actual requirement of stability in the system of profit regulation*. Without this, even under the new mechanism, enterprise possibilities would be "put in reserve" because of the insufficiency of the incentives to utilize them.

Second, the principle according to which the enterprise earning relatively higher profits should have relatively larger sharing and development funds, must be enforced not only as regards the time aspect in respect of the same enterprise, but also in the relative position of the enterprises; in general, there should be no distinction between enterprises, branches or industries. This "relativity" may be formulated also in the following terms: the enterprise earning a higher profit with the same annual wage fund and the same fixed assets should obtain larger funds. (The problem of accounting

for the differences between the enterprises, from the point of view of capital and labour intensity, will be reverted to below.) This is what may be called the *requirement of uniformity in profit regulation.*

The profit regulation can be uniform in general only if the price proportions actually express, beyond the socially necessary production and turnover inputs, also the market valuations, with a relatively higher enterprise profit expressing in fact also more efficient work from the social (national economic) point of view. Under such price conditions, owing to the uniform profit regulation, the enterprises operating more efficiently and realizing thus higher profits will occupy a more favourable position as regards the average level of personal incomes of its employees and the possibilities of expansion. Differentiations of this type promise good results. The enterprises which operate efficiently may enlarge their activities at a quicker than average rate. Thus, a certain re-grouping will take place, the weight of more efficiently operating enterprises in the economy will grow. Besides, the example and practice of the efficient enterprises will provide an incentive for those lagging behind to catch up. The enterprises, on the other hand, whose profits are regularly below the average, will fall behind. In these enterprises the level of personal incomes will be below the average, they will have smaller amounts available for development and their weight in the economy will diminish. Should this backwardness give in the course of time rise to graver problems and tensions then the competent authorities may step in with special measures of direct intervention.

Necessity of a progressive profit tax

A uniform regulation of profits will thus have the result that, as a function of the relative level of profits, a differentiation between enterprises will take place as regards the level of personal incomes and the possibilities of development.

But what should be the character of this relationship? Should it be linear, meaning that the sum to be retained by the enterprise as well as the profit tax should be in direct proportion with the amount of profits? Should taxation be degressive, that is, the higher the profits, the lower the rate — though the greater the sum total — of the tax on profits? Should there be greater differences in the formation of funds than in the relative levels of profit? Or, conversely, should taxation be progressive, with smaller differences in the formation of funds than in profits, and with a correspondingly "mitigating" influence on the differentiation of relative enterprise positions?

Having analysed in the course of preparatory work the problem from several aspects, the opinion has emerged that a *progressive tax* will provide the appropriate solution.

When an average level of profits is realized, a considerable part of personal incomes has to be covered from the sharing fund. If this part amounts to but one or two per cent, the direct material interest of the workers and employees in the volume of profits is not sufficient, it does not provide an adequate incentive. On the other hand, a considerable differentiation in the relative level of enterprise profits must be reckoned with. There will be enterprises working under favourable conditions, where the rate of profits, as related to wages and assets, will be two or three times the average. There will, of course, be also enterprises realizing much lower profits. If this great differences in the level of profits would be allowed to assert themselves fully in the first years of the new system, i.e. if the sharing funds were created in linear proportion with profits, inadmissible differences would appear in the relative levels of personal income. A massive and rapid shift in personal incomes as against the present and established pattern would lead to disturbances and therefore — considering also political points of view — the state would have to interfere with special measures. This would, however, amount to an almost immediate counterbalancing of the effects of the new mechanism.

And obviously, this intervention could not take the form of collecting ulteriorly from the efficient enterprises part of the sums used from profits for the increase of personal incomes "produced" and "earned" in the framework of the established profit regulation. The enterprises realizing average or below-average profits ought to be given some "consolation". This again would involve a general rise in the wage level, an adjustment to the wages of those with an above-average performance, and inevitably release an additional purchasing power which would endanger the equilibrium and the harmony between purchasing power and the commodity fund. Instead of such extraordinary measures it is more expedient to apply a progressive tax right at the start; in this manner the effect of profit differences on personal incomes can be reduced and mitigated to a certain extent. This progression must not lead at the same time to a levelling out of income differences. Along with progression also the principle must be enforced that relatively higher profits should secure also a relatively greater sharing fund for the enterprise.

As regards the development funds, this "sensitivity" is already lower. Here, we need not be afraid of a wider and higher degree of differentiation as compared to the sharing funds; it should be even considered as desirable since it leads to the emergence of a more efficient structure. Therefore, the part of profits to be allocated to the development fund can be proportionate to the volume of profits; in this connection a linear tax may be advocated. The final solution which emerged is the following: progressive taxation must be realized in a way that progression should affect the formation of the sharing fund in order to mitigate the effects on personal incomes of the relative

differences in the level of profits while leaving unaffected the development possibilities.

Allocation of the profits left with the enterprise

Independently of the progressive taxation of profits and the effect of progression on the sharing and development funds, the question must be analysed *how to form the sharing and development funds* from the part of profits retained by the enterprise.

There are opinions according to which in a *later* period of the operation of the new system it will not be necessary any longer to regulate centrally the division of profits between the two funds, primarily because interest in the long-term development of the enterprise will provide a safeguard against their future neglection. In the initial stages, however, it is by all means justified to apply central control because the danger exists that in lack of this the enterprises may use an unduly great proportion of the amount available to increase personal incomes.

In regulating the division of profits to be retained by the enterprises, it should be taken into account that the various industries essentially differ from each other as regards labour and capital intensity. E.g. in the precision engineering industry the ratio of tied-up assets and yearly wages is 4 to 1 on the average, while the same ratio in the metallurgical industry is 13 to 1. If the division were regulated on the basis of average indices (saying e.g. that 40 per cent of the profits to be retained should be allocated to the sharing fund and 60 per cent to the development fund), the enterprises with a high labour and low capital intensity — e.g. in the precision engineering industry — would have unduly small sums at their disposal to increase personal incomes but would have much greater possibilities to expand than the enterprises where labour intensity is low. The regulation system must, therefore, provide a means to divide the profits to be retained by the enterprise in harmony with the actual relative proportions of the tied-up assets on the one hand and wages, on the other.

The system of profit regulation

The realization of the requirements outlined above and the taking into account of their interrelations call for the solution of several other problems. Of these, let us here examine the connections between the requirements of harmony with national economic proportions, stability and uniformity as well as the precise interpretation of interest in the level of profits, further the relationships between the forms of profit collection and the formation of enterprise funds, and between enterprise interests and the creation of funds.

National economic proportions, the uniformity and stability of profit regulation

The requirement of harmony with the national economic proportions together with that of stability mean that the spheres of personal incomes and of development which differ from each other in respect of financing and decision-taking, should be treated separately and not with respect to a single year but in consideration of the lasting tendencies.

For example, in connection with the development funds it is not only the desired proportions for 1968 between investments and working asset expansion — broken down by sources of financing — that are of a determining character. Questions relating to the subsequent years must also be taken into account, such as

— what central resources will be needed in 1968 and the following years to finance the investments that fall within the scope of central decisions;

— what unused liquid assets can be expected to accumulate in the development funds;

— to what extent will the enterprises raise credits, and on what terms of repayment;

— what amounts will be earmarked for repayment purposes in the development funds in later years.

A stable, i.e. long-range "scaling" of the regulation system with the development funds is rendered difficult also by the special circumstances of the start. On January 1st, 1968, a great number of investments earlier individually specified in the national economic plan, started on central initiative (so-called "above-limit" investments), will be in process. In addition, the third five-year plan envisages the starting of numerous such investments over the remaining years. A decision must be taken on the question, to what extent is it right to finance these investments from central budgetary funds and to what extent from enterprise funds or from credits raised and to be repaid by the enterprises. These decisions will influence — mainly in the first years — the structure of investments from the point of view of decision-taking and financing and thus also the appropriate "scaling" of the profit regulation. However, the viewpoints of the novel contents and role of enterprise independence and interests cannot be neglected either. Presumably, their assertion cannot be secured without a reduction in the volume of the centrally initiated and budgetarily financed productive investments and a certain rearrangement of the sectoral pattern of investments. Thus, with the introduction of the new system it will be necessary to revise the third five-year plan, primarily as regards investments.

In connection with the sharing fund of the enterprise which is coupled with the personal incomes, it should be decided:

— what parts or elements of personal income is it expedient to cover from the sharing fund;

— what rate of growth should be estimated for the personal incomes in enterprises, as a function of the expected growth of productivity (taken in the broadest sense) and of the increase in profits;

— whether the raising of the level of personal incomes should be entirely linked to the sharing fund or some parts and components be covered from other sources (regulated directly or indirectly by central measures).

In connection with the income regulation it should by all means be taken into account that the part of increase in personal incomes to be covered from the profits must be funded in the sharing fund cumulatively year by year. (If e.g. the planned average annual increase to be covered from the sharing fund is 2 per cent, in the second year already an amount supporting a 4 per cent increase in personal incomes will be needed — half of it to maintain the level achieved in the first year — and in the third year a further two per cent, i.e. an amount supporting an increase of 6 per cent, will be necessary.)

In my opinion, the connection of these decisions with the concrete conditions of profit regulation (with the "scales" applied) should be sufficiently self-evident. The greater the part of the volume of investments and personal incomes as well as of the rise in their levels which is linked to the enterprise funds under the uniform system of profit regulation, the smaller will be the necessary extent of taxation and the larger the funds that may be formed. Obviously, in this way interest in profits will be greater, but there will be also a greater differentiation in the relative position and the possibilities of the enterprises as a function of the relative volume of profits.

There is also a direct connection between the intended (planned) development in the creation of funds and the progression of taxation. The greater the rate of growth reckoned with in the formation of funds, the smaller will be — other things being equal — the progression to be applied in profit taxation and conversely.

As regards the connection between *the harmony of national economic proportions and the uniformity of profit regulation*, the regulation has a considerable reaction on the plan (and its proportions). Since we will in general have a uniform system of regulation, in setting it up we have to start from national economic relationships and not from sectoral or industrial ones; the expected profits (and amortization) as well as the formation and proportions of the sharing and development funds must be considered on a national scale. But the consequences of this uniform regulation on the basis of national economic proportions will ultimately affect the formation of funds in the enterprises and industries. From the point of view of national economic planning it is not necessary to estimate the fund formation in individual enterprises — except for those embracing an entire industry, as e.g. Hungarian

Electricity Works. But not even national economic planning can neglect the expected volume of funds to be created in the individual industries and major branches. Approximative calculations have to be made since the sectoral pattern of the fund formation influences that of investments to be realized from enterprise funds and credits, the shifts in personal incomes, the demand for, and supply of, labour, the directions of the flow of manpower, etc. These expected changes must, however, be integrated into the national economic plan, together with their other interrelations and mutual effects.

It is quite conceivable that in certain fields — particularly in the initial period of implementing the new system, when the market relations will not yet fully assert themselves — undesirable tendencies make themselves felt as a consequence of the uniform regulation of profits, and these are brought to the surface in the course of national economic planning. It may happen e.g. that in certain industries or enterprises relatively high profits are realized because of special circumstances, but from the national economic point of view the funds which could be formed under the uniform rules of profit regulation are unnecessary (a major expansion may not be warranted because of market limitations and the above-average increase of personal incomes may not be justified by special conditions). In some of these cases it may be appropriate to apply special forms in order to collect directly part of the social net income. On the other hand, it may be equally justified to apply certain special preferences to certain other industries or enterprises. Thus, e.g., in some branches of mining the trend of profits is basically less favourable than in the rest of industry. If funds were formed according to the uniform rules, the development fund would be insufficient for the investments within the enterprise's scope of decision and the formation of the sharing funds would not cover even an average increase in personal incomes. If the national economic plan counts on the output of these mines and envisages — if for no other reason than import limitations — some development, special subsidies and other forms of subsidy may have to be applied.

Such special, individual cases of income collection and subsidizing have to be determined also for several years ahead, with the principle of stability in view. But such measures should be taken indeed in well-founded and exceptional cases only, because they hinder or modify the market effects which should be in the foreground under the new system.

Forms of profit collection and the formation of enterprise funds

As was mentioned, it is a requirement of progressive taxation that the higher the profits of the enterprise, the higher should be the rate of the profit tax, without collecting, however, in any bracket the whole of additional profits. This means that from relatively higher profits the enterprise may retain more but in a way that the proportion of the additional allocation is always

smaller in amount than the additional profit. These are only different approaches to the same problem, since progressive profit taxation is equivalent to degressive fund formation. In connection with the tax on profits it must, however, be decided what should be the *basis of measuring the relative level of profits*, the so-called basis of projection.

A similar problem arises in connection with the division of the part of profits to be retained by the enterprise in conformity with the characteristics of the enterprise. What should be then the basic enterprise data to the proportions of which the division into sharing and development funds should conform?

When looking for a *projection basis*, one must not disregard the ultimate purposes for which the profits retained by the enterprise will be used, since *the relative proportions play a major role exactly from the point of view of utilization*. Under the future system of profit regulation the utilization has two directions: from the profits to be retained personal incomes may be paid out and development may be financed. From the viewpoint of these directions of use, the position of the enterprise will be determined by the aggregate amount of wages per time unit (year), and by the value of assets tied up in the enterprise. The level of profits will be expressed in terms of their relative proportion to the aggregate of wages and to the assets tied up. The division of profits according to the directions of use will conform to the characteristics of the enterprise if it takes place in conformity with the relative proportions of the wages and the value of the tied-up assets.

However, under the system of profit regulation it is not sufficient to define in general terms the factors to which the amount of profits should be related from the point of view of tax progression, and the proportions of the factors which determine the division of the profits to be retained; the rules of taxation and the tax rates etc. must also be factually fixed. Again, the rules and tax rates must be harmoniously fitted to the desired levels of the development and sharing funds to be formed from the expected enterprise profits and to the intentions to mitigate the dispersion in the formation of enterprise funds due to the different effects of tax progression on the two funds.

In the course of the preparatory work, several solutions and their various combinations, the possibility of the application of numerous formulae were suggested for the determination of the relative size of profits, the progressive taxation system and the allocation of the profits retained to the funds. It became clear that all systems of profit regulation which meet the above requirements can — whatever the computation techniques employed — be essentially reduced to the following steps:

a) The profits of the enterprise fall into two parts, conforming to the proportions of aggregate annual wages and the value of tied-up assets weighted with uniform coefficients. Thus e.g.

$$N_r = N \frac{2B}{2B+E},$$

$$N_f = N \frac{E}{2B+E},$$

where

N_r = the part of profits which serves after taxes the formation of the sharing fund,
N = the amount of yearly profits,
B = the annual wage bill, as computed on the basis of the prescribed average wages,
E = the value of tied-up assets (yearly average),
N_f = the part of profits which serves after taxation the formation of the development fund.

Note: The coefficients mentioned above are in the given example 2 with respect to B, and 1 with respect to E.

b) The N_r part of profits will be taxed higher or lower depending on its proportion to the annual aggregate sum of wages; the tax rates can be read off from the corresponding tables precisely on the basis of this proportion. E.g. the part of N_r falling between 0 and 5 per cent of the annual wage bill will be taxed at the rate of 20 per cent, that between 5 and 10 per cent at 40 per cent and that over 10 per cent at 60 per cent.*

c) With the tax rate(s) read off, the tax on N_r is computed and deducted, the remainder will be the part falling to the sharing fund.

d) In respect of N_f the table contains a single rate; this part is taxed linearily. After deduction of the tax computed, the rest of N_f will be allocated to the development fund.

The "scaling" factors of the system are: the coefficients applied in the weighting used for the division of the profits as shown under *a)* — in our examples 2 and 1 — further the tax rates mentioned in connection with points *b)* and *d)*. There is an interrelation between these factors but there is also a connection between them and the "outer world" (the intended formation of sharing and development funds, the expected volume of enterprise profits, the progression of taxation deemed desirable, etc.). It should be obvious that in establishing the factual system of profit regulation, all these internal and external relationships must be taken into account with the aid of the basic national economic computations.

* The taxation system outlined is a simplified model of the one actually introduced.

The interest of enterprises

The formation of enterprise funds — i.e. the proportion of enterprise profits to be allocated to the sharing and development funds, respectively — is determined by the uniform conditions of profit regulation. When considering individual transactions, the enterprises are primarily interested not in the total sum of the prospective additional profits, which is only an intermediate factor of calculation, but in the amount ultimately to be allocated to the enterprise funds, more exactly to the sharing fund which is in connection with personal incomes.

Let us suppose that an enterprise could achieve an annual profit of 60 million forints without undertaking a certain obligation demanding great efforts. The contract in question promises additional profits in an amount of 12 million forints. For the sake of simplicity let us assume — though it is rather improbable — that the annual wage bill will be invariably 200 million and the value of tied-up assets 1100 million.

The enterprise will calculate as follows. If it does not enter into the contract, it will have to divide the 60 million profits — on the basis of the above example — in the following way into N_r and N_f:

$$N_r = 60 \frac{2 \cdot 200}{2 \cdot 200 + 1100} = 16$$

and

$$N_f = 60 \frac{1100}{2 \cdot 220 + 1100} = 44.$$

Thus the part of profits to serve purposes of the sharing fund will be 16 million forints. The tax on the 16 million Ft will be the following:

Tax-bracket, percentage of aggregate wages	Tax rate, per cent	Amount of profits, falling into the given bracket,	Amount of tax
		million Ft	
0— 5	20	10	2.0
5—10	40	6	2.4
		16	4.4

Thus, the total tax will be 4.4 million forints. The sharing fund will obtain from the 60 million profits 16 — 4.4 = 11.6 millions, i.e. 19.4 per cent of total profits.

If the enterprise undertakes the additional deliveries under the contract in question, it will make an additional profit of 12 million. Of this amount,

according to the preceding calculations, 3.2 millions go to N_r. But these 3.2 millions fall already into a higher bracket and will be taxed at the rate of 40 per cent. Thus, the sharing fund will be allocated 1.92 million. 16 per cent of additional profits augment personal incomes; of total enterprise profits now 13.52 millions, that is, 18.8 per cent will be allocated to the sharing fund. On the basis of these calculations the management will consider whether it can cover from the 1.92 million additional profit share the bonuses, performance wages, etc., necessary to impel the workers concerned to make increased efforts to fulfil the contract.

Interest in additional profits will be the basis of enterprise calculations. This must, of course, not be left out of consideration when establishing the system of profit regulation. Care must be taken not to increase progression to an extent that in the higher brackets the shares from additional profits become too small to pay for higher performances, so that the enterprise collective loses interest in increasing efficiency.

In this connection I should like to mention the example of promoting and paying for innovations and technical development performances. According to the concepts concerning personal incomes in enterprises, the source of innovation fees and bonuses to be paid for technical development will also come from the sharing fund. This is a correct concept. It should be left to the executives and to the collective of the enterprise to evolve on the basis of the available sums the incentive forms and practice best suited to local conditions and promoting the highest global performance of the enterprise. An incentive system of payments for innovations and technical development is in the interest of both management and the collective of the enterprises. since it can contribute considerably to increasing the efficiency of enterprise activities and to raising profits. Part of the increase in the sharing fund due to these activities will be used directly to remunerate individual and group performances, providing thus an incentive to further efforts, while the other part will increase the incomes of the entire collective with the executives among them.

If, however, the progression of profit taxation is so great in the higher brackets that only a fraction of additional profits is allocated to the sharing funds, the whole structure of incentives, elaborate as it may be, will collapse. At present, 2 to 8 per cent of annual savings (additional profits) due to innovations can be paid out as fees and awards. If — to give an extreme example — the progression is so great in the higher brackets that only 2—3 per cent of additional profits will go into the sharing fund, then the remuneration of innovators at the present rate may become difficult, since even payments amounting to 4—5 per cent can be made only at the expense of the entire collective.

The problems raised in connection with payments for innovations and

technical development are, as a matter of fact, only elements of a greater problem, namely that progressive taxation discriminates against the enterprises realizing comparatively high profits. E.g., in the case of enterprises operating under identical conditions, the one earning higher profits will be allocated a relatively lower proportion of the returns of the same innovation (or of one with the same efficiency) than the enterprise whose profits are lower. This has, of course, a certain equalizing effect on the enterprises working under different conditions.

Owing to the progressive taxation of profits, an enterprise working more efficiently may be able to retain in the sharing fund a smaller portion of additional profits due to improved performance than a less efficient enterprise. This fact again raises higher requirements in respect of the decisions to be taken in the enterprises earning greater profits and working more efficiently.

In connection with the system of profit regulation outlined above, attention should be called to another interesting feature connected with the interest of workers. In the course of the preparatory work it was, of course, mentioned that the direct connection between the volume of profits and the personal incomes of the enterprise staff will create a particular kind of interest in profits (with a view to the ratio between profits and employment) and this may lead to contradictions between the optimum utilization of capacities as interpreted on the enterprise and the national levels. The same problem is also mentioned by Benjamin Ward [1]. The interest in maximizing the value of the profit/employment quotient will hinder the utilization of capacities in the range where the marginal value of the quotient is still positive (and where, therefore, the increased utilization of capacities still ensures additional profits) but tends already to decrease and has thus a lower value than that of the quotient at an earlier point, with a lower utilization of capacities.

In the system to be established here, this problem will not pose itself in a particularly marked form. As a matter of fact, under the system reviewed the interest of the enterprises will be expressed by the maximization not of the profit/employment quotient but of the one denoted above $\frac{N}{2B+E}$. (As mentioned earlier, the specific average level of wages that can be put to account will be prescribed, and B in the formula denotes the aggregate of annual wages as calculated on the basis of this average.) In this manner, the personal incomes in the enterprise may grow even if capacity utilization is increased by the employment of additional labour, with profits rising at a much lower rate than employment. (Thus, to return to the earlier example, it may be worked out that in order to ensure an unchanged level of personal incomes it is sufficient to achieve 1.6 million forints of additional profits if the employment, and thus B, is raised by 10 per cent, i.e. by 20 million Ft

Thus, while in the initial position $\frac{N}{B} = \frac{60}{200} = 0.3$ (million Ft) were needed to raise the level of personal incomes, with respect to the increased utilization of capacity, a specific additional profit exceeding $\frac{N}{B} = \frac{1.6}{20} = 0.08$ will be already sufficient.)

*

Under the new system of profit taxation and fund formation (briefly: profit regulation) generally uniform and stable conditions valid for some longer period will prevail. According to the rules, the profits will be divided in proportion to the labour and capital intensities of production in the given enterprise. From the part of profits conforming to labour intensity the sharing fund is formed after deduction of the progressive tax, a fund which is the source of raising the personal incomes of workers and employees. The part conforming to the capital intensity is subject to a linear tax and serves, together with the depreciation allowance (or, rather, part of it) the formation of a development fund. The own development projects of the enterprise are financed from this fund. Under the system outlined, the profits retained are thus divided into two parts of which one serves personal remuneration and the other the financing of development.

Since by the average wages that can be put to account costs are prescribed, the average level of personal incomes of the staff will depend on the relative size of the sharing fund, more exactly, on the value of the quotient $\frac{N}{2B + E}$ (where N = the annual profits, B = the annual wage bill based on the average wages prescribed, E = annual average value of tied-up assets). This type of interest hinders but slightly the increase of capacity utilization in the range where the marginal value of the profit/employment quotient is positive but decreasing in tendency.

The progressive taxation affecting the formation of the sharing funds mitigates the differentiation in the level of personal incomes. The development funds are linearly taxed and thus differentiation in development possibilities is more considerable; from the point of view of the structure of development this seems to be favourable.

There is an interrelation between the system of profit regulation and the national economic plan. The conditions of profit regulation must be established in a way that when aggregate profits reach the planned level, the increase in personal incomes should be of the planned order of magnitude and also the volume of the own development projects of enterprises should conform to the plan. Of course — since the conditions are stable — a profit differing from the plan will alter the possibilities of raising personal incomes and of development in accordance with the plan. The conditions being in general

uniform, the national economic plan, too, will have to take into account the expected differences between the sectors as regards the possibilities of increasing incomes and those of development, as well as their secondary effects on demand and supply, on the flow of manpower, etc.

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РЕГУЛИРОВАНИЕ ПРИБЫЛИ ПРЕДПРИЯТИЙ ПРИ НОВОМ ХОЗЯЙСТВЕННОМ МЕХАНИЗМЕ

Г. РЕВЕС

В системе налогообложения прибылей и образования фондов предприятий (коротко: регулирования прибыли), как правило, будут функционировать единые стабильные в течение относительно длительного периода условия. Согласно правилам, прибыль будет делиться пропорционально сумме выплаченной зарплаты и фондов предприятия. Из части прибыли, выделяемой пропорционально зарплате, после прогрессивного налогообложения образуется фонд распределения, являющийся источником повышения уровня личных доходов работников предприятия. Часть прибыли, выделяемая пропорционально фондам, облагается линейно, из нее, а также из амортизации (вернее, части амортизации) образуется фонд развития предприятия. За счет фонда развития финансируется развитие, решение о котором принимается самим предприятием. Следовательно, при данной системе прибыль, остающаяся у предприятия, заведомо делится на части, используемые на личные выплаты и на финансирование развития.

Поскольку величина средней зарплаты, учитываемой в качестве элемента затрат, предписывается предприятию, средний уровень личных доходов работников предприятия в этой системе зависит от относительной величины фонда распределения, точнее, от соотношения

$$\frac{\Pi}{2З + Ф}$$

(П = годовая сумма; З = фонд зарплаты, рассчитанный на основе предписанной средней зарплаты; Ф = среднее значение отвлеченных средств). Такая заинтересованность лишь мало препятствует улучшению использования мощностей в том диапазоне, где предел частного $\frac{\text{прибыль}}{\text{численность}}$ положителен, но имеет тенденцию к уменьшению.

Прогрессивное налогообложение, влияющее на образование фондов распределения, сокращает дифференциацию в уровне личных доходов. Фонды развития облагаются линейно, поэтому дифференциация возможностей развития более значительна, что обещает благоприятное изменение в структуре развития.

Система регулирования прибыли и народнохозяйственный план находятся во взаимной связи. Условия регулирования прибыли должны быть определены таким образом, чтобы в случае выполнения плана по массе прибыли предприятий, рост личных доходов предприятия в основном соответствовал плану и объем развития предприятия также ориентировался на план. Конечно (поскольку речь идет о стабильных условиях), если размер прибыли отклонится от запланированного, то возможности увеличения личных доходов и развития будут расходиться с планом. Поскольку условия, как правило, едины, народнохозяйственный план также должен считаться с ожидаемыми первичными отраслевыми различиями в росте личных доходов и возможностях развития, далее, вторичным влиянием этих факторов на спрос и предложение, на перемещение рабочей силы и т. д.

L. Ács

THE EFFECTS OF THE BANKING SYSTEM ON ENTERPRISE MANAGEMENT UNDER THE NEW HUNGARIAN ECONOMIC MECHANISM

The article presents the novel business relations between the Hungarian bank system and the enterprises, resting on equality of rights, under the new economic mechanism taking effect on 1st January, 1968. Monetary influencing of the macroeconomic relations will take place in the new mechanism in the framework of credit policy directives approved by the Government. In this framework the connections between the banks and the enterprises will be determined by market impulses.

One of the most essential features of the economic reform in Hungary is an organic linking of central planning with the market mechanism. The purpose of the reform is to ensure a regular raising of the living level of the working population on the basis of higher productivity of labour and more efficient management. In the latter, the fact that a considerable part of economic decisions will be relegated to the enterprises is to play a significant role. The enterprises will in their economic decisions rely on the economic policy of the government, on the knowledge of the conditions of management, and especially on the information system provided by the market relations or, more exactly, on the market relations of demand and supply.

The position and role of central planning will substantially change. In the system of central plans, it will be the medium-term plan which creates the conditions of balanced economic growth on the basis of the economic policy of the government. This will be safeguarded by the system of economic regulators. One of the basic ideas of the plan is that, starting from the medium-term plan, the economic regulators are set by the government, if possible, with a validity of several years. The objective is to enable the enterprises to work out their figures for some period ahead in the knowledge of taxes, price and wage policies, foreign exchange coefficients, etc.

From this it also follows that budgetary policy — while not entirely excluding the possibility of active intervention — does not reckon with the necessity of frequent operative interference.

Under these conditions, monetary policy is to become one of the major instruments of operative economic regulation. In order to eliminate smaller or greater imbalances between solvent demand and supply, the major prob-

lems of current monetary policy will be regulated by the government by means of credit policy directives to be issued at yearly or at longer or shorter intervals.* The directives will be elaborated by the banking system which is to submit to the Council for Credit Policy its proposals concerning investment, consumer and short-term credits, their volume, the direction of credit selectivity, the rate of interest, and the credit and interest preferences. The recommendations of the Council must be submitted for approval to the Government by the Minister of Finance and the President of the Planning Office.

The enterprises are now expecting that the economic regulators (the systems of prices, wages, taxation, foreign exchange coefficients) will really establish stable conditions on the market. However, they often believe their relations with the Bank to become more uncertain. They are afraid that — as they often say — banking bureaucracy will take the place of planning bureaucracy.

1. Objective bases of enterprise credit calculations

Objective bases will be provided — to prevent the phenomena mentioned above — for the credit calculations of enterprises. On the one hand, they will be guided by the directives of credit policy, on the other hand, they will be able to base their credit calculation — within the framework of these directives — on the market relations and on the assessment of market demand. Under the new Hungarian credit system, market relations will present themselves to the Bank mainly in the form of enterprise credit rating. The principles of credit policy embody thus a system of macroeconomic regulation put into effect as a result of purposeful economic analysis, while enterprise credit ratings reflect to the Bank the actual market relations.

Therefore, when calculating its credits, the enterprise has to take into account the directives of credit policy and its own credit rating, that is, the market relations.

The directives of credit policy

To be in a position to elaborate the directives of credit policy, it is necessary for the banks

— to have adequate information about the markets (both commodity and money markets), including also the prospective medium-term (5-year) and short-term (one-year) market trends;

* Since then, the directives for 1968 have been actually issued by the Goverment; they run on the lines drawn in the article. Ed. note.

— to participate in medium- and short-term national economic planning in order to become acquainted with the main lines of economic policy, the major proportions of the production and utilization of national income, the volume of accumulation and consumption, the major development objectives, the trends in the level of living, etc.

From the above, two conclusions may be drawn:

a) The elaboration of the directives of credit policy must be preceded by a thorough, detailed analysis of the market and by participation in the elaboration of the national economic plan.

b) The directives of credit policy are to be elaborated as organic parts of the medium-term (5-year) and short-term (annual) plans.

When drawing up the directives of credit policy the initial data are the credit estimates of the individual branches of the economy and the credit balance. However, the following viewpoints must also be taken into consideration:

— the general objectives of the Government's economic policy;

— the comprehensive analyses, statistics and forecasts prepared by various authorities (Planning Office, Ministry of Finance, Price Office, Ministry of Labour, Central Statistical Office, etc.) and the analyses of the banking system itself;

— the development concepts of the economic units (enterprises and cooperatives).

The contents of the directives of credit policy may be outlined as follows:

In respect of long- and medium-term investment credit

— the credit volume will be stated by the main branches of the economy;

— the rate of interest on investment credits will also be stated;

— there will be worded and numerical instructions to the banking system as to which branches (industries) or projects should be given preference, i.e. in which fields should credit conditions be more favourable than in general.

The directives may contain stipulations as to the minimum efficiency to be required in order to enable the satisfaction of the demand for credit on the basis of ranking.

In respect of medium-term credits in the sphere of production, services and trade, the principles may determine

— the volume of credits by branches of the economy, and within them that for investments and other purposes;

— the rate of interest and the credit terms;

— the preferential domains.

In respect of short-term credits in the sphere of production, services and trade:

— the basic rate of interest will be established together with the preferential and the restrictive rates.

— rules of a directive character will be applied where short-term credits should be particularly used to promote or to restrict demand or production.

— The volume of short-term credits will be generally given only as a guiding figure. In the restricted fields, however, also obligatory quotas may be established.

The directives may, if necessary, also stipulate the additions to working assets and the credits to be drawn to finance them, as a condition of granting the credit requests.

As regards personal credits:

The volumes of and the interest rates on (long- or medium-term) construction credits as well as on short-term cash loans will be established.

In respect of construction credits the volume will be fixed on the basis of taking the needs and possibilities far-reachingly into account. As regards commodity credits and loans, the volume to be granted will be established in proportion to the volume of deposits, but will be handled in a flexible way during the year, following with attention the trends in private demand and supply. The volumes of the various types of credit are likely to change each year, but the rates of interest less frequently.

The credit rating

Under the credit directives, the Bank grants credit to the creditable enterprises.

As a determinant criterion of creditability, sales are first analysed by the Bank which takes into account the characteristics of the enterprise in question and of its products and markets. In this connection the Bank analyses the earlier sales activities of the enterprise, its position at the given moment, the trends in the markets of its products and the future sales possibilities.

In the course of continuous sales analysis, the Bank will become acquainted with the outlets of the major products (domestic use and exports, utilization for production and consumption purposes, sales through trading organizations, etc.) and their proportions; it will obtain information about the methods of marketing (delivery contracts, sales from stock, etc.). From the dynamics of the facts observed, the Bank will draw its conclusions concerning the future.

In the course of investigating the position of the enterprise at a given moment the Bank collects information about the timely problems characterizing the given enterprise or industry (the orderbook, material and technical endowments, labour supply, the volume of stocks and their compositions, etc.) and also deals with the special problems of the enterprise.

In connection with the expected trends in the markets of the products of the enterprise it examines the degree of saturation in the market, the price relations and especially the relation between supply and solvent demand.

However, the Bank is concerned with these matters only above a certain limit, keeping in view that the enterprise is responsible for the decisions it takes within its scope of competence.

In the analysis of profitability, the Bank follows different procedures in connection with investment credits and short-term credits.

With investment credits and medium-term operational credits it is a fundamental criterion of creditability whether the development fund to be formed during the period of repayment can — considering the other liabilities, the repayments of other credits due — secure sufficient monetary means for repayment. With these credits, therefore, the volume of profits expected will be decisive from the point of view of creditability.

The short-term operational credits are generally repaid from current sales returns. Therefore, in respect of such credits the Bank will judge the creditability mainly on the basis of turnover and sales returns.

Credit rating may generally be adequate only at an adequate level of rentability; it will, however, not be possible to set any numerical conditions. From this point of view it is not so much the level of rentability at the given moment that is relevant but much more its trend — in addition to the importance of the volume of profits as was already mentioned.

With continuous sales and profitable management solvency is generally ensured and payment difficulties may be due rather to problems of liquidity. Solvency is still an important indicator since an unfavourable development of other factors often becomes first manifest in payment difficulties.

The ability to repay credits when they fall due depends, in the last resort, on the former three factors.

2. The role of market relations in the connection between enterprises and the Bank

Market situation and regular sales returns as a basis of calculating credit prospects

When calculating credit prospects — meaning now short-term credits — the enterprises have to analyse first and foremost the market situation. An analysis of market demand and supply will provide the best measure of the volume of credit that can be expected from the banks.

The banking system will adjust its outstanding credits to the market requirements; it will grant the enterprises the short-term credits determined by market requirements. As long as a profitably operating enterprise repays its credits fallen due out of its sale returns, and also meets its other liabilities, the Bank will — within the limits of normal business relations — generally accommodate the enterprise in question.

As a matter of fact, it is expected that the information at the disposal of the former system of management based on the breakdown of central plans will be replaced by information obtained from the market directed by means of economic regulators. To satisfy the domestic and foreign markets by supplying products of good quality, at the contracted time of delivery and in sufficient quantities, is in the primary interest of the economy. It is at the same time the interest of the population that solvent demand finds the suitable products in the market. The credit system is built up in a way to conform to these requirements.

Accordingly — and this should be emphasized — the enterprises must in their credit calculations analyse mainly the market demand and supply situation, the short- and medium-term trends of the market.

The banking system will do the same in the future. The banking system is to undergo a considerable change in order to become suited for the analysis of the market situation. In addition, both the bank system and the enterprises will, in order to evaluate the market situation, certainly avail themselves of the analyses prepared by various scientific institutions, market research institutes, etc.

When taking its business decisions, the Bank does obviously not undertake to form of itself a judgement on the market relations, and trends. For the bank, it should be repeated, the market relations are reflected in the credit ratings of the enterprises. The Bank will consider creditable the enterprise that regularly sells its products in the market and makes a profit, meeting its payment obligations, and capable of securing future repayment of its credits. The economically well founded credit needs of such enterprises will be regularly accommodated by the Bank.

The enterprises would generally agree with the Bank on these principles. Still, they doubt whether their credit requirements justified by the market situation will always be accommodated.

Is that really so?

The market as an economic regulator can have a positive effect particularly under the conditions of central planning and management. This has already been realized by some western governments. Therefore the credit system is resorted to not only in socialist countries — where this is quite natural — but also in western countries to regulate the market. Socialist enterprises will, obviously, understand that the banking system can grant credits according to market requirements, orders and possibilities up to the limit justified by the market equilibrium and the points of view of economic development. To secure market equilibrium may at times necessitate the restriction of effective demand and with it the restriction of credits. Similarly, short-term market successes of an enterprise would in themselves not warrant the expansion of its operations as considered on the basis of

long-term market trends and the development objectives of the economy. In this case, too, credit restrictions may have to be resorted to.

Are the decisions on questions of this character actually made by the banking system? This is generally not the case. The decisions are made by the Government, which is in a position to survey the economy as a whole, within the framework of the directives of credit policy based on the analysis and proposals of the bank system and the other controlling bodies. In this connection, the banking system carries out the Government's relatively detailed concepts of economic policy.

The enterprise development fund, i.e. the accumulated profits after taxes, as another basis of calculating credit prospects

In calculating medium- and long-term credits, the enterprise has to take into account primarily its expectable profits and the tax rates prevailing, more closely its development fund. The bank system will grant medium-term credits if the enterprise is capable of repayment from its development funds within the period stipulated, which is 3—4 years in the case of investment credits and 5—7 years in the case of other credits.

This feature of the credit system may be explained by the fact that such credits are considered by the Bank as advance payments on the enterprise development fund. Since, according to the principles of the reform, the development fund may be utilized by the enterprise at its discretion, according to its own economic decisions, the opinion has come to prevail that the principle may be extended to credits representing a medium-term advance payment on the funds.

Thus when calculating the prospects of obtaining medium-term operational and investment credits, the enterprise must, above all, carry out business calculations in connection with its development fund.

Considering that such credits are, in fact, a final allocation of national income in the given year, development problems carry much more weight in connection with these credits than do equilibrium problems. Therefore, the principles of credit policy play an important role in granting such credits. When credit resources are tight, it may happen that the enterprise which offers the best business conditions will be granted the credit.

Investment efficiency and expected enterprise accumulation as well as the method of tenders as a basis of calculating long-term credit prospects

With longer-term credits it is particularly important to ensure that the objectives of the national economy assert themselves. Accordingly, the expected efficiency of the investment is an essential element in granting credits. It may, therefore, be assumed that businesslike, competitive bidding

will gain importance when granting such credits. Thus, in their calculations the enterprises will have to reckon to a greater extent with the long-term objectives of the national economy as well as with the novel-type business competition (novel in a socialist economy).

The basic rules governing long-term credits will be approved by the Government; they will prescribe the minimum of rentability to be expected per unit of investment and the maximum term of repayment. The individual applications received will be ranked by the Bank according to these criteria, with a view also to the decisions on restrictions or preferences. When deciding on long-term credits the Bank also relies on the opinions of the competent controlling bodies.

Even if the guide figures mentioned above will be flexibly handled, it may obviously occur that — owing to limited resources — not all demands for development credits can be satisfied. It is in such areas that applicants will compete for credits, and it is the task of the Bank to rank the competing requests, with the ranking having already a decisive effect on the decision. The granting of the credit will be decided in consideration of whether the demand, if realistic, is also advantageous from the viewpoints laid down in the basic credit rules. Generally, with other preferential conditions equal, the Bank ranks more favourably the investment credit demands which promise a quicker recovery of capital and a shorter term of repayment.

The future of the investment projects in process on December 31st, 1967 constitutes a separate problem, particularly in those cases where the investment in question will come within the scope of enterprise decision. According to the government resolutions concerning these projects, those which will have reached 80 per cent of completion will continue to be financed from the budget, while it will be the task of the enterprises to finance further the projects under 20 per cent of completion. It will be left to the enterprises to decide whether to continue these projects or not.

Investments between 20 and 80 per cent of completion will be continued. As regards their financing, all fixed assets put into operation by December 31st, 1967 and 40 per cent of the remaining investment inputs necessary according to the original project will be covered from the budget. The other 60 per cent and incidental additional costs will have to be financed by the enterprise. For both categories to be financed by enterprises, bank credits may be granted.

3. Credit conditions

What are the rates of interest to be reckoned with by enterprises?

Under the new economic mechanism the rate of interest may be considered primarily as a means to influence business fluctuations. Thus, announce-

ment of the rate of interest constitutes a certain indication for the enterprise whether to expect a general expansion of a slower rate of development. The Government took decision on the interest rates as follows:

The basic rate of interest is 8 per cent. For the economy as a whole and for the bulk of short-term credits this fundamental rate will be applied. With short-term credits, interest of a penalty character on overdue payments is also to be reckoned with. Its rate will be uniformly 6 per cent. There will also be higher rates to be charged by the bank whenever the assets are tied-up over longer periods. On credits over 6 months the interest rate will be 9 per cent and on those over 9 months, 10 per cent may be charged.

As against the earlier period, there are changes mainly in respect of the practice to be followed in connection with hindering the cumulation of superfluous stocks. The Bank intends to prevent their formation primarily by its crediting practice. Thus, the highly differentiated system of interest rates, which gave rise to frequent arguments with enterprises, will cease to exist.

4. Some important new features of the credit system to be introduced

Credit refusals

The novel possibility that credit may be refused, will cause serious problems to enterprises. Up to now, on the basis of the plan indicators, credits were almost automatically granted by the Bank and surplus stocks merely penalized by higher rates of interest. Higher rates had some effect on enterprises but a real influence can be exerted by the bank system only if the granting or refusal of credit can be applied as a weapon.

In the neighbouring socialist countries, after the first years of the reform's implementation, measures are now under way instructing the bank system to stop credits financing the production of goods for which there is no market demand, but to grant credits freely for the production of goods required by the market.

This practice should be followed in this country too.

It is envisaged that the banking system will focus its attention on such unwanted products as are turned out in considerable quantities in a single enterprise or in the economy as a whole. Accordingly, it may be expected that credit refusals will be based on extensive economic analyses and in major instances reference will be made to the directives of credit policy, embodying the government decisions. Before taking a decision on such cases, the Bank will meet and coordinate not only with the enterprise but also with the responsible supervising industrial bodies, i.e. it will take its decision in possession of manysided information.

Thus, the enterprises must reckon with the fact that in order to obtain credit facilities they will, as a general rule, have to consult the Bank on questions of business policy and disclose their future plans.

Credit refusal can, of course, be effective only if the enterprise is able to throw its unwanted stocks on the market even at a price below cost; if it can secure them a market at all. This is a problem affecting also the profits of the enterprise.

Enterprise losses and crediting practice

By means of credit granting and refusal based on extensive economic analysis, the credit system intends to achieve that no production of goods takes place which does not satisfy market demand either in the consumption sphere or in those of investment and foreign trade, and that unwanted stocks are liquidated as quickly as possible, even at a loss.

However, the credit system will also aid the enterprise to recover losses incurred. But that will not be done as in the past, i.e. the production of surplus stocks will no longer be automatically financed by bank credits — on the contrary, no such credits will be granted. However, if the losses of the enterprise are expected to be recovered within a year, the Bank will find a solution that enables the granting of credits in such cases. This should, however, be possible only if the enterprise gives an assurance that it will transform its production to fit the market requirements.

In certain cases — and with adequate guarantees — the Bank may grant credits for a period longer than one year if it can be expected that the operation of the enterprise will be restored to profitability within that period.

However, under the new economic mechanism the Bank will not be in a position to extend credit facilities beyond that limit. The problems of lastingly unprofitable enterprises come then within the scope of other authorities: in the course of an economic rehabilitation procedure its range of production may be altered, the enterprise may be reconstructed, amalgamated, even liquidated. Of course, a procedure of this type will take care of the workers and the social problems in the same way as of the questions of an economic character.

The short-term credit contract

According to the preliminary ideas, it should be possible for the enterprise to come to an arrangement with the Bank in the course of the discussion mentioned above, concerning a credit limit based on general credit contract. The aim is here to avoid re-negotiation in each case when short-term financing becomes necessary in the course of the same year. This credit line of a short-

term character is filled up continuously by the enterprise out of its sales returns, and may be transformed into enterprise capital by the expansion of working capital from the development fund, or into medium-term credit. As long as it exists, its purposeful utilization is ensured by regular sales returns.

The enterprise may also obtain additional credits for its business operations, based on individual credit contracts, at the basic rate of interest. Enterprises with good credit rating will be accommodated also with so-called liquidity credits to overbridge payment difficulties lasting no longer than 30 days.

Enterprise working assets and crediting

Thus, the necessary monetary means to meet market requirements are secured for the enterprise in a rather flexible way by the credit system. Beginning with 1965, by government directives the enterprises were granted credits on working assets to the extent of the centrally planned development-induced expansion. This will serve only as a guideline to the regulation of working assets in 1968. This decision is justified by considerations of economic policy, market equilibrium problems and the possible uncertainties of the subsequent years.

As against the past, the enterprises will be in a new position in respect of working capital both as regards its volume and their right to employ it. The bulk of their working capital will be formed out of their own monetary means. Hungary will be outstanding in this respect even in international comparison.

5. Connections between the bank system and the enterprise

The connections with the enterprises will be fundamentally altered primarily by the transformation of the credit system. Crediting will be based in the future on objective facts of trustworthiness and on the directives of credit policy. In addition, the Bank will cease to operate as a state agency of official-administrative character. It will invite the enterprises to supply information in order to be able to take decisions in a responsible manner and the enterprises will willingly submit the information in order to obtain a correct decision regarding their credit request. Beyond the business-type connection, the bank system will not perform any general administrative supervising tasks. The system of central credit planning will be abolished. The application for credit will be left to the initiative of the enterprise.

Accordingly, the Bank will make efforts to satisfy within a given framework and in a flexible manner the enterprises' credit requirements justified by the market situation. However, the Bank is responsible for the credits

granted and therefore — though in a framework of business discussions and contracts — decision on the credit level will be finally taken by the Bank.

To be able to meet a new situation the Bank will have to carry out far-reaching changes in its own organization, too. The most essential feature of these changes is that the Bank intends to charge with the maintenance of direct connections with the enterprise the most qualified banking specialists; let us call them for the time being — in lack of a better term — credit transactors. Thus, the enterprises will maintain in the future banking connections with specialists of managerial rank. It will be mainly their task to work out the business cases and take a decision themselves on minor questions. Major problems will be decided upon in the future at a higher, mainly directorial level. The complaints will thus cease that the problems of the enterprises are often dealt with by minor officials without experience.

On the other hand, the Bank will in the future have its own economic research teams which are expected to support the Bank's credit decisions with manysided market research.

Thus, at the beginning of 1968 fundamental changes, reflecting the spirit of the economic reforms, will take place both in the credit system and in the connections between the Bank and the enterprises. On the basis of the experiences to be gained in practice, further changes in the Bank and the credit systems may also be expected in the course of the years following the implementation of the reforms.

ВЛИЯНИЕ БАНКОВСКОЙ СИСТЕМЫ НА ХОЗЯЙСТВЕННУЮ ДЕЯТЕЛЬНОСТЬ ПРЕДПРИЯТИЙ ПРИ НОВОМ ХОЗЯЙСТВЕННОМ МЕХАНИЗМЕ

Л. АЧ

Суть новой системы хозяйственного управления, введенной в Венгерской Народной Республике с 1-го января 1968 года, заключается в том, что осуществление народнохозяйственного плана государственные центральные органы управления предусматривают обеспечить не путем выдачи прямых директив, а посредством действия экономических регуляторов, влияющих на принимаемые предприятиями решения. В интересах этой системы были значительно расширены сфера принимаемых предприятиями решений и их ответственность. В статье представляются аспекты, с учетом которых была обеспечена согласованность народнохозяйственного плана на 1968 год и экономических рычагов в отношении соотношения потребления и накопления, темпов, структуры и распределения промышленного производства. Соотношение потребления и накопления должно обеспечиваться прежде всего новой системой регулирования доходов, в том числе обложения доходов налогом, на основании которого предприятие приблизительно 60% прибылей уплачивает в государственный бюджет, а 40%-ами оно располагает само с целью развития производства и повышения личных доходов. Распределение между этими двумя целями также регулировалось государством. С системой регулирования доходов связана относительно гибкая система цен. Посредством согласования этих двух регуляторов предусматривается обеспечить повышение реального дохода приблизительно на 3%. В динамике накопления также значительная роль принадлежит принимаемым предприятиями решениям, хотя — особенно в 1968 году — предусмотренные в централизованном порядке капитальные вложения еще составляют относительно большую долю. Гибким орудием

регулирования в этом отношении является система банковских кредитов. В статье детально излагаются вопросы, связанные с действием этих рычагов.

В отношении производства экономические регуляторы, с одной стороны, поощряют увеличение продукции, осуществление экономически эффективных структурных изменений, а с другой стороны, стремятся обеспечить рыночное равновесие путем сдерживания спроса в рамках народнохозяйственного плана. В отношении реализации продукции предприятия имеют большую свободу, на которую в отношении внешней торговли воздействуют специальные экономические рычаги, также детально представляемые в статье.

Z. Román

THE HUNGARIAN INDUSTRY: AN INTERNATIONAL COMPARISON

The article presents the situation and development of Hungarian industry against an international background. The Hungarian data are being compared with those of 7 socialist and 16 capitalist countries in Europe and with those of the USA and Japan. The author reaches the conclusion that Hungarian industry made considerable progress after World War II, but the results are modest in respect of productivity and the competitiveness of products.

In Hungary, as all over the world, there is a growing interest in international comparisons. This is due mainly to the recognition of the need for a scale from which the present stand, the direction of progress and the rate of growth of the economy can be read off. Such a scale can be provided by international data. Their comparison with those pertaining to our own country is indispensable for being able to discover the *general* tendencies of economic growth which are valid also here, to reveal the *specific* features of the economy, to outline the course of development and to provide, within the framework of national economic planning, in an adequate manner for the means to accelerate the development and to render it harmonious.

In spite of the growing needs, there are still numerous white spots on the map intended to show the position of our country as reflected by international comparisons. Even in respect of industry, that most rapidly growing and perhaps most frequently investigated sector of our economy, comparisons were based mainly on the data of a few selected countries and covering some major indicators only. Last year we started to work on a major project: to give a comprehensive picture of the position and progress of Hungarian industry, based on comparison with the data of a great number of countries and also with average data of groups of countries. Within the framework of this project, first a study on the pattern of industry was published [1] and this was followed by a more extensive survey of data and analysis [2]. On the basis of this latter study, an account is given below of the experiences gained and an endeavour is made to outline the main characteristics of the Hungarian industry.

Our investigations extensively relied on the publications of the Statistical Office of the United Nations and the index computations contained therein [3]. Comparisons were made both with the UN data relating to groups of

countries and, on the basis of national statistical publications, also separately with a great number of countries, 35 in all. In the following, however, the Hungarian data will be compared only with those of 23 European countries, leaving out the six smallest countries, as well as with those of the United States and Japan. In twelve of these 25 countries the population is below 10 million, thus less than in Hungary. The comparison accordingly extends to countries greater than, similar in size to and smaller than Hungary.

In the present stage of the investigations, the primary aim was to present the position and progress of Hungarian industry as reflected by international data. As a next step, it is envisaged to analyse more thoroughly and in *quantitative* terms by help of econometric methods the *general* relationships and trends that can be observed in the development of industry and the *specific* features of our industry as related to them. In the following, four aspects of the comparisons worked out will mainly be dealt with, namely:

— the level of industrial production,
— the growth of industrial production,
— the share of industry in the economy, and
— the relation between industry and foreign trade.

However, even the comparison of the industrial sector (including mining, manufacturing, electricity and gas) requires a knowledge of the general level of development in the individual countries. Comprehensive information on that aspect can be best provided by a comparison of GDP per head. The available comparisons of these indicators are, unfortunately, rather scarce and not infrequently even contradictory. As regards the European socialist countries, a sufficiently correct *order of rank* with respect to per capita GDP can be established on the basis of various sources [4, 5] as follows: German Democratic Republic, Czechoslovakia, Soviet Union, Hungary, Poland, Bulgaria, Roumania, Yugoslavia.

In respect of capitalist countries, conversion at official exchange rates is, *on the whole*, acceptable though — as is known — this shows the differences to be greater in favour of the richest countries, principally the United States. It is a more difficult task to fit the series of socialist and capitalist countries together. Most of the comparisons were performed between the Soviet Union and the United States and these have often led to rather different results. According to Soviet sources [6], e.g. the national income per head was almost half of that in the United States. (This has been confirmed also by some American computations; e.g. Pryor—Staller [5] also accept this ratio.) According to other American computations [7], however, the ratio would be instead of 1 : 2, 1 : 3 — though using the GDP concept instead of the net material product concept of Soviet statistics.

It is rather difficult to fit Hungary consistently into both series. In the course of comparisons with capitalist countries the Statistical Office of the United Nations and the World Bank would — essentially on the basis of official exchange rates — put the value of per capita GDP in Hungary for 1964 at about $ 900, which seems too high, while the figure arrived at by F. Jánossy about $ 550 seems too low. Various calculations — which will, however, require further checking — brought us to a value between 600 and 700 dollars. On this basis, Hungary follows after Ireland and Japan in the series of capitalist countries examined and is preceding Spain, Greece and Portugal. The order of the 26 countries examined (including Hungary) can be established as follows:

Table 1

The countries compared, ranked in descending order of per capita GDP

Socialist countries	Capitalist countries
	United States
	Sweden
	Switzerland
	Norway
	German Federal Republic
	United Kingdom
	Denmark
	France
	Belgium
	Netherlands
German Democratic Republic	
Czechoslovakia	
Soviet Union	
	Austria
	Italy
	Finland
	Ireland
	Japan
Hungary	
Poland	
Bulgaria	Spain
Roumania	
Yugoslavia	Greece
	Portugal

Although Hungary stands rather back in the list among the European countries, considering also the great number of the — by UN terminology — "developing" countries in other continents, she may on the whole be termed a moderately developed country. In the following, the position of the Hungarian industry should be analysed from this aspect.

The level of industrial production

The level of industrial development is mostly measured by value added of industry per head of population. In addition, though not an easy task, it should be attempted also to compare the pattern of industrial production as well as the quality and up-to-dateness of the products turned out.

In comparing the level of per capita industrial output we approached the problem from the productivity side, on the basis of the following relationship:

$$\text{industrial production per head} = \text{industrial employment per thousand of population} \times \text{output per head in industry} \times \frac{1}{1000}.$$

This method was justified not only by the fact that we had at our disposal earlier comparisons on the level of productivity but also by the consideration that the relative productivity levels can be checked more easily than if total or per capita industrial outputs were directly compared. Since there are relatively reliable data available on the numbers of industrial employment per thousand of population, relying on them and the indicators showing the level of productivity, the industrial production per head of population can easily be worked out.

From among the socialist countries, detailed comparisons of the level of productivity were made with Czechoslovakia and the German Democratic Republic, and from among the capitalist countries with the German Federal Republic and Denmark. Various methods were used, first of all an adaptation of the so-called product-series method employed mainly in the calculation of the dynamic index numbers of production. According to these computations, in 1964 industrial productivity in Denmark was 100 per cent higher than in Hungary, and for the German Federal Republic, the German Democratic Republic and Czechoslovakia the corresponding percentages were 90, 70 and 60, respectively. Approximate calculations have shown productivity in the USSR to be 60 to 80 per cent higher than in Hungary and in Poland 25 per cent higher. For the other three socialist countries (Bulgaria, Roumania and Yugoslavia) it was, rather cautiously, estimated that their level of productivity was equal to that in Hungary. As regards the capitalist countries examined, the proportions of value added per person

employed were accepted, converted on the basis of the *official* rates of exchange, and linked to the Hungarian data through those of the German Federal Republic. In all likelihood, the productivity data of the capitalist countries would need some adjustment as regards their relative levels (e.g. in the case of the US and Norway, downward adjustment would certainly be warranted but this has no significant bearing on the evaluation of the position of Hungary).

Table 2

Per capita industrial output and its two components as percentage of the corresponding Hungarian data, 1964

Country	Industrial output per head	Industrial employment per 1000 of population	Output per person employed in industry
	as percentage of the Hungarian level		
United States	372	63	591
German Federal Republic	270	142	190
United Kingdom	254	115	221
Switzerland	253	138	183
Denmark	229	106	216
Sweden	222	97	229
Norway	213	79	269
Belgium	195	98	199
German Democratic Republic	179	105	170
Czechoslovakia	174	109	160
Austria	171	90	190
France	160	78	205
Netherlands	152	80	190
Soviet Union	118—133	74	160—180
Italy	109	57	192
Japan	103	78	132
Hungary	*100*	*100*	*100*
Finland	96	73	131
Poland	89	71	125
Ireland	84	52	161
Bulgaria	67	67	100
Yugoslavia	64	64	100
Spain	64	55	117
Roumania	55	55	100
Portugal*	50	67	75
Greece	26	38	68

* Based on 1961 data.

As shown in Table 2, in 19 out of the 25 countries examined industrial productivity is definitely, and in most cases considerably higher than in our country. According to our data, productivity is higher even in Spain and it is only in five countries *not higher* than in Hungary (in Greece and Portugal it is certainly, and in Yugoslavia, Roumania and perhaps also in Bulgaria it may be lower). Thus, in respect of the level of productivity, Hungary occupies the 20th—22nd place in the range. As regards industrial employment per thousand of population, on the other hand, Hungary is preceded by only six countries: the German Federal Republic, Switzerland, United Kingdom, Czechoslovakia, Denmark and the German Democratic Republic.

Under the joint effect of these two factors, Hungary occupies the 16th—18th place in respect of industrial output per head of population. Japan and Finland are on about the same level while in Poland, Bulgaria, Yugoslavia, Roumania, Ireland, Spain, Portugal and Greece per capita industrial output should be lower than in Hungary. At the same time, the distance separating this country from those ahead of us has considerably diminished in the last decades as regards per capita industrial output, and this applies, though to a moderate degree only, also to productivity.*

The order of the countries examined is almost the same in respect of industrial output per head of population as was shown for GDP. Hungary ranks somewhat higher, overtaking Ireland and perhaps also Finland. There are some further characteristic differences in the two series: as regards industrial output, the GFR, the UK (and Austria!) rank higher while Sweden, Denmark, France and the Netherlands lower than as regards GDP. The well-known fact that a higher per capita national income is generally accompanied by higher per capita industrial production is borne out also by these figures.

As regards the position of Hungary, it is worth attention that she attains a medium level of per capita industrial production with low productivity and high industrial employment. Industrial employment per 1000 of population was 154 in 1964. Considerably higher values of this indicator can be found only in the GFR (218) and Switzerland (212), while in some highly industrialized countries such as Sweden or the USA the corresponding figures are much lower (149 and 97, respectively). The figures go to show that further industrial growth in Hungary must be based on the rise in productivity, with the increase in industrial employment playing but a minor role.

A certain relationship may be observed between the level of per capita industrial production and the pattern of industrial output but — primarily because of the role of foreign trade — this relationship is not very marked.

* According to the data of I. Svennilson [8], in 1938 per capita industrial output was five times higher in Germany than in Hungary, and by our calculations in 1964 only about three times.

A detailed comparison of the pattern of Hungarian industry had been already made earlier [1] and these calculations were now verified from two aspects. First, it was examined what would be the possible effect on the figures obtained if the pattern of Hungarian industry were compared to that of the individual capitalist countries according to the price ratios prevailing in those countries; second, the differences were analysed which are due to the fact that the coverage of the Hungarian industry and that of the capitalist countries to which it was compared do not cover exactly the same spheres of industrial activity. According to these investigations, the high shares of Hungarian coal mining and metallurgy are partly the consequence of specific Hungarian price relations; and as regards the *total* industrial activity the share of the food industry would be slightly lower if the corrections were taken into account. For the rest, the pattern of Hungarian industry, as established earlier, would not be essentially modified by either correction. The most characteristic feature of this pattern is invariably the relatively high share of the engineering industries. However, this fact conceals a series of important problems. Many of the Hungarian engineering products are not sufficiently up-to-date. This makes their profitable export difficult. On the other hand, if used for domestic investment, they do not sufficiently raise industrial productivity. This also indicates that in comparison to the European countries not only per capita industrial output is of a medium level but — if in this respect an *average level* can be conceived of at all — also the quality and up-to-dateness of our products. To reach a higher level requires thus not only an increase of the volume of production but also a simultaneous improvement in quality as well as modernization.

The growth of industrial production

On the growth of industrial production there are detailed figures available for the period since 1950, less reliable and complete ones for the period 1938 to 1950, and much less reliable ones for the years prior to 1938. The average annual rate of increase in industrial production between 1950 and 1965 was

11.0 per cent in the socialist countries*
5.4 per cent in the developed capitalist countries
7.9 per cent in the developing countries
9.7 per cent in Hungary.

(The index for socialist countries is based on the concept of value of gross output, and shows in some cases a higher rate of growth than the index

* Following the UN sources quoted, the term socialist countries includes here and in further tables Bulgaria, Czechoslovakia, Poland, Hungary, GDR, Roumania and the Soviet Union.

computed on the basis of national income, or value added or that approximating it. But even if "downward corrected", these indices would be higher than those relating to the other groups of countries. This holds even for such apparently exaggerated corrections as were proposed by Maurice Ernst [9].)

Considering the period between 1950 and 1965, the socialist countries surpass all other countries in respect of the growth of industrial output. Though in all socialist countries except Czechoslovakia industrial production increased more rapidly than in Hungary, of the capitalist countries examined it was only Japan which showed a higher rate of growth (15 per cent on average). However, in 1950 Japanese industrial output had not yet reached the pre-war level, and reconstruction was still in progress.

There are also other countries where it requires consideration whether the year 1950 is suited to be taken as a basis. These countries, even if they had attained the pre-war level in production (and productivity), had surpassed it to various extents and had therefore unequal possibilities to catch up with normal progress. However, for the majority of the countries examined we are in a position to compare also the increase in industrial production between 1938 and 1965. For Hungary, this rate was about 7 per cent. A greater rise in industrial output can be found in the long run only in five socialist countries (Bulgaria, Yugoslavia, Poland, USSR, Roumania). Industrial output per head in 1938 was in all these countries much lower than in Hungary and is — with the exception of the Soviet Union — still so at present. Between 1938 and 1965 the growth rate of industrial production in Spain was about the same as in Hungary, while in Japan and the USA it was slightly lower, though the latter country had not suffered seriously in the Second World War. In the European capitalist countries industrial output increased over the same years at an annual rate of 3 to 5 per cent. Thus, as regards the growth of industrial production, Hungary occupies an outstanding position. True, she had started from a level much lower than the majority of the countries examined but — as is known — this not only provides more favourable opportunities but also implies difficulties hard to surmount.

For several countries, some data are also available on the growth of industrial output prior to 1938. In most countries industrial output between 1913 and 1938 rose only very moderately, by one or two per cent p.a. The rate of industrial growth was several times higher than this average in the Soviet Union — which surpassed all other countries — and relatively high also in Japan. In the same period, in Hungary the growth rate of industrial production was about one per cent. In the past few decades the growth of industrial production has accelerated in almost all countries but in Hungary the acceleration has been particularly marked.

Between 1950 and 1965 the growth rate showed considerable fluctuations in the majority of the countries examined. Therefore, any division into

periods — thus also the one into five-year periods shown below — can be used with qualifications only. The increase in industrial production in Hungary and in the individual groups of countries in the three five-year periods between 1950 and 1965 is shown in Table 3.

Table 3

Average annual growth rates of industrial production in the three five-year periods of 1950—1965

	1950—1955	1955—1960	1960—1965
Socialist countries	13.4	10.6	9.0
Developed capitalist countries	5.9	4.2	5.8
of which: EEC	9.4	6.7	5.6
EFTA	4.0	3.3	2.2
USA	5.2	2.4	5.7
Developing countries	7.3	8.0	8.3
Hungary	*13.8*	*7.6*	*7.3*

In all three sub-periods the growth rate of industrial production was higher in the socialist countries than either in the developed capitalist or in the developing countries. However, a certain decreasing tendency may be observed. In the second sub-period there was a transitory slowing down in the developed capitalist countries, while in the developing countries the rate somewhat increased. As about half of the output of developed capitalist countries is contributed by the USA, the decrease may be mainly attributed to the recession in that country. As regards the European capitalist countries, the growth rate gradually decreased and that to a greater extent than in the group of socialist countries. As regards the Hungarian industry, a considerable decrease in the growth rate may be observed between the first two sub-periods.

The countries afflicted by the Second World War generally surpassed by 1950 their pre-war level in industry (Japan being an important exception), but for some years they must have utilized much of their production and technical facilities accumulated and not used in the course of previous years. In addition, in the socialist people's democracies much of the advantages offered by the transition to socialist economy was utilized in the early fifties. These facts may account in part for the slower growth rate in the second sub-period against the first one in the case of the socialist and the European capitalist countries but the third sub-period requires a separate analysis. In the case of the USA, again, some specific factors of business cycle may be held responsible. Though a certain slowing down of the rate of growth

seems to be fairly general, if analysed by individual countries rather numerous exceptions may be found. Therefore, it would be premature to draw from the trend of average growth rates any general conclusion concerning either the future development of production or the general rules underlying the development tendencies in these countries.

Table 4

Average annual growth rates of industrial production in the three five-year periods of 1950—1965, by countries[a]

Country	1950—1955	1955—1960	1960—1965
Bulgaria	13.6	16.3	11.8
Czechoslovakia	10.9	10.5	5.2
Yugoslavia	7.0	13.3	10.6
Poland	16.9	9.8	8.6
Hungary	*13.8*	*7.6*	*7.3*
German Democratic Republic	16.1	9.4	5.8
Roumania	16.5	11.4	13.9
Soviet Union	13.1	10.4	8.5
Austria	9.5	5.9	4.4
Belgium	4.6	2.3	5.7
Denmark	2.2	6.7	6.6[b]
United Kingdom	3.6	2.5	3.2
Finland	8.9	4.6	6.6
France	5.6	6.6	5.1
Greece	11.0	7.6	7.9
Netherlands	6.2	5.6	6.0
Ireland	3.8	3.6	6.6
German Federal Republic	12.1	7.0	5.8
Norway	6.0	4.6	5.9
Italy	9.2	8.8	6.8
Spain	9.6	6.1	11.4
Sweden	3.1	4.2	7.4
United States	5.2	2.4	5.7
Japan	15.2	16.6	11.6

[a] In Bulgaria, Czechoslovakia, Poland, GDR, Roumania, USSR based on index numbers of gross value of output, in all other countries on value added.
[b] 1950—1964.

The *sources* of the growth of industrial production have been analysed from several aspects, above all from those of employment and productivity. The analysis showed that in the period under review it was only in Yugo-

slavia that increase of employment played a greater role than in Hungary: in all other countries the greater part of increase in the volume of production was due to growth in productivity. For the Hungarian industry it is characteristic that employment increased at a relatively high rate (5.4 per cent p.a.) and productivity only at a moderate one (4 per cent p.a.). From among the countries analysed, there are only two where the rise in employment was

Table 5

Growth rates of industrial production, employment and productivity between 1950 and 1965

Country	Average (compound) annual growth rate, 1950—1965			Production increase attributable to growth in productivity (percentage)
	Production[a]	Employment	Production per person employed (productivity)[a]	
Japan	14.5	4.9	9.1	65
Roumania	13.9	4.9	8.6	64
Bulgaria	13.9	7.0	6.7	49
Soviet Union	10.7	3.6	6.9	66
Yugoslavia[b]	12.3	7.3	4.7	39
Poland	11.7	4.2	7.1	63
German Democratic Republic	10.4	3.1	7.1	70
Hungary	*9.5*	*5.4*	*3.9*	*42*
German Federal Republic	8.3	3.8	4.3	53
Italy	8.2	1.6	6.4	80
Czechoslovakia	8.9	2.9	5.9	67
Austria	6.6	1.4	5.1	79
Finland	6.7	2.6	4.0	61
France	5.7	0.5	5.2	91
Netherlands	5.9	1.3	4.5	78
Norway	5.5	1.5	3.9	72
Denmark[c]	6.2	2.4	3.8	61
Ireland	4.7	1.7	3.0	64
Belgium[d]	4.3	0.5	3.8	88
United States	4.4	1.0	3.4	77
Sweden	4.9	0.8	4.0	83
United Kingdom[d]	3.1	0.4	2.7	87

[a] In Bulgaria, Czechoslovakia, Poland, GDR, Roumania, USSR based on index numbers of gross value of output, in all other countries on value added.
[b] 1952—1965.
[c] 1953—1965, manufacturing only.
[d] 1950—1964.

greater (Yugoslavia and Bulgaria) while there were 14 with a greater increase in productivity. On the other hand, considering the whole period, the growth rate of productivity declined in several countries while it somewhat increased in Hungary.

We had not succeeded in assessing unequivocally the role of investments in the growth of industry. Although the data admit of the conclusion that a greater volume of investment certainly promotes the growth of production (and productivity), also high investment rates coupled with low growth rates and high growth rates accompanied by low investment rates may be found. The exploration of the causes requires further investigations covering the sectoral pattern and several other characteristics of industry.

As is known, investment in fixed capital may promote the growth of production in two ways: by creating new working places and raising the productivity of the existing ones. It may be stated that in the Hungarian industry the investments between 1950 and 1965 served primarily the former purpose as well as the development of certain highly capital-intensive industries (mining, metallurgy, electricity) and contributed only moderately to the growth of productivity. This was, obviously, due also to the manpower supply and to a policy aimed at raising employment rather than productivity.

The share of industry in the economy

The share of industry may be analysed mainly on hand of two indicators: industrial employment and industrial production. As regards employment, the most important data have already been cited above; they show that the industrial employment is relatively high in Hungary. Let it be added that this high level in comparison to more developed countries is mainly due to the relatively low share of service industries in this country.

In 1964, industry and agriculture had approximately equal shares in employment. If the weight of industry is measured by this ratio, it will show higher degree of industrialization even for such countries where industrial employment per 1000 of population is lower than in Hungary. From among these countries industrial employment was higher than agricultural in Austria, France, Netherlands, Italy, the USA and Japan.

The share of industrial production in national income in terms of value added could be examined only at domestic prices and the results obtained are in no small degree influenced by the particular features of the national price systems. This factor may have a particularly significant role in the comparisons made with the data of the socialist countries (both within this group and with capitalist countries). In 1964, in the group of socialist countries the share of industry in national income was the following.

Table 6

Indicators characterizing the weight of industry in the group of socialist countries, 1964

Country	Percentage share of industry in the national income (at domestic prices)	Industrial employment per 1000 of population
Czechoslovakia	65	168
German Democratic Republic	65	162
Hungary	*64*	*154*
Soviet Union	54	114
Poland	51	109
Roumania	48	84
Bulgaria	45	103

The ranking obtained on the basis of the share in national income agrees with that yielded by the indicator of industrial employment per 1000 population with the exception that according to the latter Roumania is preceded by Bulgaria. However, it has been shown for several countries — thus also for Hungary and the Soviet Union — that actual prices contain an upward bias in favour of industry and thus exaggerate its share in national income. (A similar conclusion has been reached by T. D. Alton and collaborators in respect of other socialist countries, too [10].) In Hungary e.g. the share of industry may be put at 40—45 per cent both at input-proportionate prices derived from input-output tables and at world market prices; in the Soviet Union, on the basis of various types of input-proportionate prices it is estimated to be about 40—42 per cent [11]. Though the role of relative prices requires further investigation, the ranking itself is likely to be correct. According to this indicator Hungary occupies a place among socialist countries behind Czechoslovakia and the GDR.

The UN statistics publish data on the share of industrial production in comparison to value added (net of turnover tax) at national prices. In order to eliminate the effect of a wide range of services taken into account in the statistics on the data characterizing the share of industry, we have used approximate indicators covering only the sphere of material production. According to these, out of the countries examined the share of industry is highest in the UK and the German Federal Republic (58 per cent) and lowest in Greece (29 per cent). Hungary, with an estimated 40—45 per cent, is preceding such European capitalist countries as Denmark, Norway, Finland, Ireland, Spain and Greece. Out of these six countries, in the first four per capita national income is higher than in Hungary but it is, to a considerable extent, derived

from non-industrial sectors. (Since in the more advanced countries the share of services is higher, the ratio of industry to GDP — inclusive of all services — would appear considerably lower.)

The share of industrial production in national income has grown everywhere between 1950 and 1965, but the same cannot be said of industrial employment, since in several countries almost 80—90 per cent of the growth of industrial production was due to increased productivity. (At the same time — as is known — in the service industries, which developed at a similar rapid rate, the growth of productivity was slower.) In Hungary the agricultural manpower and women in households flowed into the industry at a particularly marked rate, and the growth of industrial production surpassed that of national income to a much greater extent than in the other countries examined. According to the new, adjusted index numbers total national income increased between 1950 and 1965 by 5.4 per cent p.a. and the contribution of industry by 8.3. A greater difference than this in favour of industry can be found among European countries only in Ireland, which is in a special position with the process of industrialization just beginning. At the same time, the growth rate of national income derived from agriculture has not reached even 0.5 per cent p.a. in Hungary. Of the countries examined (and publishing such data) only Czechoslovakia and Norway show a lower rate; in these countries the value added by agriculture decreased; on the other hand, the role of this sector is much smaller there than in Hungary.

The picture becomes somewhat more favourable if we consider gross agricultural production, which grew at an average annual rate of 2.5 per cent. However, even this rate seems to be relatively low. As a matter of fact, several countries may be found where industry developed at a similar rate as in Hungary, with agriculture also showing a considerable rate of growth (value added increased by more than 4 per cent annually e.g. in the GDR, Bulgaria and Greece). Hungary's economic development is thus characterized by a rapid growth of industry accompanied by a slow progress in agriculture. Up to now, the rapid growth of industry has on the whole counterbalanced the lagging behind of agriculture and has led to a relatively considerable rise in national income; as regards, however, the future, both domestic consumption and export requirements call for a boosting of agricultural output.

Industry and foreign trade

One of the major problems in developing the Hungarian economy and industry is to keep the balance of trade in equilibrium. This lends an utmost importance to investigations concerning the interrelations between the level of industrial production and foreign trade and their growth and pattern. Between 1950 and 1964, the average annual increase in the volume of foreign

trade was 11 per cent (slightly higher than the growth rate in industry and much higher than that in national income). The opinion is widely held that the growth of foreign trade was too rapid and imposed a too heavy task on the economy. International figures, however, show that — especially in small countries — economic growth is accompanied mostly by a rapid expansion of foreign trade.

In most countries, by 1950 foreign trade had not yet reached its "normal" level and the quick development in subsequent years did partly and to varying extents make up for the stagnation of earlier years. Therefore, comparisons in this field must be made with great caution. Even in consideration of the above it might be stated that in several countries a similar or even higher growth rate of foreign trade than of GDP or of industrial output is observable. For the socialist countries the following data may be given.

Table 7

Average annual increase of foreign trade in socialist countries, 1950—1964

Country	Annual increase of foreign trade (compound percentages)	Increment of foreign trade per one per cent increase in		Per capita foreign trade as a percentage of that in Hungary, 1964[b]
		national income	industrial output	
Bulgaria	16	1.7	1.2	94
Czechoslovakia	9	1.6	1.1	135
Poland	9	1.2	0.7	50
Hungary	*11*	*2.0*	*1.1*	*100*
German Democratic Republic	14	1.9	1.3	124
Roumania	12	1.2	0.9	43
Soviet Union	12	1.3	1.1	26
Yugoslavia[a]	11	1.2	0.9	41

[a] 1952—1964.
[b] Based on rouble data (for Yugoslavia on dollar data).

Of the capitalist countries examined, only in three countries was the growth rate of foreign trade greater than in Hungary: in Japan (16 per cent), in the GFR (13 per cent) and in Italy (12 per cent). In Austria it was about equal to that in Hungary (10 per cent). However, foreign trade grew considerably also in the other countries, usually at a rate higher than GDP. The rate was between 7 and 9 per cent in the Netherlands, Spain, Greece, Belgium, Finland, France, Denmark and Norway. This group includes also several small countries where the per capita value of foreign trade was high — higher than in Hungary — in 1950 already and where foreign trade has still increased since.

In comparison to the growth of GDP or of industrial output, the increase in foreign trade in these countries seems to be still greater. The increase in the volume of foreign trade was double, or nearly double, the growth rate of GDP in Belgium, the Netherlands, the GFR, Austria, Italy and Denmark, and with the exception of the two last countries surpassed by about 50 per cent the growth rate of industrial production.

As regards the volume of per capita foreign trade, of the socialist countries only Czechoslovakia and the GDR surpassed Hungary (by about 30 per cent), but in the majority of capitalist countries it was much higher — not infrequently three or four times as high. Of course, this should be attributed partly to the higher per capita GDP in these countries. But in the small countries which are more advanced than Hungary also the ratio of foreign

Table 8

Some characteristics of the volume and pattern of foreign trade, 1964

Country	Per capita		Foreign trade as a percentage of GDP	Percentage share of			
	imports	exports		agricultural and food products	engineering products	agricultural and food products	engineering products
	as a percentage of the Hungarian data			in total imports		in total exports	
Hungary	*100*	*100*	*40—45*	*9*	*33*	*21*	*43*
Austria	175	150	44	14	34	5	25
Belgium and Luxemburg	428	446	81	13	27	6	23
Denmark	375	336	60	34	29	50	23
United Kingdom	195	171	30	33	12	7	48
Finland	222	211	66	12	39	4	11
France	141	139	25	19	23	16	30
Greece	70	27	31	14	39	65	2
Netherlands	394	359	74	14	28	25	26
Ireland	231	163	63	18	30	62	7
German Federal Republic	170	208	31	22	14	2	54
Norway	363	261	47	11	40	17	16
Italy	96	87	25	20	22	12	35
Portugal	58	42	34	14	28	24	6
Spain	49	23	19	17	32	53	10
Switzerland	407	330	51	16	30	5	50
Sweden	340	359	47	13	33	3	38
United States	66	102	8	22	15	19	40
Japan	55	52	21	18	11	5	36

trade to GDP was higher without an exception. The continued rapid development of the economy will, accordingly, necessitate a further rapid growth of the volume of foreign trade and this must be secured also from the side of production, primarily by rendering the products more competitive.

In addition to the growth in volume, also the commodity pattern of Hungarian foreign trade underwent considerable changes. The share of engineering products and chemicals in foreign trade is growing throughout the world while that of textiles and food products is diminishing. This is due to two reasons: first, both consumption and production are rapidly growing in the first two groups and also the international division of labour is expanding in these fields. There were similar changes in the commodity pattern of Hungarian exports, but their extent was greater than average. The share of agricultural and food products in our exports fell almost to two thirds of its former level (from 29 to 21 per cent). A greater decrease occurred only in Denmark, but nowhere else can a change of similar extent be observed. The share of engineering products in Hungarian exports rose from 19 to 43 per cent. A greater change can be found only in Italy (from 19 to 35 per cent) and an approximatively equal one in Belgium (from 14 to 23 per cent). The case of Japan, with an increase from 13 to 36 per cent, is special, since by 1950 she had not yet reached the pre-war level. Thus, the two most characteristic features of the change in the structure of the Hungarian economy — i.e. the considerable growth of the share of industry, and, within that, particularly of engineering — were in close connection with the changes in the pattern of exports. However, as will be remembered, as a consequence of marketing difficulties this pattern of exports is not without problems.

Within our total exports in 1964, the ratio of agricultural and food products amounted to 22 per cent, that of industrial products (excl. food) to 78 per cent (calculated on the basis of data in foreign exchange forints). The share of industrial products (in the above sense) was higher only in the GDR and Czechoslovakia in the group of socialist countries and in about half of the capitalist countries examined. At the same time, the fact that the share of *imported* agricultural and food products was higher in all capitalist countries than in Hungary, indicates that our agriculture invariably has an important role. In these products only Denmark and Ireland and of the socialist countries only Bulgaria and Roumania showed a higher *export surplus*. A similar, though smaller positive balance appears in engineering products. This is worth mentioning since several countries which are more advanced than Hungary have a negative balance in these products (e.g. Belgium, Netherlands, Norway and Austria).

It should be added that while the above refers to global exports and imports, the commodity pattern varies considerably from one export or import market to the other. As regards exports to capitalist countries where

high requirements are raised in respect of quality and up-to-dateness of the products and where certain restrictive measures have to be faced, the share of food products is about 40 per cent as against the average 22 per cent, and that of other industrial products (food products excluded) is around 60 per cent as against the 78 per cent average, with a considerable part of exports made up of materials and intermediary products. Thus, the role of agriculture and of the food industry is greater in Hungarian foreign trade than indicated by the global figures and, accordingly, these branches of the economy deserve greater attention.

Some conclusions

A comparative analysis of the characteristic features of Hungarian industry — of the main characteristics which according to our present knowledge lend themselves to international comparison — indicates that there are a great number of common features in the economic growth of various countries and in the development of their industries. The special and distinctive features of Hungarian industrial development may be recognized and correctly evaluated primarily against this background.

As reflected by international comparisons, the growth of industrial production in Hungary over the past 15 to 20 years has been conspicuous, that of national income significant, that of agricultural production but slight. The weight of industry within the economy has increased considerably, be it from the point of view of contribution to national income, of employment, or of the pattern of exports. Agricultural employment has significantly decreased and — since the level of production has hardly changed — the increase in productivity in this sector may be almost entirely attributed to this factor. A considerable part of the agricultural population and of the urban population as yet unemployed, as well as entering in working age, was finding employment in industry. Industrial employment increased at a rarely experienced rapid rate, to which about half of the increase in production may be attributed; the rise in productivity was, at the same time, but moderate. Foreign trade also increased rapidly — but *not at an unusual quick rate* if compared to either national income or industrial output. As regards the pattern of industry by branches, it was primarily the share of the engineering and chemical industries which increased, while that of mining, the textile industry and the food industry diminished — in accordance with the general trends of development.

In respect of the ratio of those employed in industry, Hungary occupies the 7th place among the 26 European countries examined; as regards productivity level, she has the 20th or 22nd place; and in respect of the level of per capita industrial output the 16th or 18th place. As regards per capita

national income, the country is likely to occupy the 19th place. The majority of countries outside Europe belongs to the "developing" (underdeveloped) category and these Hungary surpasses significantly; she may therefore be classed as a moderately developed country. But here we are, quite naturally, concerned primarily with the surrounding European countries and with the more advanced ones. Hungary's present position is, to a great extent, still the consequence of an historical heritage of several centuries. But it is also the consequence of the fact that economic growth has accelerated throughout the world and thus — in spite of rapid progress — the country's disadvantage against the more advanced countries, though diminished, is still considerable. At the same time, the present position constitutes a starting point for further development, and from this point of view it shows several encouraging features.

The level of productivity is relatively low in Hungarian industry: industrial employment is greater than justified by the present level of production. However, the present manpower offers — by means of increased productivity — the possibility of further rapid growth in output. The question of the industry's supply with skilled workers, engineers and other specialists was not examined here; it is, however, certain that in this respect Hungary is in a favourable position as regards both the level of qualification or the number of qualified manpower. The system of training and the supply of specialists would enable a much higher level of productivity. The advantages offered by the socialist economic system have by far not been fully utilized; the *new system of economic guidance*, introduced at the beginning of 1968 and the *economic policy* based on it will certainly create the necessary conditions. International trends support the statement that further progress of the Hungarian economy has to be built invariably on the growth of industry, accompanied by a quicker growth than hitherto of agricultural production and of the service industries. The growth of industry can, however, be attained only with the concomitant increase in productivity and in the volume of foreign trade. Industrial activity must, therefore, be focussed on raising productivity and improving the quality, up-to-dateness and competitiveness of the products.

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ВЕНГЕРСКАЯ ПРОМЫШЛЕННОСТЬ В МЕЖДУНАРОДНОМ СОПОСТАВЛЕНИИ

З. РОМАН

В статье представлены основные характерные черты положения и развития венгерской промышленности — в международном сопоставлении. При сопоставлении уровней основой служат данные по 7 европейским социалистическим и 16 европейским капиталистическим странам, а также США и Японии за 1964 год. В качестве введения дается порядок рассматриваемых стран по величине национального дохода в расчете на душу населения; Венгрия среди 26 стран попадает на 19-ое место, но, учитывая большое число экономически отсталых стран остальных континентов, она в целом характеризуется как страна со средним уровнем развития.

Соотношения уровней промышленного производства в расчете на душу населения определяются и представляются в статье на основании уровня производительности труда и числа занятых в промышленности в расчете на 1000 жителей. Венгрия по производительности занимает 20—22-ое место, по соотношению занятых в промышленности — 7-ое, а по промышленной продукции в расчете на душу населения — 16—18-ое место. Дальнейший рост промышленного производства таким образом, должен основываться, в первую очередь, на росте производительности труда.

Промышленное производство в Венгрии за прошедшие десятилетия росло быстрыми темпами, более быстрый рост наблюдался лишь в социалистических странах. Этот рост производства, однако, происходит большей частью за счет увеличения численности занятых в промышленности; темпы роста производительности труда были сравнительно скромнее, их превысили даже в ряде капиталистических стран. По сравнению с промышленностью развитие сельского хозяйства было незначительным. Правда, в последнее время быстрый рост промышленного производства в значительной мере компенсировал низкий рост сельскохозяйственного производства и рост национального дохода в целом был значительным, в будущем, однако, как внутреннее потребление, так и потребности экспорта потребуют более быстрого развития сельского хозяйства.

Удельный вес промышленности в венгерском народном хозяйстве на основании доли занятых в ней представляется весьма высоким, это, однако, является следствием того, что в отраслях, относящихся к услугам, занято относительно незначительное число работников. (Доля занятых в промышленности и в сельском хозяйстве в Венгрии еще приблизительно тождественна). Доля промышленной продукции в национальном доходе в Венгрии является средней: среди социалистических стран Венгрия следует за Чехословакией и ГДР, но не достигает уровня большинства европейских капиталистических стран (если элиминировать влияние учета по национальным ценам). В нашем экспорте в 1964 году доля продукции сельского хозяйства и пищевой промышленности составляла 22%, а доля (прочих) промышленных изделий — 78%. Удельный вес промышленной продукции в экспорте (в вышеуказанном понимании) из числа социалистических стран был выше только в ГДР и Чехословакии, но также и приблизительно в половине рассматриваемых капиталистических стран. В то же время о неизменно важной роли нашего сельского хозяйства свидетельствует то обстоятельство, что нами ввозится относительно незначительное количество продуктов сельского хозяйства и пищевой промышленности, а также что в экспорте на рынки капиталистических стран доля сельскохозяйственных и продовольственных продуктов в общем составляет 40%.

В свете международных сопоставлений следует считать за последние 15—20 лет выдающимся рост продукции нашей промышленности, значительным — рост национального дохода, но незначительным — развитие сельского хозяйства. На основании тенденций развития, наблюдаемых в международном плане, дальнейшее развитие венгерской экономики должно основываться на росте промышленного производства — при более быстром, чем раньше, развитии сельскохозяйственного производства и относящихся к услугам отраслей. Дальнейший рост промышленного производства в то же время возможен лишь при таком же быстром росте производительности труда и внешнеторгового оборота. Центральным вопросом деятельности промышленности, таким образом, должен стать рост производительности труда и повышение качества, технического уровня, конкурентоспособности ее изделий.

R. TRIFFIN

MONETARY ASPECTS OF INTERNATIONAL ECONOMIC INTEGRATION*

Economic integration is a world-wide process; the road to it is paved with homogeneous, regional groups. Accordingly, also in the special field of international payments the creation of partial, regional reserve centres is needed. The road to monetary cooperation between two regions may lead through the cooperation of the corresponding reserve centres, which could be a suitable form of monetary cooperation between Eastern and Western Europe.

1. The movement toward regional integration began many centuries ago, with the merging of cities, countries, dukedoms, etc. into the modern national states. It is continuing today with the gradual merging of the nation-states themselves into larger economic, and even political units.

The gradualism of the process often obscures its significance to contemporary observers. National borders are subtly eroded, rather than spectacularly torn down, and the pretension of national sovereignty continues to be jealously preserved while its reality melts away under the impact of inexorable forces as well as of laggard human intelligence and conscious decisions. Enlightened self-interest increasingly imposes a modicum of international consultations long before they become consacrated and institutionalized into formal treaties and binding commitments. And where such consultations fail to develop, the compatibility of national policies is often enforced upon the weaker nations by the unilateral decisions of the stronger.

Similar limitations apply to national economic and monetary sovereignty, and extend far beyond formal bilateral or multilateral treaties and commitments. The latter, indeed, most often do little more than organize and legalize, belatedly and partially, some of the wider consultation habits which have grown previously under the basic forces of interdependence which nations are less and less able to elude without major damage to their own self-interests. Fears, or threats, of retaliation, as well as a growing awareness of the benefits to be derived from mutual assistance and mutually supporting policies, underlie

* The text of this article is essentially identical with the lecture of Professor TRIFFIN, delivered on a symposion held in 1967 in Budapest under the auspices of the *European Centre of the Carnegie International Peace Foundation* (Geneva) and the *Hungarian Institute for Cultural Relations*. Ed. note.

more and more national policies and international consultations in the economic and monetary fields. Formal agreements — in GATT or the IMF, for instance — are only the visible part of a much larger iceberg, the bulk of which is submerged and largely hidden from view.

A realistic map of our economic and political world would erase the simple boundary lines between nation-states, and replace them with dotted lines of various intensity and permeability, indicating various degrees of economic and political integration.

2. Academic economists have long been in the forefront of this integration movement insofar as it entailed the mere dismantling of protectionist national barriers to trade. Their "laissez passer" prescription in the international field was allied, however, with a "laissez faire" philosophy which was inexorably losing ground in domestic economic policies. National interventional policies require far more than merely negative *laissez passer* policies to be reconciled with one another. International integration must acquire a positive content through mutual assistance and, most of all, policy coordination designed to ensure the compatibility of national aims and means of policy with one another in mutually supporting, rather than mutually defeating, fashion. Failing such reconciliation, national states can hardly be expected to accept and implement renunciation to external policies — such as, for instance, unilateral exchange rate adjustments or recourse to trade and exchange controls — damaging to other countries but regarded as useful, or even inescapable, for the maintenance of domestic policy objectives. The liberalization program of OEEC (Organization for European Economic Cooperation), for instance, did not get really off the ground until the EPU (European Payments Union) could be agreed upon to provide mutual clearing and credit facilities to smooth out the unpredictable impact of liberalization on each country's balance of payments. Credit facilities, moreover, as well as temporary escape clauses from liberalization commitments could not be provided without parallel agreements on internal policy confrontation and consultation aiming at eliminating persistent balance-of-payments surpluses and deficits, so as to insure the repayability of credits and/or the removal of the temporary restrictions allowed under escape clauses.

A second, and equally "academic" flaw in the academics' policy prescription was their insistence on *worldwide*, as against merely *regional* integration agreements, the latter being viewed askance as essentially discriminatory and susceptible of leading to autarchic blocks depriving the world from the maximum benefits derivable from worldwide free trade. Free — or even simply *freer* — trade commitments are, as just pointed out, unnegotiable in practice without supporting, and positive, financial and internal policy commitments, and such commitments themselves are far less negotiable among the several scores of countries in which the world is now divided than they are within

smaller groups of neighboring countries, with a more homogeneous historical and cultural heritage, keenly aware of their mutual interdependence, prepared to understand and trust one another's policy, and better able to enforce upon each other mutual compliance with the mutual commitments involved.

3. The post-war drive toward regional economic integration, therefore, did not spring from so-called "expert" economic advice, but from politics and common sense. In Western Europe it originated with the Marshall Plan and the OEEC. Intra-European cooperation was strongly pushed by the United States as a way to accelerate economic reconstruction and fill a power vacuum.

The spectacular success of OEEC, in its first ten years of existence, contrasted sharply with the dreary results of the nationalistic economic policies of the 1920's, and particularly of the 1930's. Moreover, the devastation and deaths wreaked by two world wars had all but destroyed emotional as well as intellectual attachment to outworn illusions of national sovereignty. Both factors combined in stimulating the more ambitious efforts at economic, and ultimately political, integration which found their practical expression in the Treaty of Rome and in the development of the European Economic Community.

Progress toward political integration has remained slower than initially hoped by the founding fathers of the Community, not only because of the remnants of nationalistic emotions and routines, but also because of the difficulties of steering a common and truly independent path for the new Europe.

The economic success of the undertaking, however, is no longer in doubt. GNP has grown uninterruptedly over eight years at a rate of 4 to 8 per cent a year in real terms. Mutual trade has tripled in value within the Community itself, but even trade with non-members has increased by about 75 per cent and even by more than 160 per cent with Eastern Europe, thus refuting the dire prediction of opponents about the damaging impact of "discrimination" by the six countries against their trade with the rest of the world.

This success has begun to inspire similar attempts at regional integration in other parts of the world, particularly in Central and Latin America. I am just back now from an ECAFE meeting called upon to examine concrete proposals for an ECAFE Payments Union.

4. Residual, and — let us hope — gradually vanishing "cold war" attitudes and motivations should not blind us as to the long-run political implications and significance of regional integration. The progressive harmonization and merger of national decision-making processes into broader regional units is the historical sequel of the previous merger of smaller regions into the national states of today. Too many people still fail to take full cognizance of this trend, while others oppose it in the name either of outworn concepts of national sovereignty or of premature hopes for a world government.

In truth, regional integration should be viewed as complementary, rather than antagonistic, to national as well as to worldwide decision-making. It is necessary to make national decisions more effective and mutually supporting, rather than mutually frustrating or even destructive. Worldwide coordination may similarly prove necessary to the effectiveness of regional actions and policies. But coordination and integration should not be sought for their own sake. They are means to an end, and are justified only when their benefits in terms of efficiency and human welfare exceed their costs, i.e. the bridling of the freedom of choice by individuals or groups, and the administrative and political complexities needed to reach and implement joint decisions among larger and larger groups of people.

A structured view of even a world government and a world administration should make room for as much decentralization as is reconcilable with efficiency, and indeed will have to reconcile itself to far more decentralization still as long as the understanding and emotions of government personnel and public opinion continue to be dominated by past habits rather than by present realities and opportunities for a faster pace of human evolution.

5. My own concern has long been with the monetary aspects of international integration, both at the regional and the worldwide level.

The marathon debate on international monetary reform — which I helped to initiate nearly ten years ago — has elicited by now a widespread consensus, even among practical central bankers and responsible political leaders, that the creation or destruction of world monetary reserves should become a matter for concerted international decisions, rather than be left to the hazards of gold production. U.S. and U.K. payments deficits, and speculators' — or even central bankers' — attitudes toward the future of gold, sterling and the dollar. This consensus is likely to lead, some day, to a reserve system largely made up of guaranteed deposits with a central institution, such as the International Monetary Fund. The liabilities — and therefore the assets — of this institution will probably have to increase at an average pace of, roughly, 4 to 6 percent a year in order to provide a growth of world reserves consonant with optimum, non-inflationary, rates of expansion of the world economy.

Sterile gold metal should play a gradually vanishing role in the assets of such an institution. It should be gradually substituted by concerted credits — or even grants — in support of commonly agreed objectives of monetary stabilization and economic development. Some resources might even be devoted to the financing of worldwide undertakings in other fields, such as the peace-making activities of the United Nations, the medical programs of the World Health Organization, the cultural endeavours of UNESCO, etc.

Many obstacles, however, still stand in the way of such a rational, but ambitious, world reserve organization. One of them is the reluctance of pro-

spective surplus countries to surrender to any worldwide voting procedure full command over the enormous resources that they would have to contribute to the functioning of such a system.[1] This problem might be made more manageable by a decentralization of the world reserve structure, entrusting appropriate shares of financial operations and responsibilities to regional economic groups such as the EEC and the Central American Monetary Union today, LAFTA, ECAFE, and other similar groups tomorrow.

Reserves needed for *intra-regional* settlements could be held as deposits with such regional reserve systems and invested under regional decisions and management. Reserve deposits with the IMF itself — and the attendant problems of management and voting power — would be correspondingly reduced, and cover only the needs for *inter-regional* settlements.

6. As of now, however, and until major reforms have been introduced in the IMF machinery, the main alternatives to regional reserve assets are either gold, or dollar, or sterling balances. All three of these forms of reserve accumulation channel countries' reserves to the benefit of either the gold-producing countries, or of the two countries whose relative capital endowment is already the highest in the world.

Gold, moreover, has long ceased to provide more than a small and fast declining fraction of needed reserve increases: 44% over the years 1950—1959, 26% in 1960—1964, 12% in 1965, and indeed *minus* 3% in 1966. The bulk of reserve increases has come to depend more and more on the payments deficits of the United States and the United Kingdom, on continued acceptance and accumulation of dollar and sterling balances as monetary reserves for other countries, and on these countries' willingness to refrain from excessive conversions of these balances into gold metal. The simultaneous fulfilment of these prerequisites to the smooth functioning of the system, however, is next to impossible. The persistent deficits of the reserve-center countries and their mounting short-term indebtedness to other reserve holders are, on the contrary, placing more and more pressure:

1. on the United States and the United Kingdom to eliminate their deficits; and

2. on other countries to stop financing such deficits through further accumulation of dollar and sterling reserves exposed to devaluation risks, and even to convert previously accumulated dollar and sterling holdings into gold.

Ever since the temporary flare-up of gold prices on the London market, in October 1960, the preservation of the system has required more and more consultations and cooperation between central banks and governments. While successful in plugging in time recurrent gold, dollar and sterling specula-

[1] At 5% a year, on the average, world reserves would have to increase initially by about $ 3.5 billion a year, and by far more indeed as time goes on. Reserve increases over ten years would be about $ 44 billion and $ 5.4 billion for the tenth year alone.

tion crises, this continuous negotiating process has also brought to light the economic and political implications — largely ignored up to then — of the use of dollar and/or sterling as international reserves. The feeding of needed reserve growth through dollar and/or sterling accumulation means that other countries would have to lend, on the average, $ 2 billion to $ 4 billion a year — and more as time goes on — to the two reserve center countries, irrespective of the use made by them of the financial resources thus placed at their disposal: higher levels of domestic consumption or investment, larger programs of foreign grants or loans for economic development, increased direct investments in developed or underdeveloped countries, rising military expenditures and involvement in different parts of the world, etc.

It is increasingly obvious that concerted international solutions to the world reserve problem are the only alternative to financial and political subordination of all other countries to the reserve center countries and particularly, today, to the United States.

Regional reserve arrangements may help to bring partial solutions to the problem, even in advance of the needed worldwide agreements in which they should eventually be inserted.

7. To my mind, the soundest and most promising point of departure for such regional reserve arrangements should lie in the commitment of all participating countries to hold an agreed portion of their total monetary reserves in the form of reserve deposits with a regional "Reserve Center" or "Reserve System", jointly managed by them. These agreed deposits might start modestly with a small fraction of each country's total reserves, and expand later as experience has familiarized all of them with the advantages of the system.

8. The most immediate of these advantages are relatively minor, but far from insignificant. They lie in the savings that can be derived from avoiding the use of foreign currencies for the settlement of *compensable* transactions within the region itself. Each country's account would be credited with the bilateral surpluses accumulated with some of its partner countries, and debited for the bilateral deficits encurred toward others. Settlements in foreign currencies would thereby be avoided to a considerable extent, being required only for the settlement of each country's net surplus or deficit with the group as a whole. Such settlements would take place periodically. At the end of each month, for instance, each country whose account had dropped below the agreed proportion of deposits to reserves would have to transfer foreign currencies to the Clearing to reconstitute its minimum deposit, while countries whose deposit had risen above the agreed minimum would be free to withdraw the excess in the settlement currencies.

The scope of these proposed clearing operations may be very large indeed. Multilateral compensations accounted for as much as three-fourths

of gross settlements in the European Payments Union, and provisional calculations suggest a similar order of magnitude for compensable ECAFE trade. The savings, especially in foreign currencies, that could be reaped from the system would include:

1. the by-passing of the exchange margins and other costs levied on exchange operations involving different banks or different so-called key currencies;

2. the larger earnings available on the foreign exchange assets held in the Clearing itself, as a portion of these, at least, could be invested at somewhat longer maturities than if held directly — as is now the case — by each country separately, and therefore subject to larger and more frequent fluctuations than those of the group as a whole.

These savings could be passed on, partly or wholly, to traders themselves through a lowering of exchange margins applicable to intraregional settlements.

9. It should be noted that the proposals discussed so far do not involve any real burden, sacrifice, or risk by either surplus or deficit countries.

The deficit countries benefit from credit extensions to them by the surplus countries, through the intermediary of the Clearing, in each period between settlements dates. These credits, however, are fully covered by their own credits to the Clearing, i.e. by the foreign exchange resources transferred by them to the Clearing. Even if they defaulted at the settlement date, the Clearing would still have the foreign exchange needed to cover all settlements due to the creditor countries. In fact, the default of a debtor would still leave him as a *net* creditor of the Clearing and would merely mean that it failed to reconstitute its agreed-upon minimum deposit with the Clearing, thus excluding itself from further participation in the system but entailing no real credit risk for other members.

The deposits maintained by all countries with the Clearing entail, of course, a corresponding extension of credit to the system. These, however, are a mere substitute for the credits that would, otherwise, be extended by them to the Treasury or banks of the countries with which they now hold their foreign exchange reserves. This substitution does not, therefore, entail any additional costs or risks, as long as the Clearing itself retains these assets in the same foreign markets and passes back to members the interest earned on them. In fact, as indicated above, these earnings would now be increased by savings on transaction costs and higher yields on longer maturities.

10. Much larger benefits could be derived from the system, however, if the Clearing were authorized by members to invest some of its assets within the area rather than only in foreign money markets. Is it possible to negotiate an agreement of this sort without hampering seriously the safety, liquidity, and full convertibility of members' deposits? I believe it is.

Within each national economy, the development of a banking system has long substituted credit-money for earlier gold and silver moneys. That is to say, the public is willing to use as money credit claims on the banking system — in form of currency and deposits — in lieu of the gold and silver coins of old. This enables the banks to channel into productive loans and investiments resources that could otherwise be channelled only into mining or refining of so-called precious, but sterile metals, or their purchase from foreign countries.

No national banking system, however, could afford to hold all its assets in *domestic* loans and investments. A portion of its assets must be retained in *international* reserves, acceptable by all countries in settlement of the country's international transactions.

Gold and silver, and then gradually gold alone, long served this purpose of providing a form of money acceptable in settlement all over the world. Today, however, more than a third of world reserves, close to one-half of the reserves of countries other than the United States, and nearly three-fourths of the reserves of the less developed countries are held in so-called key currencies, or reserve currencies, i.e. primarily in the national currency of the United States and of the United Kingdom.

Any regional group could help finance and foster its own monetary stabilization and economic development objectives if it could channel a substantial portion of these international monetary reserves into regional rather than extra-regional, investments.

This should be possible, and even indeed logical, to the extent that a significant portion of each member country's international monetary reserves is used in fact for intra-regional, rather than extra-regional, settlements. About a third of the total trade of the ECAFE countries, for instance, takes place within the region itself. Yet, no reserves are held, or are likely to be held, in the national currency of any ECAFE country.

One of the most challenging tasks of a regional reserve center would be to devise, and make available to its members, — a new type of reserve asset as safe and attractive, or more, as customary dollar or sterling balances. Three conditions are all that is necessary to that effect. I shall tackle them in reverse order of importance.

1. Deposits with the Regional Reserve Center should earn interest at a rate at least equal to that available on alternative dollar or sterling investments. This should, of course, raise no difficulties, for the reasons already indicated above, as far as re-investments by the Center in the New York or London markets are concerned. As for the Center's loans or investments within the region itself, they could devolve appropriate interest rates, and yet remain cheaper for the borrowers than alternative borrowings in New York or London.

2. Deposits with the Center should be as adequately guaranteed, at least, against devaluation or blocking as the claims now held directly by members in New York or London. Again, this should raise no difficulty. Exchange or blocking risks would be the same — or possibly lesser as far as blocking is concerned — on deposits re-invested in New York or London. As for the Center's loans or investments within the region, they should be denominated either in dollars or in a regional "unit of account" equivalent — as in the EPU case, and in the EEC case[1] — to an exchange guarantee in terms of whichever participating currency actually remains most stable in the future.[2] Moreover, exceptionally strong guarantees against default would result from a commitment of all members to channel through its Clearing account any and all payments due to a defaulting member until such default is fully covered and extinguished.

3. Last, but not least, Reserve Center deposits should be as fully liquid and usable for all balance of payments settlements as any alternative reserve asset. They could be withdrawn at any time — even to the last cent — to cover deficits anywhere in the world. All that the agreed *minimum* deposits with the Center would imply is that each country keeps with the Center the agreed proportion of its *total* reserves. Whenever its deficits lead to a decline in aggregate reserves, it can draw *pro rata* on its Center deposits and on the reserve assets held, outside the Center, in gold and/or foreign currencies.

Insofar as the group as a whole remains in equilibrium or surplus with the rest of the world, the deficits of any member country are offset — or more than offset — by the surpluses of other members, and the withdrawals of any deficit countries are offset — or more than offset — by increases in the deposits of other members, leaving the *external* reserve assets of the Center unchanged, or growing.

The Center must, however, stand ready to provide external assets in currencies of worldwide acceptability — practically dollars or sterling — to cover any *net* deficits of the *region as a whole* with non-participating countries, up to the agreed portion of Center deposits to total reserves. Even the most prudent management of the Center's assets would not require it to keep *all* of its assets in foreign currencies in order to fulfil this requirement. Experience should dictate the reserve ratio which the Center should hold in this form, but would still leave room for the possibility of substantial loans and investments within the region itself, in support of commonly agreed programs of monetary stabilization or economic development.

Whenever such internal loans and investments, combined with regional

[1] At least if current proposals for an EEC unit of account are approved, as expected, in a forthcoming meeting of the Council of Ministers.

[2] See on this point, the definition of the EPU unit of account in Article 26 of the *Agreement for the Establishment of a European Payments Union* [1], my comments [2] and a paper by Jean L. Blondeel [3].

deficits, threaten to bring the Center's external reserves below some benchmark level or proportion, new regional loans or investments should be discontinued until external reserves have recovered to the desired level. If unpredictable developments or bad management happened — contrary to all likelihood and expectations — not only to reduce external reserves below prudent levels, but to exhaust them entirely,[1] moderate and temporary increases in minimum deposits should suffice to enable the Center to meet all permissible demands for withdrawals until the situation had been corrected.

There can be no doubt, therefore, that a regional reserve system could bring substantial benefits to any regional economic group without weakening in the least — on the contrary — the liquidity and safety of members' reserves. Earnings, as well as guarantees against exchange, blocking or default risks can be made stronger for regional reserve deposits than for alternative deposits in foreign money centers. The liquidity of deposits can also be assured by any reasonable management and/or specific Treaty limitations such as those suggested above.

11. A mixed situation arises when the regional group itself includes one dominant member, and particularly one whose currency is traditionally accepted as reserve currency either regionally (sterling in the sterling area, the rouble in Eastern Europe, the U.S. dollar throughout the Western Hemisphere) or by many other countries as well, or even the world at large (the U.S. dollar). The question may then arise as to whether:

a) other members of the group should seek to replace the dominant currency by a regional reserve asset, as described above; or,

b) should retain the dominant currency as part of their reserves, but seek to gain whatever influence they can on the use made by the dominant country of the credit extended to it by their accumulation of its currency as part of their reserves.

The answer to this question is less obvious than it might seem. It depends on the chances of success of the negotiations involved, and on the consequences of actual failure and of a possible breakdown of the area through shifts into gold or other reserve assets. (The sterling system might well be threatened with such a breakdown, some of its members having shown for some time already an inclination to shift reserve assets — even though gradually — from sterling into gold and dollars. Large shifts from *autonomous* dollar holdings — swaps, Roosa bonds, etc. — have also taken place in recent years, but confined, on the whole, to developed countries, particularly in Continental

[1] Assuming that no new loans and investments are authorized whenever the external assets of the Center drop below 50 per cent of its deposit obligations, such total exhaustion could occur only if the aggregate monetary reserves of the region declined by more than 50 per cent *plus* the amounts recovered by the Center in the meantime on its previous loans and investments.

Western Europe.) The reserve currency holdings of many members of the dollar and sterling areas are derived from their borrowings on the New York and London markets, and access to such borrowing might be severely curtailed indeed if the borrowing countries shifted borrowed funds into gold or other currencies. I know too little about the rouble area to offer any comments in this respect, but would be interested in any observations that more competent participants to this conference might have on the subject.

12. I might conclude with a few, highly tentative observations about the ways in which the rouble group could improve its links with the monetary system of the rest of the world.

The most logical approach would of course lie in the participation of the member countries, or of the group itself, in the International Monetary Fund. This would entail, of course, some contribution to the Fund's capital. Such participation had been foreseen in the Bretton Woods Agreement, with prospective quotas of $ 1200 million for the USSR and $ 125 million each for Czechoslovakia and Poland. The latter two countries did, in fact, join the Fund, but withdrew from it during the years of the cold war.

Quotas have increased substantially since then, and would probably be set today at levels about double those contemplated at Bretton Woods. One fourth of them being payable in gold, the participation of the USSR, for instance, would probably entail a transfer of about $ 600 million of gold to the IMF, against equivalent and *unconditional* gold-tranche drawing rights. Much of this transfer could probably be financed through a reduction of dollar and sterling assets now held by the USSR, and devoid of the guarantees provided by the IMF against the risks of devaluation or blocking. Further safeguards against breaches of the IMF agreement itself could be negotiated through the physical location of some portion of the IMF gold reserves in the territory of a neutral country or even of the USSR itself.

An alternative, or complementary, approach would lie in partial reserve deposits of the Eastern group countries in any European Reserve Fund that might be established tomorrow under the aegis of the EEC countries, and of reciprocal deposits of such a Fund or its members with a Reserve Fund of the Eastern group itself. Pending such new institutional arrangements, deposits with the Bank for International Settlements could pave the way to greater cooperation between the two groups.

Needless to say, such suggestions are probably too new and too revolutionary to be seriously entertained as a basis for negotiation, before they have been thoroughly explored, and modified, by all the parties concerned. Yet, I would hope that the problems and perspectives that they raise are sufficiently challenging to tempt some of the experts assembled here to start the ball rolling, both at this meeting itself and, most of all, after we have all returned home with strengthened hopes that a more peaceful, decent, and

rational world can be constructed for our children than the one we inherited from our fathers.

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ВАЛЮТНАЯ СТОРОНА МЕЖДУНАРОДНОЙ ЭКОНОМИЧЕСКОЙ ИНТЕГРАЦИИ

Р. ТРИФФИН

Экономическая интеграция является постепенным, многовековым процессом, в ходе которого сначала города, провинции слились в современные национальные государства; в настоящее же время даже национальный суверенитет все более теряет свое реальное содержание. Просвещенный национальный интерес при своих решениях фактически гораздо скорее прибегает к методу международных консультаций, чем это предписано формальными международными обязательствами (и очень часто более сильная нация односторонно принуждает к этому слабых). Конечно, постепенное свертывание национальных границ, ограничение суверенитета наиболее очевидно в области внешней политики и военных дел, но таково же положение и с экономическим и валютным суверенитетом. Фактическое сотрудничество гораздо шире рамок таких формальных и (или) видимых институтов и соглашений, как ГАТТ или МВФ.

Хотя речь идет о всемирном процессе, следует видеть, что путь ведет через относительно однородные, региональные группировки, интеграции, являющиеся — в противоположность некоторым абстрактным возражениям в духе «laissez-faire» — не преградами, а стимулами развертывания мирового торгового оборота. Вместе с тем необходимо внутри каждой интеграции обеспечить такую степень децентрализации, которую еще можно согласовать с эффективностью.

Сказанные выше общие положения в полной мере относятся и к международной платежной системе. В настоящее время она строится на базе золота — доллара — фунта стерлинга, но относительный вес золота в резервах уменьшается в пользу доллара, особенно в резервах развивающихся стран с наименьшей ликвидностью. Валютные резервы в долларах и фунтах стерлингах могут увеличиваться лишь при росте существующего дефицита платежного баланса двух стран с ключевой валютой; другими словами, прочие страны в случае непрерывного экономического роста вынуждены постоянно увеличить предоставление краткосрочного кредита двум указанным валютным центрам, независимо от того, каким целям служит данная эмиссия доллара или фунта. Такое положение и сегодня сохраняется, несмотря на повторяющиеся спекулятивные атаки лишь благодаря усиленной международной валютной кооперации, а с другой стороны, дальнейший рост долларовых резервов привел бы к финансовой и политической зависимости резервирующих стран от США. Таков фон, на котором развертываются переговоры о реформе международной платежной системы. Здесь, однако, нельзя ожидать быстрого решения; в то же время частичные региональные соглашения могут привести к частичному решению проблемы еще до всемирного соглашения, и в дальнейшем они могут быть включены в рамки последнего.

Наиболее здоровой и многообещающей исходной точкой указанных частичных соглашений может быть заключение региональных договоров о резервах, согласно которым участвующие страны обязуются держать определенную часть своих валютных резервов в виде вкладов в совместно управляемом региональном «резервном центре» («клиринге») или «резервной системе». Такая система не означает для них никакого дополнительного риска, поскольку предоставленный таким образом Центру «кредит» только заменял бы (краткосрочный) кредит, предоставляемый в настоящее время казне и эмиссионному банку стран с ключевой валютой, ведь значительную часть национальных (валютных) резервов держат здесь за проценты.

Таким путем, государства такой зоны могли бы экономить ключевую валюту (золото), поскольку при взаимной торговле отдельные страны-члены должны будут платить золотом (ключевой валютой) только по мере дефицита по отношению ко всей зоне, или пополнения у Центра своих сокращающихся резервов; валютный эквивалент чистых активов соответствующие страны могли бы свободно изымать из Центра и использовать без всякого затруднения. Прочие (компенсируемые) расчеты внутри зоны ежемесячно взаимно учитываются; большая часть (около 75%) взаимных расчетов таким образом совершается без использования валюты. Издержки оборота по валютным операциям могли бы сокращаться. Резервный центр мог бы размещать значительную часть вкладов (в ключевых валютых) в международных валютных центрах на более длительный срок, с большим процентом, с меньшей флуктуацией, чем это могут страны-члены делать со своими вкладами в отдельности. Еще более выгодно было бы, если бы центр имел поручение размещать часть своих (международных) резервов не на внешних данежных рынках, а вкладывать во внутренние (зональные) долгосрочные займы и прочие капитальные вложения и, таким образом, мобилизуя отвлеченные резервы, способствовал бы задачам стабилизации валюты и развития экономики. Остальные валютные средства, выполняющие функции валютных резервов, служили бы погашению (возможных) дефицитов по отношению третьих стран. Однако и здесь можно достичь экономии. Пока внешняя торговля группы с остальной частью мира в целом уравновешена, дефицит любой страны-члена вне зоны компенсируется излишками других стран-членов, и резервы центра остаются неизменными.

Подходящей формой валютного сотрудничества между восточно- и западноевропейскими странами — помимо возможного вступления восточноевропейских стран в МВФ — могло бы служить, если обе зоны имели резервные центры, размещающие свои вклады друг у друга, и, таким образом, можно было бы одновременно развивать экономические связи между двумя зонами и укреплять международную валютную стабильность.

F. A. Hasab

THE INTERNATIONAL OIL PRICE MECHANISM

The author deals with practical and theoretical aspects of the international oil price mechanism, mainly elucidating the posted-price system as a monopoly price. Special attention is given to the effect of the relatively uniform price mechanism of the various energy carriers. The factors determining the crude oil price are also examined.

In the second part of the paper an attempt has been made at investigating the special problem of the mine rent of hydrocarbons, from the point of view of the price formation of oil. The author tries to answer the question whether under present-day conditions an absolute rent in the Marxian sense does exist or not in oil production and in the other extracting industries.

The oil market differs from that of any other commodity both in its structure and its price mechanism. This is due, *on the one hand*, to the fact that in the extraction and processing of crude oil and natural gas monopoly capitalism has developed a special form of the division of labour, with the oil and natural gas deposits generally situated in developing countries, and the processing industries and trading companies concentrated in the advanced capitalist countries. *On the other hand*, the differences derive from the fact that the oil industry with its vertical structure is one of the most highly monopolized industries in the world. The International Oil Cartel, which comprises the greatest international monopolies, controls through its subsidiaries and holding companies more than 60 per cent of the world's oil extraction, transportation, processing and marketing. It also adds to the special character of the oil market that the countries with an interest in the international cartel are the greatest consumers while the producer countries with their backward economies play hardly any role as consumers. As a result of these facts, the flow of oil from the producer to the consumer falls into two phases, two distinctly separate trading cycles.

1. The crude oil is first brought by tankers and over the pipelines to the refineries which are owned by the oil monopolies and situated mainly on the east coast of the United States and in Western Europe. For this cycle the monopolies have worked out a separate price system.

2. From the refineries the various processed products are supplied to wholesale companies belonging equally to monopolistic interests. These com-

panies are also in America and Western Europe. This trade, too, has a special price system affected by the customs tariffs of the countries in question, by various market factors and by measures taken from time to time by the countries concerned.

The main suppliers of crude oil are the Middle East and Venezuela; the Far East and Northern Africa play at present only a secondary role, though the importance of the latter is rapidly growing. 90 per cent of the oil traded in the world market is supplied by countries belonging to OPEC (Organization of Petroleum Exporting Countries).

The United States, the country of the great oil monopolies and formerly a net exporter, has since 1948 become a net importer and is at present the world's greatest producer and consumer in one.

The system of posted prices

At present, the dependant situation of the developing countries is dominated by indirect forms of exploitation. In case of the oil-producing countries, the posted prices are a characteristic example of these indirect methods.

The big monopolies, the companies belonging to the international oil cartel, have introduced uniform posted prices for the crude oil mined in the main productive areas of the non-socialist world, irrespective *of differences in the extraction costs*. In calculating the posted price, the monopolies base themselves on the cost of crude oil extraction in the USA, the greatest oil producing and consuming country. To that the taxes to be paid in the US are added. Thus, the price of oil mined in the Middle East, Venezuela, or any other extracting area has to conform ultimately to the CIF New York price.

Table 1

Posted prices in the three main oil extracting areas (of the non-socialist world)
(US dollars per barrel, gravity degree: API 34)[1]

	USA (West Texas)	Venezuela	Middle East (Kuwait)
Posted price, FOB	2.91	2.80	1.87
Freight to New York, according to AMC tariff, less 35 per cent rebate	0.25	0.25	1.19
Taxes	—	0.11	0.11
Posted prices CIF New York	3.16	3.16	3.17

[1] Source: OPEC Memorandum No. 58, in Arabic. These data agree with those published in Petroleum Press Service, Sept. 9, 1964 (p. 358).

The posted prices are practically based on the FOB Gulf of Mexico price which is at present $ 2.91. To this the freight from the Gulf of Mexico to New York ($ 0.25) is added. These two factors together give the posted price of crude oil in New York, i.e. $ 3.16 per barrel, CIF New York. It is on this basis that the posted prices for oil from Venezuela, the Middle-East and the Far-East are calculated. In the case of Kuwait, e.g., from this price ($ 3.17), the cost of freight between Kuwait and CIF New York ($ 1.19) and the tax on oil established by the government of the United States ($ 0.11 per barrel) are deducted. This is how the posted price of $ 1.87 per barrel in Kuwait is worked out. The profit share stipulated in the contracts with the respective countries is calculated by the monopolies generally on the basis of these posted prices, of course, after the deduction of the production costs arising there.

In the following we are going to examine the factors determining the monopoly price of crude oil. These factors are: prime costs, the monopoly position, substitutability and the oil rent or the rent in fuel-producing industries.

Investigating the pattern of the present-day world market of oil, its price mechanism and its functioning, two problems will arise, viz.

a) How is the world-market price of some product of the extracting industry — in this case of crude oil — formed, i.e. what is the connection between the market value of the product as the price, centrum, on the one hand and the monopolistic situation prevailing in the market of the product, on the other.

b) What is the relationship between the supply-and-demand position of the product in question and that of its closest substitutes — which in the case of crude oil means primarily coal.

The simultaneous examination of these two factors is necessary also because the mechanism of oil prices now prevailing in the world market *cannot be described by starting simply* from the prime costs of production.

In establishing the crude oil prices it is utterly erroneous to start from the production costs of the individual oil fields. In the examination of the trends of crude oil prices, even Marxist economists are often inclined to start from the mine rent prevailing in oil extraction, or from the differential mine rent. This approach would assume that the price formation of crude oil was independent of the combined demand and supply of the various fuels.

The international cartel, through its media of propaganda, claims that this is a case of honest deal where competitive factors operate in accordance with the law of supply and demand.

The truth is the opposite, and this for the following reasons.

The capitalist oil industry has a vertical structure and all its branches are dominated by the monopolies, the subsidiaries of the International Oil Cartel and its holding companies. Due to the vertical structure, the Oil Cartel

has an opportunity to conceal the *extra profit in the accounts of the purchasing and processing* companies instead of showing it in the books of the subsidiaries engaged in the extraction of oil. It is thus only an appearance that the deals e.g. in the Persian Gulf do not ensure an additional profit to the monopolies; they, in fact, enjoy all advantages both as purchasers and suppliers.

Thus the oil extracted e.g. in the Middle East is sold in international trade at prices built on the posted price but varying according to the transportation and other costs and the sales market. However, the monopolistic position occupied in transportation, and practically in the purchase of oil as well, enables the Oil Cartel to earn even more extra profit and to share in the profits of the oil business not on a 50 per cent basis but to pocket also the difference between the local posted price and the international price (which is, due to the monopoly position, practically identical with the New York posted price). According to the calculations of Mr. Abdullah Tariki, former minister of the oil industry in Saudi Arabia, due to the difference between the two prices the American companies made in 1962 a profit of 880 million dollars instead of one of 300 million.

From the above it will be clear that the price centrum of crude oil has several components which do not belong to the domain of prime-cost analysis but are connected with the mutual substitutability of various goods suited to meet largely identical requirements.

To make our treatment of the subject easier to understand we will first investigate the price mechanism of crude oil only on the basic characteristics of the present-day oil industry; i.e. we start from the extraction and examine the production of crude oil for the time being in isolation from that of other products.

True, in the extracting industries the price centrum is determined by the input of the enterprise working under the least favourable conditions, but this applies only where

— there is free competition;

— the domestic market is not protected by protectionist measures of state monopoly capitalism;

— a closed economic unit can be assumed;

— the product extracted is not substitutable by any other product (products) having the same use value.

However, the protectionism of the monopolies practically excludes Venezuelan and Middle Eastern oil from the competition in the American domestic market in order to maintain a high monopoly price.

Ever since 1959, the import of crude oil into the USA is regulated by official quotas fixed by the administration. Under these conditions, the calculations aimed at establishing the marginal cost of oil wells still worth extraction become highly unreliable.

The crude oil prices are determined by the activities of the International Oil Cartel comprising 5 big American monopolies. This cartel will fix a price at which even the marginal American oil extracting enterprise can continue its operations.

In the formation of crude oil prices, too, a role will be played by the so-called *false social value* factor, due to the following causes:

a) the monopolistic ownership and operation of the "marginal" US enterprises; and

b) the special position of the US oil monopolies both in production and marketing.

Accordingly, the world price of oil is determined today not by free competition but by the monopolistic market situation. *This means, in the first approximation, that the posted price of oil conforms only to the least favourable conditions* in the extracting industry.

The products of the extracting industries are, of course, also affected by the conditions of substitutability. Therefore, a concrete analysis cannot be confined to oil extraction alone. It should also take into account the fact that oil and coal can satisfy largely identical needs and assume the mutual substitutability of the two products.

Supposing now that the present monopolies were abolished and the closed economy given up, i.e. discussing the trends of oil prices under the assumption of free competition in the world market but still neglecting the substitutability with coal, we come to the conclusion that in this case the price of crude oil would tend to decrease transitorily. In the long run, however, it would rise again to the former level and probably even higher. The present demand for oil could be satisfied also with the product of the companies operating under more favourable conditions. This would involve the closing down of the wells working under the least favourable conditions. A growing supply of crude oil extracted with a lower input would put the oil produced at a higher cost out of competition. This assumed change involves the danger for oil extraction in the US that once the monopolistic position is abolished, the Texas oil wells must be closed down.

The individual production cost of the enterprise extracting under the least favourable conditions (but still in operation) would be the price centrum. The change in the price of crude oil would presumably lead to an expansion of industries based on crude oil as a raw material. This, in turn, may increase the demand for oil to an extent that the wells earlier closed down would again have to be put into operation while prices would rise to the earlier level. Even the operation of still less profitable wells may prove necessary, as a consequence of a rise of oil prices above the initial level.

Before proceeding to discuss the price formation of oil within the framework of the combined world market of all fuels, it should be emphasized that

monopoly capitalism has *distorted the pattern of crude oil prices* also by dislocating the world market of oil. The main international market of a product should be where the *greatest quantities* of it are imported. The demand and supply relations emerging there should determine the price. Accordingly, the world market of oil should be in Western Europe and not — as mentioned in connection with the practical calculation of the posted price — in the USA which e.g. in the case of the Middle East accounts for but 5 to 6 per cent of the purchases of oil from the region.

Now, practice shows that the world market prices of the primary sources of energy (with the exception of hydroenergy) *i.e. those of coal, fuel oil and natural gas are relatively close to each other in terms of utility.* (Differences in quality within the individual groups must, of course, be disregarded here.) Therefore, in the price formation of hydrocarbon products — crude oil and natural gas — under the monopolistic conditions prevailing in the present-day oil industry the effects of demand and supply in the world market of fuels as well as that of the close substitutability by coal should also be taken into account.

Experience shows that demand for crude oil appears mainly in the form of demand for an up-to-date fuel. But this demand can not yet be wholly

Table 2

*Price relations of coal and heavy fuel oil in England**

Mining district	Coal price at the mine	Price of the quantity of heavy fuel oil of the calorific value of one ton of coal		
		production price	consumption tax	consumer price
	shillings per ton	shillings		
East Midlands	77/4	123/4	38/0	161/4
Northern	88/5			
West Midlands	92/5	78/1	24/1	102/2
Scotland	92/2			
North-western	97/5			
Burham	100/3			
South-eastern	102/3			
South-western	108/3			

* Source: F. Cságoly: Major problems of the trend of crude oil prices in the power economy. (In Hungarian.) Candidate's dissertation. Budapest, 1964. p. 231. — National Coal Board, Annual Report, 1961. On the basis of Statistical Abstract 1961, published by W. A. Edwards in "Utilization of fuel in the chemical industry: Current and future developments". (Journal of the Institute of Fuel, Dec. 1963, pp. 500—508.)

met by the actual supply of such fuels and this is the reason why coal, a comparatively obsolete fuel, is still in use.

The production cost of oil of a certain calorific value is generally lower than that of coal of the same calorific value. This can be basically attributed to the high labour intensity of coal production. The mutual substitutability of the two products means partly that the relatively more up-to-date crude oil enjoys a monopolistic position in relation to the product turned out at a higher cost, i.e. coal, and partly that the demand for fuel keeps also coal in use. (Coal still satisfies 37 per cent of the demand for primary sources of energy in the non-socialist countries. [1])

The avarage socially necessary labour input that goes into the production of crude oil is lower than that needed for the production of coal of the same calorific value, yet their relative prices are not proportional to that but are formed in accordance with their substitutability in actual use.

Thus the two products which satisfy identical social needs and are substitutable with each other — i.e. hydrocarbon products and coal — *will enter into exchange relation on the basis of the socially necessary labour involved.*

It is worth while to examine from this point of view the relationship between the prices of coal and heavy fuel oil in England where fuel oil is heavily taxed and the difference in individual values equalized by the application of an *import-consumption tax.*

In England the price of a ton of coal is about 95 sh/t at the mine, while the price of heavy fuel oil of the calorific value of one ton of coal is made up of the following components:

production price	78/1 sh
consumption tax	24/1 sh
consumer price	102/2 sh

Considering the cost of coal transportation, the difference is *negligible.* This explains why oil is used not only for heating but for other purposes as well.

Under the conditions of state monopoly capitalism the prices express also the *state subsidies* (both direct and indirect) granted to coal mining (tax reductions, special transport rates etc.). The price of coal is, especially in Western Europe, generally lower than the prime costs of production, while the difference is covered by state subsidies. The monopoly price of coal is thus a *low price* separated from costs. In the oil industry, however, to the prime cost are added the monopolistic profits and the taxes of a prohibitive character applied by the advanced capitalist countries to restrict the competition of crude oil in support of the domestic production of energy sources. This is also a cause of the *extra rent* which emerges in the production of oil as against that of coal.

The practice established in the price formation of sources of energy also shows that, as compared to costs, the oil prices are generally about 15 per cent lower than the coal prices. That this margin is not higher is due to the fact that the demand for coal continues for various reasons, that it does not shift fully to the relatively more up-to-date oil or natural gas. There are several factors working in this direction, such as the natural endowments of the country in question, the relative lagging of the supply of oil and natural gas behind the excessive demand, and the low rate of amortization of old heating equipment.

The investigation of oil prices can, accordingly, not start from the individual value of the marginal oil well but will have to consider simultaneously the use of natural gas and coal for social needs. It follows that the allegation according to which the high-cost oil extracting plants would close down if the monopolistic situation in the oil industry ceased to prevail *does not hold. As a matter of fact, the profitability of the oil extracting enterprises depends not only on the differential rent arising in oil extraction, but also on the social use value of all fuels combined. The profitability will ultimately make its effects felt through the relatively coherent price mechanism of the sources of energy.*

Of course, the present price of crude oil *cannot assert itself unrestrictedly as a monopoly price.* The posted price cannot be set by the monopolies, at will, as a monopoly price lastingly severed from the production price and with a constant upward bias. Here, the prevailing economic conditions will act with a limiting effect. These economic limits appear mainly in the world market of hydrocarbons and of fuel in general. From among the factors limiting the monopoly position of the oil industry, the *contradictions within the cartel* should be mentioned first. The International Oil Cartel is a monopolistic association whose members are of various nationalities and have retained also their financial independence. Behind the agreements there are the antagonisms both of economic and political character between the various states, which not infrequently lead to conflicts of interest. In addition, the *competition between the oil cartel and the oil companies outside the cartel* also plays a role. It is perhaps unnecessary to mention that the new, independent companies as new suppliers aim at a redistribution of the market. In their fight against the oil cartel they have, first of all, to influence the trend of oil prices. This enables the extraction conditions of the new deposits to be reflected in the price. This fact found its practical expression, in the period following the Second World War, in the repeated reduction of the posted prices.

Last but not least, the *monopoly price of oil is affected also by the essential economic bound set by the relative use and mutual substitutability of oil and coal.* The latter term, as used here, means that there is a competition in the fuel markets between the hydrocarbon extracting and the coal-mining monopolies.

This compels the monopol-capitalist state to take various measures (e.g. in the field of taxation) in order to interfere, in the interest of domestic coal production, with the import of oil.

All these factors result finally in a relative stability of crude oil prices in comparison to the prices of other raw materials. The posted prices have been changed in the course of the last three decades only a few times. This relative high stability *is due, in addition to the monopolistic position, fundamentally to the more advantageous position of oil as against that of coal in the substitution relation.* At the same time, it should be emphasized that the posted price is a *fictitious* one, calculated artificially, *ex post.*

There are great differences between the individual developing oil extracting countries and the advanced capitalist countries, above all the US, in respect of natural endowments and labour costs, differences in favour of the underdeveloped oil extracting countries. This fact finds its expression in the trend of oil extraction costs.

The average daily yield of a well in the main oil fields of the non-socialist world is the following:*

Arab East	6783	barrels
Venezuela	318	,,
USA	12.3	,,

* Source: Al Ahram, 8th August, 1964.

According to computations carried out in the Deutsches Institut für Wirtschaftsforschung, the relative costs of oil production in the main fields were as follows:

Table 3

*Extraction costs in some countries**

(USA = 100)

German Federal Republic .	115
Venezuela	60
Algeria	45
Iraq	12
Iran	10
Kuwait	7

* Source: Deutsches Institut für Wirtschaftsforschung. Wochenbericht, 7th February, 1964.

The *relatively high discrepancy* between the oil extracting costs in the developing countries and the relating posted price (e.g. in the case of Kuwait the former amounts to $ 0.14, the latter to $ 1.87) enables the vertical monopolies to introduce a system of rebates, with the subsidiaries granted a rebate up to 30 per cent on their oil purchases from the mother company. On the other hand, due to the present situation in the oil industry and oil market

of the non-socialist world, the countries receiving royalties in the form of oil are inclined to re-sell the oil thus obtained to the companies rather than marketing it themselves.

The prevailing posted price is of a dual character. In view of the actual situation in the world market, it *is an advantageous one both to the American oil monopolies and the Near-Eastern oil exporting countries.* To the American companies the advantage lies in the fact that at the actual posted price even the high-cost Texas wells continue in operation; to the Near-Eastern oil producing countries in the relatively wide margin between production costs and prices. From this it also follows that under free competition there would be a fall in prices, a fall which would, however, effect the two parties in different ways. To a certain extent (neglecting now the relations between oil and coal), it would inflict a blow on the high-cost oil companies in the advanced capitalist countries. From the oil extracting countries, on the other hand, the abolition of the monopolistic situation would mean at the same time a free development of demand and supply. A growing world demand for oil may be an effective factor of equilibrium working against the fall in oil prices.

The secret "rebates" mentioned above are a practical proof that a considerable part of crude oil is never traded in the international market at the posted prices. The fact itself that secret rebates have been introduced supports the validity of the statement that the system of posted prices is of an artificial character.

In the final analysis, the posted price is a monopoly price formed under the effect not only of the monopolistic situation prevailing in the oil industry and the laws of monopoly capitalism asserting themselves in oil extraction but also under that of the relatively uniform price mechanism of the various sources of energy which has emerged under the conditions of monopoly capitalism.[1]

The problem of mine rent in the hydrocarbon extracting industry

In the following we make an attempt at investigating the special problem of the mine rent of hydrocarbons but only from the point of view of the price formation of oil. Before proceeding to analyse the problem of mine rent, the following should, however, be pointed out:

[1] The discussion of the second trading cycle lies beyond the scope of this paper. For further information see: OPEC Pricing Problems, Further Consideration, Geneva, 1963, where the price trends of processed products are dealt with. A barrel of crude oil costs $ 3.17 CIF New York. In comparison, the retail price of processed derivatives (gasoline, fuel oil, etc.), is relatively high, averaging as it does about $ 11.00. The data also show that the extracting and processing costs account only for a relatively small part of the retail price. The relatively low prime costs make it possible to impose an unusually high consumer tax. Cheap crude oil benefits thus not only the monopolies but constitutes a veritable state affair in the advanced capitalist countries and this is the main explanation for the close community of interest between the official policy and that of the oil monopolies under the conditions of monopoly capitalism.

— The Marxian theory of rent relates mainly to free-competition capitalism; while its validity will undergo important modifications under monopoly capitalism. In the analysis of the rent and the oil prices, we put the emphasis — as could be seen in the above discussion — on the question, where and in what form do the monopolistic advantages present themselves.

— Finally, we will endeavour to answer the question whether an absolute rent in the Marxian sense exists or not in oil production and the other extracting industries under present-day conditions. If the absolute rent in the Marxian sense ceased to exist — as we shall see later — the amount appearing as a rental on the use of capital in the marginal enterprises may be termed an absolute rent.

— For lack of national statistics we are compelled to use the data officially published by the monopolies. It follows that the data must be viewed with certain reservations.

The emergence of an oil rent

It is practically impossible to separate from each other the various forms of mine rent. The problem may be better approached by examining the forms of emergence of the mine rent partly from the point of view of the oil-producing countries and partly from that of the oil monopolies.

1. Horizontally examined, the mine rent appears for the oil-producing country in the form of crude oil and is realized as a royalty and a profit share. The system of royalty means that the oil companies hand over a fixed amount of oil to the state granting the concession which disposes of this oil at liberty.[1] The profit share means the sharing of the owner state in the profits realized in oil extraction. In the calculation of share the value of the royalty is generally also included.

2. In the vertical oil industry the mine rent is realized in the final product but concealed in the profits. The international oil concerns, utilizing the monopolistic conditions prevailing at present in the oil industry and the technological characteristics of the industry, control through their subsidiaries and holding companies a considerable part of oil exploration, extraction, transportation, processing and marketing. Due to the vertical structure of and the monopolistic situation in the oil industry, the margin between the prices of crude oil and the final products is extremely wide. (See note on p. 100.) It is, therefore, easy to understand why every country should endeavour to establish or develop a vertical oil industry.

[1] Originally it was a fixed amount of money, independent of the quantity of oil extracted.

The size of the mine rent and its various forms

The magnitude of the mine rent in hydrocarbon extraction depends, over and above that of the surplus value, on several factors of which the most important ones may be summed up as follows:

a) The demand and supply of capital. The volume of the capital invested will affect the rent *directly* if it is employed in the extraction of hydrocarbons. The effect of capital investments on the rent is indirect only if the investments are directed towards other branches of the oil industry, especially to refining, i.e. to the production of final oil derivatives, whose prices *cannot be formed independently* of the factors affecting the price of the basic product.

b) The quality of the crude oil and the mobilization possibilities of the hydrocarbon deposits. The mobilization of crude oil and natural gas fields, the research, extraction and transportation costs of hydrocarbons are factors which also enter into the differential rent.

The gravity degree of the crude oil to be found in the Middle East is generally 35—36°API, while that of the oil extracted in Venezuela is 24°API; the former is thus superior in quality to the latter.

Important factors are the *geographical situation, the territorial and climatic configurations of the terrain as well as the transport possibilities arising from the latter.*

The geographical conditions have an active influence on production both from the point of view of rentability and of technology. Middle Eastern oil lies far from the main consumer areas in Western Europe and the USA, i.e. from the present world market of oil.

Since the terrain conditions are also unfavourable in the Middle East, the oil extracted there is, due to transportation difficulties, at a disadvantage as against the oil produced in the USA or Venezuela. The construction of a pipeline will, of course, counterbalance the disadvantages of certain oil fields (e.g. in the deserts) after recovery of the capital invested, though the pumping stations to be established along the pipeline will raise the costs of production.

Although the geographical situation does not form part of the natural conditions in the stricter sense — being partly a market condition and partly one of production — the proportion of transportation costs is *by far not immaterial* to the extracting company.

As a consequence of wasteful management, the differential rent due to additional inputs asserts itself in the Middle East only to a highly limited extent or not at all. As is known, the oil deposits may be exhausted. In order to prolong the life-time of the well, it is necessary to introduce certain technical processes (secondary production methods) which enable more reasonable management. This cannot be expected from the foreign monopolies since they care only for their own extra-profits and not for the economic interests of the

country in which the oil field is located. The producer country is, however, interested in the introduction of the *organizational or technical* measures which will slow down the inevitable process of deposit exhaustion.

c) The *costs of exploration and boring strongly depend on the geological conditions*. Exploration costs include in addition to those of boring also the geological and geographical research costs and the wages paid out in the course of these activities.

These two factors — the *research costs* and the costs of oil and gas well *boring*, which both depend primarily on the geological conditions — undoubtedly affect in a positive or negative way the *size of the rent* paid by the hydrocarbon extracting companies.

The geological conditions of the Middle Eastern oil deposits are more favourable than those of the fields in the USA or Venezuela. They lie less deep, their yields are higher, the crustal pressure is more favourable, etc.

d) The policy of the oil extracting country and its national capital are distributive factors and in this sense affect the magnitude of the rent.

The importance of the political factor should be stressed. The character of the government in the oil extracting country and its policy play a decisive role in disclosing and extracting the mineral wealth of the country. Under the present conditions, the most important type of these activities is the granting of concessions and the conclusion of agreements, which determine the magnitude of the mine rent.

The problem of absolute rent in crude oil extraction

In the above we tried to emphasize the intention to apply the Marxian theory of rent to the concrete, changed conditions. Marx elaborated his theory of rent under the conditions of free-competition capitalism, with the economic conditions within a single country in view and applied it mainly to agriculture where the land rent was enjoyed by a class of landowners to whom capitalism was alien and who, therefore, would check its progress. When examining, on the other hand, the problem of mine rent in oil extraction in the Middle East, certain concrete historical circumstances have to be taken into consideration.

1. Free-competition capitalism has been supplanted by monopoly capitalism, vast monopolies have emerged also in oil extraction. We tried to show in this paper the effects of this fact on the prices of oil and oil derivatives.

2. In the case of oil rent in the Middle East, we have quite a different situation from the one Marx had to deal with when working out his theory of rent. Here the leaser and the lessee are the developed and the underdeveloped countries, respectively, and the rent is received by the Middle Eastern countries for ceding the right of exploitation to the advanced econo-

mies. Thus, the thesis of Marxian rent theory according to which those obtaining the rent (the landlords) would put a brake on the development of capitalism is inapplicable here, since the Middle Eastern countries can use the rent precisely for advancing their own capitalist economies.

3. The problem of rent in oil extraction is different also in the respect that we have here to deal with a special branch of the extracting industry and the consequences due to the special character of the forces of production as well as the special features of the domain have to be considered (e.g. in the examination of the organic composition or in relation with additional capital inputs etc.). Thus, we cannot speak of a class living on part of the surplus value appropriated in the form of rent. *Nor can we say that production has three protagonists:* those enjoying rent, profit and wages. The rent is enjoyed in this case by the state and levied on the foreign capitalist companies.

It is our belief that it does not follow from the above that the categories of the Marxian theory of rent cannot be used as a starting point. It is, perhaps, still not sufficiently clear why we chose to start from the abstract, theoretical categories instead of trying to reach our objective *only* by investigating the practical facts. Our aim is to demonstrate the rental character of the royalty and the fifty-fifty share system by *delimiting* the differential and the absolute rent. We try to answer the question whether the mine rent arising in hydrocarbon extraction contains an absolute rent in the Marxian sense or not. Is there an absolute rent at all in the extracting industries and, if so, what is its basis once the organic composition of the capital has reached the average of that in industry?

The oil rent may be essentially conceived of as a *differential* and monopolistic rent. It is a monopolistic rent in the sense that the crude oil has an extremely high monopoly price, the surplus value amounting to about 7 or 8 times the extraction costs. This high monopoly price enables the payment of a monopoly rent. We may speak of a monopoly rent also in the sense that the hydrocarbons as sources of energy are of a higher use value than coal and since oil extraction, i.e. supply, is limited because natural resources are restricted, the trends of demand and supply cause a lasting upward deviation of hydrocarbon prices from what would be the free market price. In addition to the arguments already put forward in this study we should like to add the following to support the thesis that the oil rent (comprising the royalty and the fifty-fifty share in profits) is essentially a differential and monopoly rent. The arguments listed below relate only to the differential rent.

1. From the point of view of productivity, the Middle Eastern oil deposits offer greater advantages than those in North America and Venezuela.

2. The return of capital is quickest in the case of Middle Eastern deposits.

3. Wages in the region are lowest.

The high monopoly price and the extremely high yield of the Middle

Eastern oil-fields secure already a firm material basis for the foreign companies to pay a rent to the Middle Eastern states.

It can be supported by calculations that the *oil extracting industry is one of a highly organic capital composition*. However, *no definite and statistically proved answer* could be given to the question whether the oil industry is as highly organic, or even more so, in capital composition as the average industry of the oil extracting country *or the average of international capital* (since we have to deal here with an international industry). If such comparative calculations could be successfully carried out, they would provide a final answer to the question whether the rent in the oil extracting industry contained an absolute rent in the Marxian sense or not. In lack of the statistical data necessary to compare the organic composition, this seems for the time being almost impossible to achieve. A definite answer to the problem is rendered difficult also because, due to the high monopoly price in the oil industry, the leasing of oil deposits with the least favourable natural conditions does not constitute any problem to the lessees. Therefore, the fact that even the least favourable wells are operated is still no proof for the existence of an absolute rent in this field. Moreover, not even the fact that the marginal oil fields are also yielding a rent allows the conclusion to be drawn that an absolute mine rent existed, the rent may also be one of a differential character. This can be explained as follows.

The source of the differential rent is the varying productivity of different capitals resulting in differing production costs.

There are some who, though not quite definitely, tend to regard the royalty to be an absolute rent. In our opinion the royalty (inclusive of the profits obtained under the fifty-fifty share system) is essentially a differential and monopoly rent and can comprise an absolute rent only in so far as the organic composition of the capital operating in the oil extracting industry is lower than the organic composition of the average competing capital. We believe the argument to be false, according to which the royalty is an absolute rent because the owner (in this case the state) enjoys it merely in consequence of the possession of the oil deposit, and that the royalty may be conceived of as the economic realization of the monopolistic ownership of the oil deposit. I think that this reasoning is quite incorrect since all types of rent have the feature in common that they are the economic realization of the ownership of some natural or productive resource or some other scarce resource of livelihood (as in the case of the ground rent). These rents may have different material bases and we accordingly distinguish the absolute, the differential and the monopoly rent (under capitalism). This is why the method is incorrect which takes out the absolute rent from among the other forms of rent only on the grounds that it is the rent obtained by the owner merely as a consequence of the ownership of some natural resource.

If, however, the mutual substitutability of crude oil and coal is also considered, the problem of absolute rent arises in connection with the coal mine operating under the least favourable conditions. As a matter of fact one ton (and especially one unit of calorific value) of oil extracted at the highest cost realizes still more surplus value than one ton (let alone one unit of calorific value) of coal extracted at the highest cost. This difference should be considered as a differential rent (neglecting now the monopoly rent and monopoly profits which are also part of the high price of crude oil).

In our opinion, the essence of absolute rent is whether the monopoly of land ownership adds something to the price of the product or not. In other words: would oil be cheaper if there was no monopoly of land ownership? If so, the difference may be considered as absolute rent. If the price is so high that the marginal well also yields a rent, but for other reasons, it should be given another name. It may be e.g. a monopoly rent in the sense that for the time being the fuel produced at higher cost cannot be supplanted by oil. In other words, the demand for oil can be met only to a limited extent. Oil can thus not be considered a product the supply of which may be increased indefinitely by the mere increase of the labour input. And only the price of products with an unlimited supply will tend to sink to the level of production costs.

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МЕЖДУНАРОДНЫЙ МЕХАНИЗМ ЦЕН НЕФТИ

Ф. А. ХАШАБ

Рынок нефти по своей структуре и механизму цен отличается от рынка остальных товаров. Это объясняется тем, что в области добычи нефти и природного газа и их переработки монополистический капитализм развил своеобразную форму разделения труда. Месторождения нефти и природного газа сконцентрированы, как правило, в развивающихся странах, а перерабатывающие отрасли и предприятия, торгующие нефтепродуктами, — в развитых капиталистических странах. В то же время вертикальная по своей структуре нефтяная промышленность является одной из наиболее монополизированных отраслей в мире.

Исследуя структуру и механизм цен современного мирового рынка нефти, а также его деятельность, можно столкнуться с двумя проблемами:

а) каким образом складывается на мировом рынке цена определенного продукта добывающей промышленности — в данном случае: нефти, — то есть какова взаимосвязь между рыночной стоимостью как центром цен продукции добывающей промышленности и *монополистическим положением,* господствующим на мировом рынке этого продукта;

б) далее: как относятся спрос и предложение данного продукта к спросу и предложению других продуктов, с которыми он находится в тесной взаимозаменяемости, — а в отношении нефти — в первую очередь, к спросу и предложению угля.

Совместное изучение двух этих факторов необходимо уже и потому, что механизм цен, действующий на современном мировом рынке нефти, не может быть определен, исходя только лишь из себестоимости производства.

Международный механизм нефтяных цен трактуется автором в двух аспектах: через изучение системы posted price и посредством изучения вопроса ренты с рудников при добыче углеводородов.

Рассмотрев исчисление posted price, автор переходит к теоретическому анализу цен. Основная концепция его заключается в том, что при определении цен на нефть совершенно ложно исходить только лишь из индивидуальных производственных издержек нефтяных скважин. *Цена нефти имеет несколько компонентов: себестоимость, монопольное положение, взаимозаменяемость и нефтяную ренту.*

Механизм нефтяных цен сначала рассматривается автором лишь на основании современной специфики нефтедобычи. В дальнейшем анализе предполагается прекращение настоящего монопольного положения. В обоих случаях автором игнорируется взаимозаменяемость нефти и угля.

Цены на первичные энергоносители (за исключением водной энергии), то есть на уголь, мазут, природный газ на мировом рынке — с точки зрения их полезного эффекта — относительно близки друг другу. Поэтому при определении цен на углеводородные продукты: нефть, природный газ, следует учитывать влияния спроса и предложения на современном мировом рынке топлива, а также влияние взаимозаменяющего их продукта — угля, при монополистическом положении, господствующем в нефтяной промышленности.

Объявленная цена, таким образом, в конечном счете, является монопольной ценой, объясняемой не только монополистическим положением нефтяной промышленности и законами монополистического капитализма, действующими в добыче нефти, но также и относительно единым механизмом ценообразования различных энергоносителей, сложившимся в условиях монополистического капитализма.

Автор применяет теорию ренты Маркса к конкретным, изменившимся условиям, принимая во внимание, что

1. На смену основывавшемуся на свободной конкуренции капитализму пришел монополистический капитализм, и в области нефтедобычи сложились огромные монополистические компании.

2. В отношении нефтяной ренты на Среднем Востоке положение получающих и производящих ренту лиц существенно отличается от описанного в теории ренты Маркса. В этом случае арендаторами являются развитые, а собственниками — развивающиеся страны, нефтяную ренту же получают средневосточные страны за предоставление своих месторождений нефти для эксплуатации развитым хозяйствам. В этом отношении, следовательно, нельзя применить тот вывод теории ренты Маркса, согласно которому получатели ренты (то есть помещики) препятствуют капиталистическому развитию, ведь средневосточным государством эта рента может быть использована как раз для капиталистического развития экономики данной страны.

3. Отличается вопрос о ренте с углеводородов и в том аспекте, что здесь речь идет о специфической отрасли добывающей промышленности, поэтому следует учитывать особые следствия, вытекающие из своеобразия производительных сил (например, при изучении органического строения, дополнительных капитальных вложений), а также специфические условия данной территории.

Нефтяная рента, по сути дела, может считаться дифференциальной и монопольной рентой (последней в том смысле, что нефть имеет исключительно высокую монопольную цену). О монопольной ренте в этой области может идти речь и в том отношении, что углеводороды как энергоносители имеют большую потребительную стоимость, чем уголь и поскольку добыча нефти, то есть ее предложение ограничено, условия спроса и предложения в этом случае вызывают устойчивое отклонение цен углеводородов кверху.

Абсолютная рента в трактовке Маркса перестала существовать из-за относительно высокого органического строения капитала. В то же время абсолютная рента должна существовать у тех предприятий по добыче угля, производство которых необходимо, хотя их производственная деятельность и связана с самыми высокими издержками.

REVIEWS

И. ШВЕЙЦЕР

КОНФЕРЕНЦИЯ СЭВ ПО ЦЕНАМ В БУДАПЕШТЕ

На научной конференции, состоявшейся с 10—15 апреля 1967-ого года видные экономисты, эксперты стран-членов СЭВ изложили свои взгляды об усовершенствовании системы цен в торговле между странами-членами СЭВ.

Организация научной конференции тесно связана с работами по созданию собственной базы цен, начатыми в 1960 году на основе решения руководящих органов СЭВ, принятого почти 10 лет тому назад. Проведенные до сих пор работы были направлены, главным образом, на составление модели общественно необходимых международных затрат, основанных на условиях производства стран-членов СЭВ.

Однако факты экономического сотрудничества стран-членов СЭВ, наблюдаемые при безусловном прогрессе недостатки и препятствия требуют иного, более широкого подхода к проблеме цен. В этом отношении большую роль играет опыт, приобретенный в ходе совершенствования внутренних систем цен стран-членов СЭВ. Все более утверждается воззрение, что дальнейшее существенное совершенствование системы цен, полное развертывание функции цен не является лишь вопросом реформы цен. На повестку дня во многих странах стала реформа всей системы хозяйственного управления, прежде всего, путем развертывания рыночных связей, установления новых соотношений между планом и рынком. Такое направление развития поднимает вопрос о том, возможно ли вообще формирование системы цен, действительно стимулирующей развитие международного разделения труда, без существенного совершенствования всего механизма экономического сотрудничества.

* * *

От имени организаторов конференции приветствовал её участников *Б. Чикош Надь* (Венгрия). *И. Фриш* (Венгрия) в своем вступительном слове напомнил, что в начале работ по созданию собственной базы цен имелось субъективное желание перейти за относительно короткий срок на новую базу цен. Однако против субъективных желаний действовали объективные экономические законы. Для нас не совсем было ясно, что существенное изменение системы цен по внешней торговле между социалистическими странами невозможно осуществить без глубокого преобразования хозяйственного механизма; не учитывалось также и то, что коренная реформа хозяйственного механизма, происходящая в настоящее время в некоторых странах-членах СЭВ, со временем неизбежно повлечет за собой изменение системы

цен СЭВ. *И. Фриш* подчеркнул многогранность проблемы цен, выражающуюся также и во многообразии взглядов и способов подхода к ней. Значение конференции, по его мнению, состоит в том, что она дает возможность для изложения и обсуждения взглядов, по этому чрезвычайно важному кругу проблем и, тем самым, способствует прогрессу научного познания.

26 рефератов, представленные на конференцию, и многочисленные выступления её участников действительно отражали многообразие взглядов, мыслей и предложений.

В многообразии исходных позиций, взглядов и аргументов расхождения наметились уже и в том, как определяли коренные причины проблем экономисты, настаивающие на дальнейшем совершенствовании системы цен.

Многие участники придерживались взгляда, что *существующие цены, основанные на ценах мирового капиталистического рынка, отражают искаженные соотношения цен*, и этот факт оказывает отрицательное влияние на развитие международного разделения труда между странами-членами СЭВ. Таково было мнение — наряду с некоторыми другими экономистами — болгарских экспертов.

По мнению *Ж. Аройо* (Болгария), на капиталистическом мировом рынке вследствие специфических соотношений цен происходит перераспределение национального дохода развивающихся стран в пользу стран империалистических. При перенятии этих соотношений цен в торговле между странами-членами СЭВ машиностроение становится высокорентабельной отраслью даже при отсталой технике и неполном использовании мощностей, а экспорт сельскохозяйственных продуктов и некоторых видов сырья — неблагоприятным. Ж. Аройо обратил внимание на опасность, вытекающую из этого положения, заключающуюся в возникновении, с одной стороны, дефицита в сырье и сельскохозяйственных продуктах, а с другой стороны — — затруднений в международной специализации производства. Для предотвращения этого явления, он настаивал на разработке собственной базы цен, основанной на национальных затратах стран-членов СЭВ.

На вредное влияние базы цен мирового капиталистического рынка, искажающей соотношение цен, указывали также некоторые советские экономисты. *И. Долгополова* объясняла эти искажения существованием монополий, различными соотношениями производительности труда, вытекающими из природных условий, а также различной динамикой изменения цен капиталистического рынка и затрат социалистических стран. *А. Алексеев* и *В. Шильдкрут* констатировали, что на мировом капиталистическом рынке цены на многие виды сырья и продоволствия отражают условия перепроизводства, а на социалистическом мировом рынке как раз по этим группам продуктов имеется дефицит, и в ряде случаев условия производства неблагоприятны; с другой стороны, цены мирового капиталистического рынка на машинное оборудование высоки вследствие усиленного спроса, а в странах-членах СЭВ наблюдается избыточное предложение изделий обрабатывающей промышленности, и технико-экономические показатели отстают от лучших образцов мирового рынка.

Против системы ценообразования, основывающейся на ценах капиталистического рынка, приводились и другие аргументы. Многие подчеркивали, что прежде всего образование и развитие мирового социалистического рынка, *общественно-экономические отношения, коренным образом отличающиеся от условий мирового капиталистического рынка* то, что неизбежно при-

водит к самостоятельной системе цен, к собственной базе цен. Этот взгляд преобладал в реферате *В. Дьяченко* (СССР). В начале его реферата говорилось, что развитие экономического сотрудничества на данном этапе находится в теснейшей связи с развитием, возрастанием роли товароденежных отношений. Изменения, происходящие в механизме национальных экономик, обращают внимание на *экономическую эффективность* взаимных соглашений, а внешнеторговые связи окажут большее влияние на производство, на образование внутренних пропорций народного хозяйства. Следовательно возрастают требования к ценам.

Необходимость собственных цен мирового социалистического рынка В. Дьяченко объяснял существованием двух систем мирового хозяйства, носящих принципиально противоположные типы международных связей.

Эта необходимость пробивала себе дорогу и до сих пор, в отклонениях цен, связанных с условиями производства определенных товаров. В переходе к собственной базе цен, В. Дьяченко предполагал два этапа: на первом этапе в поправках к базе цен мирового капиталистического рынка все в большей мере и более обоснованно будут отражаться условия производства, уровень общественно необходимых затрат труда стран-членов СЭВ, но собственная база цен как исходная позиция начнет действовать лишь на втором этапе. По мнению В. Дьяченко, переход будет дифференцированным, поскольку прежде всего следует устранить диспропорции в ценах, приводящие к незаинтересованности стран-членов СЭВ в расширении производства и экспорта сырья, а также в развитии специализации.

В. Дьяченко заявил: нельзя допускать, чтобы отклонения от цен мирового капиталистического рынка ослабили стимул к достижению высоких производственных показателей развитых капиталистических стран, к техническому прогрессу. В частности, и для этого важно изучать возможность согласования факторов ценообразования и тенденций цен мирового капиталистического рынка с собственной базой цен. В. Дьяченко выступил против упрощений в связи с собственной базой цен, подчеркивая, что общественно необходимые международные затраты труда мировой социалистической системы хозяйства будут служить исходным мотивом, но собственная база цен будет отражать и другие факторы.

И. Долгополова также отмечала: в условиях, когда относительная эффективность экспорта и импорта отдельных товаров становится решающей в определении направлений и объемов внешнеторговых связей, в механизме международного сотрудничества необходимо принимать меры, продолжающие и дополняющие внутренние мероприятия. В частности, из этого вытекает актуальность совершенствования системы внешнеторговых цен.

Увеличение роли национальной эффективности как фактора, влияющего на направление и объем оборота, подчеркивалось и во многих других рефератах и выступлениях. Исходя из этого, многие пришли к выводу, что пренебрежение условиями производства, национальными затратами может все в большой мере вызвать вредные эффекты в дальнейшем развитии экономического сотрудничества стран-членов СЭВ.

Ю. Ольсевич и О. Тарновский (СССР) *важнейшим условием* перехода к новой базе цен считали наличие механизма внешней торговли отдельных стран-членов СЭВ, непосредственно связывающего структуру производства на экспорт с внешнеторговыми ценами. Ими указывалось: многие элементы механизма экономического сотрудничества нуждаются в совершенствовании.

Необходимо существование развитого денежного рынка, совершенствование валютных курсов. В связи с проблемами внешнеторгового механизма стран авторы ставили вопрос о *функциональных связях* между производителями и окончательными потребителями экспортных продуктов, между внешнеторговыми организациями и государством. В настоящее время дифференцированные валютные коэффициенты, дотации и обложения защищают не только производственные предприятия, но и экспортные организации от влияния отклонений в эффективности экспорта различных продуктов. Определение эффективности является задачей центральных органов. Однако эта форма, в конечном счете, отдаляет структуру внешнеторгового обмена, всю систему разделения труда в СЭВ от оптимума и не стимулирует активную инициативу внешнеторговых организаций и производственных предприятий. По мнению Ольсевича и Тарновского, централизованный механизм следует дополнять и развивать посредством гибкой системы рыночных связей. Сомнительно, однако, что прямые внешнеторговые связи предприятий могут привести к оптимальной системе внешнеторговых цен.

Многие экономисты, выступавшие на конференции, корень проблемы цен видели в том, что рынок стран-членов СЭВ распадается на элементарные рынки, на двусторонние соглашения; в том, что валютно-финансовые связи неразвиты, что в свою очередь препятствует развертыванию стимулирующего влияния рыночных отношений на международное разделение труда. Такое положение объясняется тем, что система плановых директив в управлении внутренним хозяйством стран-членов СЭВ не могла не отразиться и на сфере международного экономического сотрудничества. Таков подход к этой проблеме в реферате *Ш. Ауша* и *Ф. Барта* (Венгрия). Авторы, анализируя характер двусторонних клирингов стран-членов СЭВ, отмечают, что существующий механизм не ставит экономических преград различным отклонениям по странам, поэтому размер этих отклонений чрезвычайно велик. Этот факт придает «особый» характер этим клирингам. Авторы анализируют соотношения между главными товарными группами и внутри них. В частности, они доказывают, что значительная часть внешнеторговых цен на готовые изделия в торговле между социалистическими странами совсем не являются ценами типа цен мирового рынка, не служат формами проявления международной стоимости, а ориентируются на внутренние цены. Это — выражение крайне примитивной, второстепенной роли товарных, стоимостных и денежных категорий в существующем механизме внутри стран и на социалистическом мировом рынке.

Многие из докладчиков подчеркивали тесную связь между реформами внутреннего хозяйственного управления и совершенствованием системы цен в торговле между странами-членами СЭВ. Многие из участников конференции поднимали вопрос и о том, что параллельно с реформами внутреннего хозяйственного управления и во взаимосвязи с ними необходимо поставить на повестку дня реформу механизма международного сотрудничества. Это может создать условия коренного преобразования системы цен путем развития рыночных отношений.

Во втором, отдельно представленном реферате *Ш. Ауш* (Венгрия) проанализировал существующие структурные условия, а также весь механизм сотрудничества стран-членов СЭВ. Он привел доказательства того, что международный механизм является порождением механизмов, сложившихся внутри стран, и обрисовал черты, которыми должны обладать жела-

тельный и возможный новый международный механизм цен, платежная система, координация планов при наличии внутренних механизмов, основанных не на плановых директивах.

В основном проблемы развития валютных связей рассматривал в своем реферате *И. Петржсивальский* (Чехословакия), настаивавший на введении частичной обратимости национальных валют — в качестве переходного периода. Основная идея его работы: проблема цен является вместе с тем и проблемой экономической политики, различные предложения отражают различные соображения в области экономической политики. И. Петрживальский подчеркивал: назрело время для экономической политики стран-членов СЭВ, постепенно создающей единый рынок заинтересованных стран в тесной связи с мировым рынком. Это — экономическая политика, включающая «микроэкономические сферы» (т. е. предприятия) в международное разделение труда, изменяющая формы внешней торговли, углубляющая валютное сотрудничество. В реферате указывалось, что теперь во многих странах, особенно в странах, экономика которых в значительной степени носит открытый характер, остро ощущается необходимость интенсификации хозяйствования. Это противоречит любой экономической политике, ориентирующей на изоляцию народного хозяйства от других стран-членов СЭВ или от мирового рынка.

Анализируя проблемы рыночных связей между социалистическими странами, *Й. Горски* и *Я. Плева* (Чехословакия) исходили из того, что стоимостная сторона обмена оказалась оттесненной на задний план, сложился, по существу, двусторонний натуральный обмен между странами-партнерами. Они относили это в вину существующей до сих пор концепции и форме монополии внешней торговли, отгораживающей внутренюю экономику от соприкосновения со внешними рынками, в частности, и в отношении цен. Авторы подчеркивали значение связей между производственными и внешнеторговыми организациями социалистических стран и указывали: прежде всего необходимо восстановить хозяйственную калькуляцию, опирающуюся на рациональную систему внутренних и внешнеторговых цен в масштабе предприятий.

М. Тардош (Венгрия) анализировал проблему торговли между социалистическими странами с помощью моделей линейного программирования. Его основной вывод относительно цен: маловероятно, чтобы цены мирового капиталистического рынка или собственная база цен дали возможность формирования цен, отражающих все экономические факторы, которые оказывают на них влияние. По его мнению, стоит подумать, не могут ли предприятия или организации, предоставляющие интересы стран, используя имеющиеся весьма большие возможности взаимной торговли — это видно и на основе моделей — найти на основе торга взаимовыгодные цены.

В. Кипрова (Чехословакия) рассматривала взаимосвязи между экономикой стран-членов СЭВ и мировым рынком, указывая на важную функцию рынка СЭВ — *передачу влияний мирового капиталистического рынка*. Она подчеркивала: социалистические страны не могут обособленно друг от друга приспосабливаться к эффектам мирового рынка, структура их производства не может складываться непосредственно под влиянием мирового рынка. Функционирование рыночного механизма между странами-членами СЭВ объективно показало бы отклонение условий стран-членов СЭВ от условий мирового рынка. Без влияния мирового рынка невозможно реализовать

экономическую эффективность во внутренней экономике отдельных стран, нельзя создать заинтересованность в повышении технических параметров производства и производительности труда до мирового уровня.

Г. Колмей (ГДР) занимался вопросом дальнейшего совершенствования системы цен прежде всего, с точки зрения научно-технической революции. Он отмечал, что недостаточный уровень специализации объясняется, в первую очередь, не внутренними и внешнеторговыми ценами, а недостатками хозяйственного механизма внутри стран и в международном сотрудничестве. Его предложение относительно цен: сохранение в ближайшем будущем существующей системы при применении более дифференцированных форм ценообразования.

А. Боднар (Польша) не придавал особого значения с точки зрения совершенствования системы цен — существованию в мировом хозяйстве двух различных общественно-политических систем. Он подчеркивал, что мировое хозяйство и мировой рынок едины, но в них существует несколько региональных рынков, в том числе, рынок стран-членов СЭВ. Особенность взаимных связей, функционирование регионального рынка определяются, с одной стороны, экономическими моделями, действующими в отдельных странах, а с другой стороны, в тесной связи с этим, взаимными валютно-денежными отношениями, проблемой обратимости валют. Осуществление реформы народнохозяйственного планирования и управления представляет внутреннее дело каждой страны, но это не исключает, а предполагает дискуссии, особенно о влиянии этих реформ на экономические отношения. В связи с этим он остановился на польском опыте. По его мнению, установление соответствия между внешнеторговыми ценами и издержками производства следует понимать так, что предприятия должны быть вынуждены принимать такие производственно-технологические нововведения, совершенствовать параметры своих изделий в таком направлении, чтобы внешняя торговля стала для них рентабельной.

Что касается проблемы цен в торговле между странами-членами СЭВ, то по мнению А. Боднара, цель заключается в переходе к ценам, учитывающим для решающей доли изделий условия спроса и предложения. Эти цены должны основываться на ценах мирового капиталистического рынка.

Подобно многим другим экономистам А. Боднар основным фактором дальнейшего развития системы сотрудничества считает совершенствование валютно-денежных отношений. Необходимо создать предпосылки системы валютноденежных регуляторов многостороннего типа, чтобы освободиться от отрицательных последствий двусторонней системы.

Основная идея выступления *Б. Шуйока* (Венгрия) заключалась в том, что проблема цен может быть решена в рамках развития всей системы экономического сотрудничества, а именно, — подобно внутренним реформам — путем повышения роли закона стоимости. По его мнению, экономическая взаимопомощь будет осуществляться по настоящему лишь тогда, если её исходным пунктом будет не учет излишков и дефицитов, и не замена автаркии внутри отдельных стран автаркией в масштабе содружества, а осуществление принципа экономической эффективности. Б, Шуйок обратил внимание на то, что как специфика цен мирового капиталистического рынка, принятых за основу, так и требования планового хозяйства противоречат стремлению к установлению полностью единой системы ценообразования в отношении различных товарных категорий. В связи со внутренними реформами доклад-

чик указывал, что может возникнуть возможность «либерализации» торговли, особенно в отношении предметов потребления, а также и некоторых видов машин, т. е. возможность свободного *выбора предприятиями и планирующими органами между товарами внутреннего происхождения и поступающими из стран-членов СЭВ*. В заключении он остановился на условиях введения многосторонних финансовых расчетов, обратимости рубля. Им отмечалось, что свободное заключение соглашений между предприятиями по определенному кругу товаров позволило бы деньгам выполнить их функцию как средства обращения — хотя бы ограничиваясь лишь этим кругом. Большая роль отводилась им созданию кредитных возможностей и форм, отвечающих требованию эквивалентности обмена при погашениях в течение нескольких лет. Можно быть уверенным, — говорил Б. Шуйок — что в этом надо отвести соответствующую роль уже созданным финансовым институтам.

Б. Чикош Надь (Венгрия) в своем реферате, выступлениях и заключительном слове подчеркивал, что реформа цен в торговле между странами членами СЭВ может осуществляться только в ходе процесса, в котором все больший вес будет приобретать многосторонность расчетов и обратимость валют. Им подчеркивалось, что это — длительный процесс, даже создание предпосылок потребует 1—2 пятилетия, при этом возможны разные варианты переходных форм. Равняясь на них, следует формировать механизм внешнеторговых цен, действующий в торговле между странами-членами СЭВ.

Zs. Mausecz

THE 6th ITINERANT CONFERENCE OF HUNGARIAN ECONOMISTS

The 6th itinerant conference of Hungarian economists was held in Debrecen on June 27—29, 1967. The organizers were the *Hungarian Economic Association*, the *Economic Section of the Society for the Dissemination of Scientific Knowledge* and the Industrial Economic Committee of the *Hungarian Association of Societies for Science and Technology*. About 600 economists, working in different fields, attended the meeting. The main topic of the lectures and discussions at the Conference was the profound preparation of the reform of economic management and control, which is the most important task Hungarian economists and Hungarian economic life in general are confronted with. The talks were given by experts who are themselves active in the preparation of the reform like Dr. István *Huszár*, Deputy President of the Central Statistical Office, Dr. László *Rácz*, Deputy Head of Department, National Price Office, Dr. Lajos *Ács*, Director of the Hungarian National Bank and Mr. Lajos *Faluvégi*, Head of Department, Ministry of Finance.

The meeting was opened by Professor Imre Vajda, President of the Hungarian Economic Association. In his opening address Professor Vajda emphasized that the aim of the conference was to discuss the principle and conception of the new incentive system. Among other things he emphasized that a new role of enterprises will manifest itself in the future also in the fact that the micro-economic decisions brought by the independent enterprises

may have a reaction on state measures, they even may expediate some central decisions or the change of earlier decisions.

I. HUSZÁR spoke mainly about the preparation of the introduction of the new economic mechanism. He pointed out that in the course of the central preparation of the reform conditions have been provided to make it possible for the enterprises to carry out the main tasks of the preparation themselves. Most of the regulations that set the framework of the enterprise activity have been worked out. A new system of planning has been developed: the enterprise elaborates its own plans in accordance with the national economic plan and in the knowledge of other conditions, and the national plan will regulate only the activities of the supreme direction and the central organs. New regulations have been worked out for the system of investments, money and credit turnover, foreign trade, foreign exchange management and turnover of products. It is now up to the enterprises to work out their new approach according to their own circumstances. To be able to do this the enterprises have to see clearly not only the regulations but also the market situation and the possibilities of marketing.

A great many elements of the reform can be introduced only step by step — said I. Huszár, but this is by no means a deviation from the original aims. For example, we have to proceed gradually in connection with the depreciation allowances of which enterprises only possess 60 per cent at present because the structure of investments under the current five year plan demands it so. In 1968 wages will rise only by an average 4%, even if the enterprises could afford a greater rise.

The new system of economic management will raise higher requirements on managers. They have to realize that it is only possible to manage enterprises in an entrepreneurial spirit. The new incentive system will also work in the same direction.

With the creation of the new system of economic management an economic conception has been born that can always be applied and will have to be applied flexibly to the actual requirements of the economy. The conception of the reform makes a boom in initiative and independent actions necessary.

Mr. Huszár next dealt with some questions of economic policy in connection with the reform. It is generally known that in the first two years of the current five-year plan public consumption as well as economic growth had been quicker than expected. But it would be unwise to project on this basis an overfulfilment, though on the other hand the rate of growth must not be withheld. From this it follows that when working out plans of the enterprises for the next three years, the average rate of growth will have to be considered as a starting point.

Finally I. Huszár spoke about the equilibrium of the domestic and foreign market. He emphasized that any disturbance on the domestic market, especially of the consumer goods, would jeopardize the success of the reform of economic management. This is why it would be unwise to enforce the equilibrium of the foreign trade and of the balance of payments in cases when these can only be secured by way of considerable restrictions on the domestic market. The possible volume of investments will also have to be decided with caution.

L. RÁCZ's lecture was entitled "Price Policy and Price System". He

emphasized that the new price system serves the optimal growth of the economy and the establishment of an equilibrium in the national economy.

In the new system of economic management prices will be not only of informative character but will also regulate production and consumption. This is why prices will have to be flexible and their deviation from the value is justified in cases when the structure of production is unable to meet the demands at prices reflecting social inputs. In such cases the State may diminish the calculated production costs by subsidies or in other cases it may increase the production costs by taxes or customs. In the new system of economic management, such demand and supply relations will come about — with the help of these measures — according to the objectives of the plan, as will make enterprises interested in the production of certain products even if the present level of input would not make this production temporarily gainful.

In fact, the new price system is based on production prices. The prices valid from January 1, 1968 relate the profits to the fixed funds (buildings, land, machinery, stocks).

In the new price system the building costs of investments will increase in the capital-intensive branches of industry. The costs of commodity turnover increase, as the real inputs are to be reflected in the transport costs. Agricultural prices are expected to go up by 17 per cent compared to the prices in 1965, while prices in industry will go down by 2—3 per cent. Similarly the prices of raw materials and basic materials imported from a socialist country or of domestic origin go down by an average of 8—12 per cent, while the domestic prices of materials imported from the capitalist countries go up by almost 40 per cent. Prices in manufacturing industries will increase.

The new price system is a combination of the administered and market price systems, and the choice of price forms: fixed prices, limit prices, free prices and their control will facilitate technological progress and better quality production.

There are to be officially fixed prices for about 40—50 per cent of the goods for public consumption: in the majority of cases (about 70 per cent) prices of basic materials. However, even the administered prices cannot be rigidly fixed and here also certain slight changes must be allowed for. The new price system, with several measures, hinders unjustified rises in prices. Finally L. Rácz emphasized the importance of enterprise price policy in the new price system.

L. Ács was dealing in his lecture with the new credit system.*

L. Faluvégi's lecture dealt with the new system of income regulations. In forming this system the different potentialities of the enterprises must be taken into account and the enterprises must be treated accordingly. Such potentialities are the varying capital intensity and labour intensity of production, the possibly varied initial profits and the different foreign trade facilities. In the interests of the national economy it is necessary to cut exorbitant profits and to alleviate later differences, because otherwise some enterprises would possibly not develop in accordance with the necessary production structure of the national economy and there would be too great differences in personal earnings as well. The negative effects of the extreme differences

* The main ideas of the lecture are presented in his article in this number of our journal, see pages 41—53. Ed. note.

are counterbalanced by production taxes on the one hand (part of the initial profits is taken away from enterprises that have an outstanding profit) and by a progressive taxation on the enterprise profits, on the other. The bigger part of the profit is to be used for development purposes and its taxation is linear, while a progressive taxation is applied to the other part of the profit that is used for increasing personal incomes. A basic principle is, however, that a fast development of profitable enterprises must be secured and therefore progressive taxation should never be so intensive that the enterprise would lose its interest in turning out greater profits.

L. Faluvégi announced that the sources for the development fund will be the profit and the depreciation. In 1968, 40 per cent of the development fund produced in 1967, and the part of the investment fund that has not been used up will make up the sum of the development fund for that year. This sum will be increased continuously by the depreciation allowances. The fund for personal incomes will be complemented by granted sums and these are free of tax. Such sums are the subsidy on enterprise catering service, the costs of protective garments, etc.

The actual schedules for the system of income regulation are now being worked out. To find out their possible effects a wide range computation is in process, based on 400 000 data.

In the discussion following the lectures the participants first of all spoke about how enterprises have been and are still preparing for the new system of economic management. The impression was that the preparation is not on the same level in every enterprise. Enterprises see the difficulties of the switchover in different light: some have overrated the difficulties, others have underrated them. The discussion provided an opportunity for managers to look at the preparatory work they had done, in a more realistic way. Quite a few of the participants have drawn attention to the fact that in some enterprises monopolistic tendencies can be noticed. They demanded regulations to bridle these tendencies. In the course of the debate it also came to light that some enterprises agree with the taking of risks and with the competition only in principles, and would like to put off the realization of these by protective regulations. However, other speakers rightly pointed out that the exaggerated cautiousness is contrary to the substance of the new system of economic management which places the responsibility and independence of enterprises in the very centre.

Many participants discussed the system of income regulation and there was a debate about how much the interest of physical and white-collar workers will change under the new management system. The enterprises that are weaker than the average are afraid that they will get into a less advantageous position in this respect, as in the past it was still possible to raise personal incomes irrespective of the achievements of the enterprises.

Some participants criticized the introduction of production taxes, as according to them this will hinder the introduction of new products.

Almost all speakers touched on the system of income regulation and particularly the part concerning the technological development fund. Many thought that the fund was not sufficient (particularly for the repayment of the investment credits) and suggested that the total amount of the depreciation allowances should stay with the enterprises.

The discussion was finally summarized by Professor VAJDA who also

answered the most important questions that were brought up in the course of the discussion.

A NEW HUNGARIAN ECONOMIC QUARTERLY

The Hungarian Economic Association has launched a new economico-political quarterly entitled "*Gazdaság*" (The Economy).

The major objectives of the new periodical are to deal with the problems of economic policy presenting themselves under the new system of economic management; to develop the Marxist approach to economics; to disclose the problems of the new phenomena of economic progress in Hungary and to contribute to their solution. In addition, the periodical will keep its readers informed on the activities of the Hungarian Economic Association, the International Economic Association as well as the foreign economic societies.

The first issue of the periodical contains, among others, an article by *B. Csikós-Nagy*, President of the National Material and Price Office, bearing the title "A gazdaságpolitikai koncepció" (The economico-political concept), discussing the major theoretical problems involved in setting the objectives of economic policy. A contribution by Mrs. *J. Zala*, Director of the Economic Research Institute, presents a summary and a critical evaluation of economic development in Hungary in the last ten years. Foreign readers may be particularly interested in an article by Professor *I. Vajda*, President of the Hungarian Economic Association, "Széles körű, tervezett európai kooperációt" (For an extensive and planned European cooperation), containing factual proposals for increased European cooperation.

For the information of readers abroad, Acta Oeconomica will from time to time publish some articles of the quarterly in a foreign language.

BOOK REVIEWS

KORNAI, J., *Mathematical planning of structural decisions.* Amsterdam—Budapest. 1967. North Holland Publ.—Akadémiai Kiadó. pp. 526*

János Kornai's book contains the result of the author's research of many years carried out with the purpose of providing mathematical foundations for sectoral plans as well as national long- and medium-term plans. It can be said to be a pioneer work from many respects.

The book is divided into five parts. In the first part the author introduces the traditional methods of socialist planning and its indicators defining them in terms of mathematical economics. He deals in greater detail with the methods of investment efficiency calculations and with the application of the input-output analysis in planning and in efficiency calculations.

The second part discusses methodological problems of sectoral programming models on the basis of experiences gained from the actual calculations in the cotton and the synthetic fibre industries. Here the author examines in detail the cost as a function of the activity level, the results of programming techniques as compared with the traditional planning and decision methods.

The third part is devoted to the treatment of uncertain data. Within this it deals with the sensitivity analysis of programming models, the parametric programming and discusses the possibility of combining methods based on the theory of probability with mathematical programming. The fourth part is about the calculative valuations used in the programming models, with special regard to the valuation of the assets engaged in production and of wages. The determination of import costs and the setting of foreign exchange rates are also treated.

In the last part of the book the combination of the national scale programming with the sectoral programms is discussed, expounding the model of "two-level planning" and putting forward ideas about the future of a "pyramidal" multi-level programming in the planning of the national economy. The author deals with the questions of "shadow prices" and with the criteria of optimization in the programming models of the national economy.

A relatively small part of the book are chapters where the author describes methods, economic facts and institutions already familiar from other books; however, these are important from the point of view of understanding the complex correlations. The bulk of what is said here is new, so far that it applies methods that are already known to new subjects, interpreting and applying them to the conditions of socialist planning. A considerable part of the book is taken up by the results of the author's own practical and theoretical research. Of these the following should be mentioned:

* The book was parallelly published by the mentioned publishing houses and it was published also in Hungarian, German and Slovakian. Ed. note.

a) The theoretical study of the probabilistic methods in the treatment of uncertain data of the risk-taking problem in decision-making, and the safety programming as a possible answer to the problem.

b) The imitation of traditional programming methods, the connecting of sectoral programs in the "two-level planning" model of the national economy.

c) New ideas in connection with the problems of the objective functions of the national economy.

d) A pilot study to determine a calculative rate of interest and wage rate to be applied in long-term computations and the considerations of price theory connected with it as well as the application of the aggregate growth model for this purpose.

Special mention should be made of the method of the book itself. The author always sets out from practical problems, from acute and actual questions of planning using calculations actually performed. But this starting out from reality is always linked up with a high-level theoretical analysis, generalization, theoretical elaboration of the problems, often with an appropriate solution of major theoretical questions. Then the author proceeds to examine whether these results achieved by theoretical reasoning can be applied in practice or in what way they can be approached in tackling practical problems. This method of approach secures the organic unity of case studies and theorizing. Thus the chapters being of monographic character help to explain the abstract thoughts and the latter retain their connections with actual economic problems. The subjects discussed in this book are manyfold, but the logical structure of the book and the clear style facilitate the reading even at the most difficult passages.

This book is one of the proofs that in Hungary there has been an important development in the field of mathematical identical with purposeful price formation and that maximum centralization of price economics, where first efforts had been made only about 10 years ago with a considerable time-lag.

HOCH, R. and associates, *Az élelmiszerek fogyasztói árképzésének kritikai elemzése.* (A critical analysis of the formation of consumers' food prices.) Budapest, 1966. Közgazdasági és Jogi Könyvkiadó. pp. 523.

The case of food products is used by a research team (headed by R. Hoch) at the Institute of Economics, Hungarian Academy of Sciences, to analyse the whole system of the price formation of industrial consumer goods — indeed, the entire mechanism of consumer prices as it has operated up to the present. The critical analysis leads to positive proposals and theoretical statements of practical value to which the impending introduction of the new system of economic control lends a timely significance.

The products of the food industry and those which do not undergo industrial processing are dealt with separately in the paper. This separation is necessary because of the differences in price formation between the two groups. The price formation of the processed food products is largely similar to that of other industrial commodities, while in the case of non-processed foodstuffs special heterogeneous and diversified interrelations must be taken into account.

Price, as a comprehensive economic category, is closely connected with the whole system of production, marketing, planning, incentives, etc. Accordingly, the authors do not confine themselves to the problems of price formation in the narrow sense but by working out the basic interrelations they extend their critical analysis, in fact, to the whole economic mechanism.

They are correct in their emphasis of the fact that official price fixation is not control, is not identical with an optionally purposeful price policy.

The ministries* which control the production would endeavour to establish cost-proportionate producer prices so that these prices enable the fulfilment of the ministry's plans and facilitate the work of control based on indicators. They want consumer prices whose enforcement will result in cost-proportionate producer prices. They fix net producer prices which contain an equalized rate of profit in order to prevent the differences in profit rates to affect the pattern of production. Such "neutral" prices are demanded also by the "physical" approach predominant in enterprise management. What is aimed at is that the results of the enterprises reflect the material processes and that no "unjustified" profits or losses (i.e. such as would express market relations) should appear.

The "neutral" or cost-proportionate prices offer some advantages also to trade. As a matter of fact, in this case, at least in principle, the pattern of supply is determined by the composition of orders and not by the differences in profit rates. In several cases, however, trade wishes to influence the pattern of supply also by differentiating the rates of profit. It is compelled to do so because of market demand and its own material interests.

Nor was up to now an ulterior correction of prices possible. As a result, the differentiation of profit rates became stabilized, though the direction of stimulus needed by the industry may have changed in the course of time. Under the system which existed up to now, owing to the rigid connection between producer and consumer prices, it was either the authorities in control of producer prices or those controlling consumer prices who were able to carry into effect their price policies. In practice they were forced to compromise in a way which did actually not suit the requirements of either.

The centre from which the price formation of new products started was the price based on precalculated prime costs. In reality, however, these costs do not constitute an objective basis, representing as they do relative magnitudes highly dependent on the set rules of calculation. With the application of any method of "differential calculation" the result will be determined beforehand by the choice of the basic product. The greatest paradox of actual price formation is that the "price centrum" based on cost calculation is in fact not proportionate to costs and does even less reflect the proportions of social inputs.

In the course of working out the prices of new products by means of what is called the "identification method", those in charge of calculation will be faced with the paradox task of having to express qualitative rank with a quantitative scale of prices. This task is rendered even more complicated by the fact that it is generally only a technical coincidence whether the production cost of a better quality is lower or higher than that of an inferior one. However, with relative prices failing to reflect the qualitative order, difficulties may arise in the marketing system. If the new product is relatively high priced, it will become unsaleable, while the earlier products become (or remain) short in supply; or, if it can be sold in spite of its high price, there will be a hidden rise in the price level. If the new products enter the market at a relatively low price, a shortage will make itself felt immediately while of the earlier products stocks will begin to accumulate.

As regards price policy in respect of food products, stability was regarded the fundamental requirement. This manifested itself in a highly centralized price control and in the infrequent price changes. The official modifications of food prices over the last fifteen years have come about either under the pressure of changes in the conditions of supply and demand, or they were intended to alleviate a chronic

* Since the study had been written the control over food production was concentrated into a single agency: Ministry of Agriculture and Food. Editor's note.

shortage or to achieve a general modification in the pattern of demand. As an inevitable consequence of this price policy, prices could not or hardly fulfil their proper role. There was a broad field under such conditions for hidden price rises, mainly in the form of deterioration in quality and changes in the assortment of goods contrary to the interest of consumers. (Enterprises were even encouraged to resort to such measures by the instructions to lower their costs and increase profits.)

Hidden changes in prices may be interpreted also as an adjustment of the price level and price proportions to the conditions of demand and supply. Paradoxically, the rigid system of price control, motivated primarily by the requirement of stability, became itself an institutional cause of the rise in the price level.

The thorough analysis by the authors shows that the "price centrum" based on prime costs cannot mechanically become the actual consumer price. Owing to several reasons (limited supply, state preferences, commercial viewpoints, etc.), consumer prices *must* differ from cost proportions, both as regards assortment within a commodity group and the relations between individual commodities or commodity groups — even if cost proportions reflected actual social inputs. Often even *greater differences than the present ones* would be warranted. However, the mechanism of price formation as it has been operating up to now, with the rigid, interrelated system of industrial profits, trade margins and turnover taxes does not allow greater differences to emerge.

If net producer prices move closely parallel to consumer prices, even slight modifications in the consumer price — which actually do not affect consumption — will sensitively influence production, particularly in the case of a low rate of profit. Higher industrial profit rates and an interest in the level of profits would act towards mitigating the contradictions due to price deflections.

Deflections of consumer price proportions from cost proportions, and the formation of net producer price proportions may be basically regulated by means of the established rates of turnover tax. But the regulation, harmonization or differentiation of the relative producer and consumer price proportions of the various types of one and the same commodity do not belong to the natural functions of the turnover tax. On the one hand, it should be left to trade to decide (either when fixing or when changing the price) whether they wished to work out the consumer price proportions of the various types in proportion to costs or otherwise. On the other hand, it should be subject to bargaining and agreement between industry and trade whether the proportions of actual producer prices should agree with the calculative or factual cost proportions or not, and whether the proportions of the prices paid by trade to the industry should agree with those of consumer prices or deviate from these. In some cases not only the producer price should be subject to bargain between trade and industry but the latter should also have a say in working out the consumer price. The official regulation or influencing of the consumer price of a commodity does not generally necessitate a similar regulation of the producer price.

The majority of the principles advocated by the authors will, in my opinion, necessarily become part of the price system under the new economic mechanism.

L. FALL

HEVESI, GY., *Folyamatos munkarendek alkalmazásának gazdasági, szervezési és szociális kérdései*. (Economic, organizational and social aspects of the application of continuous work programmes.) Budapest, 1966. Akadémiai Kiadó. pp. 170.

The approach of the book's author is that of an engineer analysing the losses and investigating their causes as well as

the ways and conditions of their elimination. This approach is increasingly adopted nowadays also by the economist who is becoming an "engineer of society". The book's basic idea may be summed up as follows. In industry, fixed assets to the value of several billion forints are productively engaged only ten hours on the average out of 24 hours of the day. The question is, how can this excess of production potential be utilized to improve the quantitative and qualitative indicators of production and, in the last resort, the working and living conditions of the population. The book treats the problem with an adequate theoretical apparatus and in its full complexity, but emphasizes — correctly — the methods and problems of practical solutions.

The book falls into six chapters. In the first chapter the author discusses the present utilization of the calendar working time and the possibilities of its increased exploitation; in the second one the fields where, and the conditions under which, it is expedient to apply continuous work programmes are briefly but comprehensively surveyed.

When outlining the possible fields of application, the author points primarily to the economic and social factors which may particularly justify the introduction of continuous work programmes. From among the economic factors the bottlenecks are mentioned first which put a brake on the production of profitable export products and of those in short supply; then the relationship of the capital and labour (wage) intensity of production is stressed as a factor having a strong influence on the economic efficiency of continuous work programmes. As a matter of fact — and this idea underlies the whole book — the transition from periodical work programmes to continuous operation can be successfully solved only if the workers are given adequate compensation for the change in their accustomed rhythm of life either in the form of increased wages or in that of reduced work hours. One of the most important items to balance this additional compensation is the saving in amortization costs and in the charge on fixed assets resulting from the increased utilization of capacities, the amount of these costs being dependent on the value of fixed assets engaged per 100 forint of wages. In addition, the author is correct in stating that there still persists the traditional weekend break in a number of industries where continuous operation would bring substantial advantages from the technological point of view. Such are, e.g., the glass industry and non-ferrous metallurgy where technology requires high temperatures and where in the case of continuous operation the losses due to cooling down and re-heating could be reduced.

Chapter 3 discusses the organizational problems connected with the introduction and application of continuous work programmes. After a short review of the periodical work programmes applied at present, a comprehensive survey is given of the shift charts of various continuous working programmes and of the fields where they can be expediently applied. In this Chapter, as throughout the book, the author relies in his statements on concrete investigation carried out in industrial works and analyses the advantages and disadvantages of the various shift charts on the basis of actual conditions.

The subdivision of this chapter is characterized by a particularly dynamic approach. The systematic presentation of the material is based not on the structural characteristics of the shift charts but on the aspects of transition from one state to another. Thus, the problems of transition from one type of working programme to the other without and with a reduction in work hours are treated separately and so are the problems connected with the limitation and gradual abolition of night shifts.

The principle that increases in capacity utilization must be subordinated to the

requirements of economic efficiency, may be considered as generally accepted. This approach characterizes also Hevesi's book. In Chapter 4 the economic effects of transition to continuous operation are also separately investigated. Paragraphs 2 and 3 may claim particular attention since in these the author analyses the economic results of the introduction of continuous operation on hand of concrete Hungarian and Yugoslav examples. The ample material offers an illustration of the fact that the introduction of continuous operation is economically advantageous in a wide sphere, particularly in the plants where the conditions described in Chapter 2 exist.

The author analyses mainly the connection between continuous operation on the one hand, and amortization and investment savings, on the other. He stresses that the application of continuous operation is an efficient means of defence against technical depreciation; accordingly, when increasing the utilization of capacities the amortization norms must not be automatically increased in proportion to the increased utilization without further investigation. An upward revision is justified only when and to the extent that the increased utilization reduces the efficient lifetime of the asset with technical depreciation also taken into account.

Analysing a great number of investment projects, the author reaches the conclusion that the planning of new plants and the reconstruction of old ones on the basis of the principle of continuous operation may be an important source of investment savings; the decrease in costs will, however, be slower than the increase in the equipment's specific operational time.

One of the major practical obstacles of shifting to continuous operation is the reluctance and mistrust of the workers. The objections most often voiced are that the time for leisure and family life will be reduced and the established rhythm of life upset. In Chapter 5 the author convincingly proves on hand of the results obtained from several sociological surveys that these fears are unfounded if *the transition is coupled with a reduction in work hours* in plants where changes had been implemented; after an initial period of some months the majority of the workers "voted" for the new system.

The Research Group for Industrial Economics of the Hungarian Academy of Sciences, headed until the last year by Gy. Hevesi, undertook a difficult task — last but not least because of the aversion already mentioned — when deciding a few years ago to focus its work on the problems connected with the introduction and application of continuous operation programmes. Since then, on the initiative and with the cooperation of the Research Group, several plants have successfully introduced continuous work. With the large-scale reduction of work hours now on the agenda, the problem gains special importance. By working up and presenting the ample material relating to domestic and foreign experiences in a really complex manner, Gy. Hevesi's book gives a new stimulus and scientific as well as practical help to the efficient application of this form of production and work organization, constituting at the same time a fine example of the efficiency of research carried out in close cooperation with practical work.

E. MEGYERI

PATAKI, J., *Állami gazdaságpolitika Nyugat-Európában.* (Government economic policy in Western Europe.) Budapest, 1966. Közgazdasági és Jogi Könyvkiadó. pp. 216.

The author — Hungary's ambassador in Ethiopia — gives an overall picture of recent developments in government intervention in West European countries. Though the author mainly deals with the ways of this intervention in the Western part of our continent, he frequently refers also to examples in the United States'

experiences when they are more characteristic for the type of intervention in question.

The study consists of five separate parts: *a)* Opinions and counter-opinions as regards the economic role of the modern capitalist state; *b)* Taxation and price policies; *c)* The State-owned production sector; *d)* Anti-cyclical government policy; *e)* Planning methods and experiments in the Western European countries.

ad *a)* In the first part, the author summarizes the historical conditions and theoretical bases of the development of Government economic policy in Western Europe; especially as regards the views of Keynes, Beveridge, G.D.H. Cole, J. Robinson, H. Morrison, etc. He also examines the objections raised by the neo-liberal school, against increasing Government intervention.

In the author's view, the fundamental reasons for the growing influence of Government economic policy after the Second World War were the requirements set by the economic reconstruction and the maintenance of full employment. This holds more for Western Europe than for the United States where it was the danger of the reappearance of prewar economic stagnation tendencies that required more intensive government intervention after the war. Today there are in both continents also other factors pushing countries in this direction: the introduction of new revolutionary technologies and the development of a modern division of labour within the economy. Even the maintenance of equilibrium on the markets themselves needs government intervention; in short, modern capitalism cannot exist without State support.

ad *b)* In the second part, the author analyses the tax cut problems in the USA, and those of American taxation policy in general, dealing with British tax system and taxation policy, too. In this part, Dr. Pataki dwells also on price policy in general and stresses: the main tasks of government price policies are to keep in equilibrium two general and rather contradictory preferences of economic policy: the relatively high level of investments (which is — or may be — of inflationary character) and the stability of prices. In the author's view, the main concrete goals of the price (and income) policies are generally reached; sometimes, however, this policy doesn't work, or just in the opposite direction. In this connection, he examines the recent British, French and Italian stabilization programs.

ad *c)* In the third part, the State sectors of several Western European countries are described, i.e. those of Britain, France, Western Germany, Italy and Austria. In doing so, the author gives many interesting details about these sectors, making at the same time some comparisons between them. He comes to the conclusion that the State sector is one of the most important elements in contemporary government intervention in capitalist economies; at the same time, this sector is controlled as flexibly as possible and its rentability and development never escape the attention of its autonomous management.

ad *d)* In the framework of the analysis of anti-cyclical government policies, Dr. Pataki dwells on the income policy, agricultural subsidies (on hand of the examples of Britain, Western Germany and Finland), and interrelations between the general economic policy and foreign trade policies, including tariffs and export credits. All these government measures, just as the above-mentioned price policy, are considered by the author efficient enough for the purpose to be achieved.

ad *e)* After studying the historical background, the theories and the various sides of government intervention, the author analyses its widest and most complex form, i.e. planning.

Step by step, the government intervention has become ever wider to the extent that it became necessary to co-ordinate its means — the author underlines. He shows that planning influences

not only the spheres of distribution and market but those of production and long-term investment policies as well. This is the case especially in France and Holland whose planning methods are extensively discussed in the study.

However important the role of planning in capitalist country may be, it must not be forgotten it is not planning in the socialist sense of the word there — Dr. Pataki emphasizes.

Nevertheless — the author concludes —, recent developments in Western countries in this field are worth-while to be known thoroughly, because the above-mentioned methods, if properly used, can yield the results desired and thus they are interesting for socialist countries, too.

GY. BECSKY

SIPOS, A., *Agrárviszonyok Nyugat-Európában.* (Agrarverhältnisse in Westeuropa.) Budapest, 1967. Kossuth Könyvkiadó. pp. 280.

Die Landwirtschaft der entwickelten kapitalistischen Länder betrat nach dem zweiten Weltkrieg neue Wege. Die neuesten Ergebnisse der Technik und Wissenschaft gewannen in der Landwirtschaft schneller und in kürzerer Zeit an Boden als in der Industrie. Besonders die wissenschaftlich-technische Revolution und der kraftvolle Eingriff des Staates sowie der Monopolien bewirken in der Landwirtschaft grundlegende Veränderungen.

Die agrarwirtschaftliche Literatur widerspiegelt aber diese bedeutenden Veränderungen bei weitem nicht in vollem Masse. Die sich entfaltenden neuen Entwicklungstendenzen erweckten zwar schon in den Fünfzigerjahren die Aufmerksamkeit der marxistischen Forscher, doch wurde auf einzelne Eigenarten der Agrarentwicklung besonders in der Landwirtschaft der Vereinigten Staaten — wo der Prozess der technischen und strukturellen Umgestaltung fortgeschrittener war — hingewiesen. In den Sechzigerjahren prägen sich dann die neuen Entwicklungstendenzen auch in der Landwirtschaft der entwickelten kapitalistischen Länder Westeuropas schärfer aus.

Das neue Buch von Aladár Sipos trägt in bedeutendem Masse zur Ausgestaltung der wissenschaftlichen Auffassung der modernen Landwirtschaft bei. Es umfasst all jene bisherigen Forschungsergebnisse, die die Klarlegung der Entwicklungstendenzen der modernen Landwirtschaft bezweckten. Auch analysiert er ausführlich die Gründe, die die Beschleunigung der Entwicklung der rückständigen Landwirtschaft hervorriefen, zeigt uns den Stand der Produktionskräfte der derzeitigen Landwirtschaft und zieht weitere wissenschaftliche Schlüsse aus der Umgestaltung der materiellen-technischen Grundlage der Landwirtschaft.

Im ersten Kapitel des Buches legt der Verfasser dar, dass in sämtlichen europäischen entwickelten kapitalistischen Ländern die Mechanisierung der Landwirtschaft in einem schnellen Tempo vor sich geht. Infolge der Steigerung der Arbeitsproduktivität nimmt die beschäftigte menschliche Arbeitskraft fortwährend ab. Die Agrarproduktion entwickelte sich nach dem zweiten Weltkrieg günstig, aber natürlich war die jährliche Wachstumsrate der industriellen Produktion in sämtlichen entwickelten kapitalistischen Staaten schneller, als diejenige der Landwirtschaft. So verminderte sich auch der Anteil der landwirtschaftlichen Produktion innerhalb des Nationaleinkommens. Diese Tendenzen bedeuten aber nicht, dass sich die Rolle der Landwirtschaft im Reproduktionsprozess verkleinert, sondern weisen nur auf die in der Volkswirtschaft vor sich gehenden strukturellen Wandlungen hin.

In der gegenwärtigen Periode vergrösserte sich die Rolle jener Faktoren, die zur Förderung der technischen Entwicklung in der Landwirtschaft beitragen. In der Landwirtschaft der entwickelten kapitalistischen Länder »ist in den Grossbetrieben der Übergang von der manuellen

zur maschinellen Produktion im wesentlichen schon vollendet«. (S. 69.) Der Gebrauch von Traktoren, einiger Arbeitsmaschinen, Kunstdünger, Pflanzenschutzmittel usw. nimmt auch in den Kleinbetrieben zu. Der Verfasser beweist aufgrund vieler Daten, dass die technische Entwicklung in der Landwirtschaft heute schneller vor sich geht als in der Industrie. Dies drückt sich einerseits darin aus, dass die Arbeitsproduktivität der Landwirtschaft in den meisten Ländern schneller zunimmt, als diejenige der Industrie. Trotzdem ist aber das Niveau der Arbeitsproduktivität in der Industrie höher (ausgenommen England, wo die Lage umgekehrt ist). Andererseits nimmt in der Landwirtschaft auch die organische Zusammensetzung des Kapitals schneller zu als in der Industrie. Die landwirtschaftliche Kapitalakkumulation besitzt die Eigenart, dass sich die Zahl der Arbeiter parallel mit dem Wachstum des Kapitalbestandes verringert. So erhöht sich die Kapitalsumme je Kopf schneller als das investierte Kapital. Aus den Angaben ist der Schluss zu ziehen, dass in den entwickelten Industrieländern der Unterschied zwischen der organischen Zusammensetzung des industriellen und landwirtschaftlichen Kapitals langsam aufhört, oder schon aufgehört hat.

Mit Hilfe des schnelleren Entwicklungstempos wird die Liquidierung der Rückständigkeit der Landwirtschaft in einer verhältnismässig kurzen Zeit ermöglicht. Der Verfasser ist der Meinung, dass sich die Unterschiede des Fortschritts später verringern und sich die beiden Wirtschaftszweige — auf einer höheren technischen Stufe der Landwirtschaft — annähernd gleich schnell entwickeln werden.

Der interessanteste und neuartigste Teil des Buches ist das zweite Kapitel, in dem Aladár Sipos die Gestaltung der Bodenrente unter den veränderten Verhältnissen des modernen Kapitalismus behandelt.

Aufgrund breit angelegter statistischer Untersuchungen stellt der Verfasser fest, dass sich die absolute Summe, und ebenso der Anteil der Grundrente innerhalb des Gesamteinkommens beträchtlich vermindert. Die Angaben beziehen sich auf den Gesamtbetrag der Differentialrente und der absoluten Grundrente und es ist nur theoretisch möglich darauf zu schliessen, welche Form der Grundrente heute in der Wirklichkeit besteht. Die Bedeutung der Differentialrente I. nahm ab, da im Ernteertrag und in der Lage der Böden heute schon keine so grossen Unterschiede bestehen, wie im vergangenen Jahrhundert. Die schlechteren Böden wurden aus dem Ackerbau ausgeschaltet. Die Rolle der Differentialrente II. erhöhte sich aufgrund der rentablen zusätzlichen Investitionen. Dagegen hört die absolute Grundrente langsam auf, oder hat schon ganz aufgehört, weil der Ausgleich der organischen Zusammensetzung des Kapitals es nicht ermöglicht, dass der Wert der landwirtschaftlichen Produkte ihren gesellschaftlichen Produktionspreis übersteige. Das landwirtschaftliche Kapital kann nicht mehr Arbeit in Bewegung setzen, wie das nicht-landwirtschaftliche Kapital — schreibt der Verfasser —, kann also schon deshalb keine grössere Mehrarbeit realisiesen. (S. 97—98.) Unter solchen Umständen entsteht auch dann keine absolute Grundrente, wenn in der Landwirtschaft das Pachtsystem vorherrschend ist. Die Bedeutung der Pacht vermindert sich aber gemäss den Angaben und diese Tendenz wird voraussichtlich auch in der Zukunft fortdauern.

Im dritten Kapitel analysiert der Verfasser die Konzentration des Bodens und der Produktion. Infolge der Bodenkonzentration »erobert die grossbetriebliche Produktion auch in der Landwirtschaft immer mehr Raum und die kleinen Bauernwirtschaften verschwinden mit stürmischer Geschwindigkeit«. (S. 140.) In den Kleinbetrieben können die Produktionsmittel nicht rationell ausgenutzt und das Volumen der Warenproduktion nicht erhöht werden; sie produzieren teuer und ihre Einkommen genügen meistens nicht

einmal zur Reproduktion der Arbeitskraft. So werden sie zu Hindernissen des weiteren technischen Fortschritts. Deswegen wird heute schon in immer mehr Ländern der Abbau der Kleinbetriebe zu einem Regierungsprogramm.

Das vierte Kapitel enthält eine ausführliche Behandlung der staatlichen Unterstützung der Landwirtschaft.

Die Ausgestaltung der grossbetrieblichen Landwirtschaft ist in der Tat eine geschichtliche Notwendigkeit, doch müssen jene Faktoren besser beachtet werden, die den Fortschritt der Differenzierung behindern und die kleinbetriebliche Form konservieren. Neben den die Konzentration beschleunigenden Faktoren entstehen auch verlangsamende Faktoren, die heute zwar eine kleinere Rolle spielen, deren Wirkung aber nicht vernachlässigt werden darf, da sie die an Bedeutung verlierende bodenzergliedernde Tendenz ablösen und schon heute ihre Wirkung fühlen lassen.

K. Forgács

Kövér, K., *A tőkés világ valutarendszere.* (Валютная система капиталистического мира.)
Budapest, 1967. Közgazdasági és Jogi K. 243 стр.

В экономической литературе социалистических стран в настоящее время еще довольно редко встречаются работы, разрабатывающие какую-нибудь специфическую область капиталистической мировой экономики. В данной работе дается марксистский анализ одной из сложнейших сторон капиталистической мировой экономики: валютной системы.

К. Кевер с большим знанием предмета анализирует многостороннюю корреляцию между стабильностью валют капиталистических стран и развитием международной торговли, развитие сил, создающих и разрушающих капиталистическую валютную кооперацию, развитие международных ключевых валют и их различное влияние на денежных рынках, роль золота в современных международных расчетах, международную валютную ликвидность и ее напряженность, положительные и отрицательные стороны предложений по рационализации международной валютной системы.

Автор пытается разъяснить содержание отдельных терминов, употребляемых в международных денежных связях. Им дается полезный обзор — с точки зрения экономической истории — формирования валютной системы капитализма, валютного кризиса 1929—1936 годов и его действующих до сих пор факторов. С помощью исторического анализа автор раскрывает тождество и отличия золото-валютного стандарта настоящего времени и его формы, функционировавшей до второй мировой войны.

В одной из важнейших глав книги излагаются факторы, определяющие валютное развитие. По существу изучаются вопросы взаимосвязи между валютным курсом, нормой процента (кредитной политикой), ценой и рынком золота, международной ликвидностью, а также международным платежным балансом; причинные связи между отдельными эффектами. Здесь автор приходит к ряду новых выводов, полезных и интересных как с теоретической, так и с практической точки зрения.

Подробно анализируя положение валютных центров капиталистического мира, в работе исследуется настоящее положение доллара США, фунта стерлинга и западноевропейских валют; развитие валютного соперничества. Относительно капиталистического валютного сотрудничества автор дает широкий фактический материал об организационной структуре, механизме и результатах деятельности Международного валютного фонда. С этими соображениями связан критический анализ различных международных планов и предложений о преобразовании валютных отношений. Читатель может ознакомиться с планами Якобсона, Модлинга, Руза, Постума, Бернстейна и Триффина, а также с новыми французскими предложениями.

К. Кевер в своей работе критически анализирует валютное сотрудничество ка-

питалистических стран, планы по его развитию и пытается вскрыть в них рациональные соображения.

Относительно небольшой объем книги хороший пример того, что с помощью экономичного, целеустремленного изложения мыслей можно дать убедительный анализ также и широких проблем. Установив правильные пропорции между изложением фактических сведений и экономическим анализом, автор сделал свое произведение ценным пособием.

И. Визел

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J. ZALA

1958–1967: THE ECONOMIC TRENDS OF A DECADE

The author analyses Hungarian economic development over the ten years preceding the introduction of the reform of economic control and management. It aims at an examination of the path of development, and at a determination of the factors influencing acceleration or slowing down of the rate of growth. She mainly investigates the effect of balance of trade problems on the growth rate of the economy.

In the following I propose to deal with the economic development of the ten-year period just concluded and with some of its problems. The delimitation of this period is warranted not so much by its being a full decade but rather by the fact that 1968 is to witness the start of a new system of economic management. Thus, 1967 was essentially the closing year of a period of development where — though in changing form — the old methods of economic management were prevailing. 1958, on the other hand, had been the year of overcoming the damages caused by the events of 1956, that is, one that had already marked the end of a reconstruction period.

The decade under survey was a period of considerable economic achievements. This should be emphasized not because of certain unwritten rules of behaviour which would ask for listing the results before raising the problems, but because it is part of a complete and true picture.

In the ten years from 1958 to 1967 the volume of *industrial production and construction* increased more than twofold, that of *agricultural* production by about 18 per cent, *national income* by about two thirds, the *consumption level* one and a half-fold, *investments* more than twofold and *exports* two and a half-fold.

For a correct evaluation of the results, several circumstances should be taken into account:

1. In the base year 1958 the level of the last "normal" year of the preceding period — 1955 — had been reached and in several respects, first of all as regards the level of consumption, even surpassed. (In 1958 private consumption was by 20 per cent higher than in 1955.)

2. The period saw the completion of collectivization in agriculture. At the same time, the social problems involved had to be surmounted and the

economic sacrifices entailed by the organization of large-scale farms had to be shouldered.

3. The considerable results of the period were achieved in spite of the fact that in some years balance-of-trade problems necessitated the restriction of the rate of growth.

The rate of progress in the past ten years was significant even by international standards. Though there are no comparative data available for the whole of the ten-year period, in the last 8 to 9 years this country occupied

Table 1

Annual average increase of national income (NMP) in the socialist countries and of gross national product (GNP) in some capitalist countries between 1958 and 1966

Countries	per cent	Countries	per cent
Romania	9.6	Japan	10.4
Bulgaria	9.1	German Fed. Rep.	5.4
Soviet Union	7.0	Netherlands	5.3
Hungary	*5.8*	France	5.0
Poland	5.8	Denmark	5.0
German Dem. Rep.	4.3	Switzerland	5.0
Czechoslovakia	4.0	USA	4.7
		Austria	4.6
		Belgium	4.0
		United Kingdom	2.1

a medium position in the range of socialist countries in respect of the rate of economic progress (as reflected by the average annual increase of national income), and ranked with the capitalist countries where the rate was quicker than average.

It is a well-known fact that in spite of the significant rate of growth the country's leading organs have, in connection with the problems which presented themselves in the course of the past years, raised the necessity of a critical analysis of the system of economic control and management and, relying on this analysis, decided to initiate a reform of that system.

Critical analysis can be undertaken only with some requirement in view. In a socialist planned economy, a start could be made from the requirement of rapid economic development, a rate much quicker than in any capitalist country and an even, never-slackening growth in respect of all indicators. Further, the rate of growth should ensure the equilibrium of the balance of

foreign trade. As is known, the economic development of Hungary failed to meet this requirement in some years and in certain respects. The pace of economic progress was unsatisfactory, primarily because it was not sufficiently even. The lack of external equilibrium necessitated to put at times a brake on progress.*

The unevenness of development manifested itself primarily in the field of *investment.*

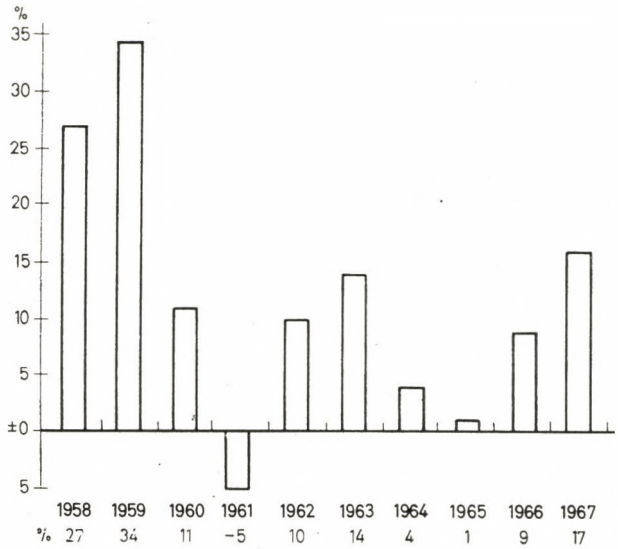

Fig. 1. Annual changes in investment expenditure (percentage changes as against the preceding year)

It is a well-known fact that periodical changes in the volume of investments are considered in economic literature as an important, almost decisive factor of business cycles. Accordingly, whenever these indicators show an uneevn trend of development, they constitute a problem which, under our conditions, deserves closer investigation.

Increases or decreases in the volume of investments are under socialism not the result of decisions taken by enterprises. Investments did not grow in some years because some investors expected a boom, nor did they decline in others because investors thought the cycle had passed its peak. The sums invested are in our country not regulated by the expectations of enterprises. Under our conditions, the willingness to invest did never decline, as a matter

* For the sake of truth and historical precision, it should be pointed out that these problems did not emerge *only* and *not even mainly* in the period under discussion. Some had presented themselves with the same or even with greater intensity in the fifties. In that period, however, other problems had been dominating, which are not intended to be dealt with in this article.

of fact, every industry was aiming at development at all times. It was always the central authority that set a limit to these intentions. Thus, whenever in a given year the volume of investments showed an increase or a decrease, this was always due to a central decision embodied in the annual plan. The investment quotas of a given year (i.e. the tendency to increase or to decrease investments, and to what extent) were, in actual practice, influenced not by considerations of an even development — such considerations found their expression more in the five-year plans which did, however, influence to a lesser extent the events of the individual years — but rather by the external equilibrium situation as reflected in the balance of trade of the previous year.

Surveying the data of the past years, we will find that in several years, though not in each one, a more or less direct connection existed between the balance of trade and the trend in investment, a connection that usually manifested itself with a time-lag of one or two years.

Table 2

Relation between the balance of trade and investments

Annual balance of trade (million foreign exchange Forints)		Annual change in the volume of investments (percentage change from previous year)	
1958	+ 617.7	1959	+34%
1959	— 273.8	1960	+11%
1960	—1195.6	1961	— 5%
1961	+ 40.0	1962	+10%
1962	— 579.7	1963	+14%
1963	—1171.2	1964	+ 4%
1964	—1676.2	1965	+ 1%
1965	— 127.2	1966	+ 9%
1966	+ 326.6	1967	+17%

Thus e.g., in 1959 and 1960, when there had been an active trade balance or a near-equilibrium position in the preceding years, investments increased considerably, at a quicker than average rate (by 34 and 11 per cent, respectively). A similar relationship may be found in the case of the relatively favourable foreign trade balances of 1965 and 1966, and the growing investments in the following years (1966 and 1967).

In 1961, 1964 and 1965 investments were cut back or only slightly increased (by one to four per cent). Presumably, these decisions were greatly influenced by the fact that the deficit in the balance of trade had been outstandingly high in the preceding years (1.2 to 1.6 billion foreign exchange

Forints). No similar relationship can be found between the passive balance in 1962 and the investments in 1963, since in spite of the moderate deficit of 1962 investments in 1963 increased at a more than average rate (by 14 per cent as against the preceding year).

Both Marxist and non-Marxist economists have found a connection between the trends in the volume of investment and economic growth. Under capitalist conditions, growing investment activity is generally concomitant with rising production, employment and wages (consumption) — and conversely, a restriction or fall in investment activity is followed by decreasing production and employment (excess capacities and unemployment) and a stagnation or even decline of consumption.

In this country, the uneven growth of investments — and even decline in one year — did not have such consequences.

Industrial equipment being generally and continuously used to capacity, there was no decline in industrial output in the ten years examined and the rate of growth was relatively even. There was an increase in the volume of production even in 1965 when, as is known, the process of growth was slowed down deliberately by energetic and efficient central measures, and in the subsequent years the growth rate regained the earlier level.

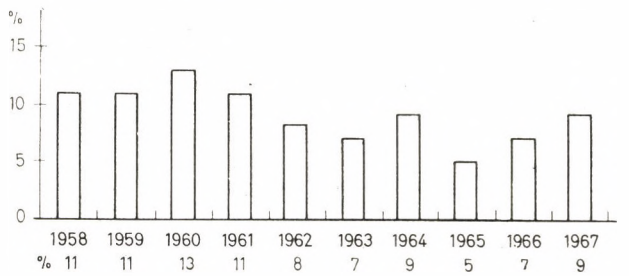

Fig. 2. Annual growth of industrial output (percentage increase from previous year)

Thus, in 1961, when investments were down by 5 per cent as compared to the previous year, industrial output grew by 11 per cent, i.e. at about the same rate as in 1958 and 1959 when investments had considerably increased (by 27 and 34 per cent, respectively). In 1964, when the growth in investment was below average (4 per cent), industrial output increased 9 per cent, and the rate was the same in 1967, when the growth in investment was well above average (about 12 to 14 per cent). 1965 is probably a year when there was some connection between the development of investments and industrial output; in that year investments were kept near the level of the previous year and industrial output increased to the smallest extent in the period investigated (5 per cent).

The trend of *employment* was more even than that of production.

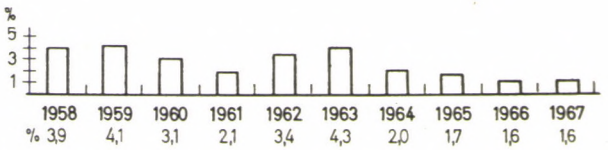

Fig. 3. Non-agricultural employment (percentage increase over previous year)

Hardly any connection can be found between the annual growth of employment (non-agricultural employment being relevant from this point of view) and the annual changes in investment. At least, there is no sign of employment decreasing with diminishing investments (e.g. in 1961). The data indicate at most, some loose connection, namely that in the years when investments declined or stagnated or only slightly increased (1961, 1964 and 1965), non-agricultural employment increased at a rate below average (about 2 per cent in each of the years mentioned). Not even this connection may be found in 1966, when employment increased by 1.6 per cent only, while investments rose by 9 per cent, i.e. slightly above average.

Total employment showed even less change:

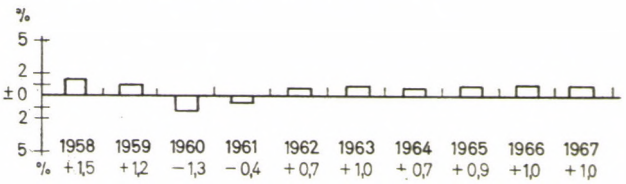

Fig. 4. Growth of total employment (percentage changes from previous year)

Within total employment, the flow of manpower from agriculture to the other branches continued also in this period, though at a decreasing rate.

Table 3

Changes in agricultural and non-agricultural employment
(percentage changes from previous year)

	Agricultural	Non-agricultural
1958	−1.5	+3.9
1959	−2.6	+4.1
1960	−7.6	+3.1
1961	−4.6	+2.1
1962	−4.0	+3.4
1963	−5.2	+4.3
1964	−2.1	+2.0
1965	−0.8	+1.7
1966	−0.3	+1.6
1967	−0.7	+1.6

From the relatively even growth of employment as well as from the fact that a continuous, though slow, increase in average incomes had been an objective set by central authority (with no decision aimed at reducing average real income being brought in any of the years under investigation), it followed that the amounts destined for *private consumption* out of national income also increased evenly from year to year.

The growth of consumption was more even than that of investments in the sense that the amounts destined for consumption did not diminish in any single year and annual increases moved between narrower limits. On the other hand, a certain connection may be found in some years between the balance of foreign trade and consumption in the following year. In 1961 and 1965, by central decision the level of consumption was allowed to rise only slightly (by 1.4 and 3 per cent, respectively). Now, it was in the years preceding the two mentioned (i.e. in 1960 and 1964) that the trade deficit was highest. No such connection can be found between the considerable deficit in 1963 and consumption growth in 1964 when the latter increased at about the same rate as in six years out of the ten under investigation.

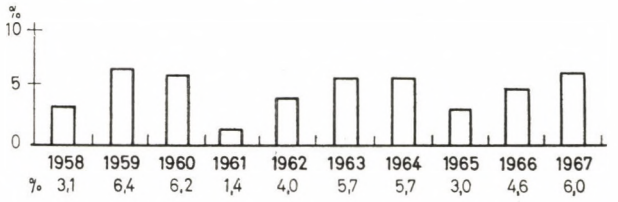

Fig. 5. Annual growth of private consumption (percentage changes from previous year)

From what has been said above it appears that the uneven trend of the funds devoted to investment did not or only slightly affect industrial output, employment and consumption.

The volume of industrial output and construction increased year by year relatively evenly. Accordingly, an almost evenly increasing amount of industrial and construction goods became available from year to year. The final utilization of industrial and construction goods is taking place to a decisive extent in consumption, investment and export. As has been shown, consumption increased each year to a greater or lesser extent but rather evenly. Industrial exports also grew considerably in each year (between 10 and 20 per cent annually), except for 1963 and 1966 when the rate of growth was only 4 to 5 per cent.

If an evenly increasing volume of industrial and construction products becomes available (from domestic production and imports) each year and if, at the same time, two factors of final demand, i.e. consumption and exports also grow rather evenly, though slower than production and imports, while

the third major factor, namely investment, changes rather unevenly, a difference must appear between the total quantity of commodities available and their total utilization. This difference will appear in the form of *accumulating stocks*.

Let us examine this relationship on the basis of an example relating to a single year.

In 1960 there was a substantial deficit in the balance of trade. As a consequence, the central bodies decided to allow in 1961 the consumption level to rise only to a small extent and to cut back investments as well. But industrial output showed a considerable increase also in 1961 (11 per cent). Accordingly, in 1961 the volume of industrial goods available (taking into account also a modest increase of 3 per cent in the import of industrial goods) increased substantially. At the same time, out of the three major utilization factors (consumption, investments and exports) two — namely consumption and investments — were restricted or reduced in volume. Though, in order to restore external equilibrium, industrial exports were considerably stepped up (they increased by 20 per cent in a single year!) the utilization of industrial products could yet grow only at a slower rate than industrial output. The difference between "resources" and "utilization" went forcibly into accumulating inventories. Under such conditions in 1961 10 billion forint worth of commodities — 3.5 billions more than in 1960 — were added to existing stocks. This is about 25 per cent of all 1961 investments whose level was reduced by 5 per cent as against the previous year.

The 1964 data show a similar relationship, though in a less accentuated form. As a matter of fact, in that year the growth rate of consumption was not restricted and investments did not decrease, they only grew slower than average. In 1964 industrial output increased by 9 per cent and industrial imports by 14. At the same time, final utilization of industrial goods increased to a smaller extent: industrial export rose by 12 per cent, investments by 4 per cent and consumption by 6 per cent. Additions to inventories (of industrial goods) amounted in 1964 to 8.6 billion forints, i.e. 2.5 billions more than in the preceding year. The increase corresponded to 16 per cent of investments in that year (with the latter having been allowed to grow only by 4 per cent).

Stocks are necessary in a developing economy. International comparisons have, however, shown the level of aggregate stocks to be too high in this country in relation to national income. At the same time, owing to the composition of stocks, shortages and redundant inventories are a regular occurrence. From this point of view it is particularly significant that the accumulated stocks consisted of industrial products left over from production (which were neither consumed, nor exported, nor invested). This is a problem in itself since in the ten years under investigation, goods of this character have accumulated in a value of some 65 billion forints. This amount corresponds to

about 4 per cent of all the goods consumed and invested in the course of the ten years.

However, the uneven character of development should not be ascribed to this factor; if, in the course of these ten years, always the same percentage of national income had been added to inventories, consumption and investments still could have developed evenly and also foreign trade could have been balanced. From this point of view the problem is that in some years, under the pressure of the trade balance, we *partly* restricted some fields of utilization — mainly investment, but, to a smaller extent also consumption — and *partly* failed to leave any unused capacity but rather increased production with the result that part of the output, varying in volume, was left in every year to increase inventories.

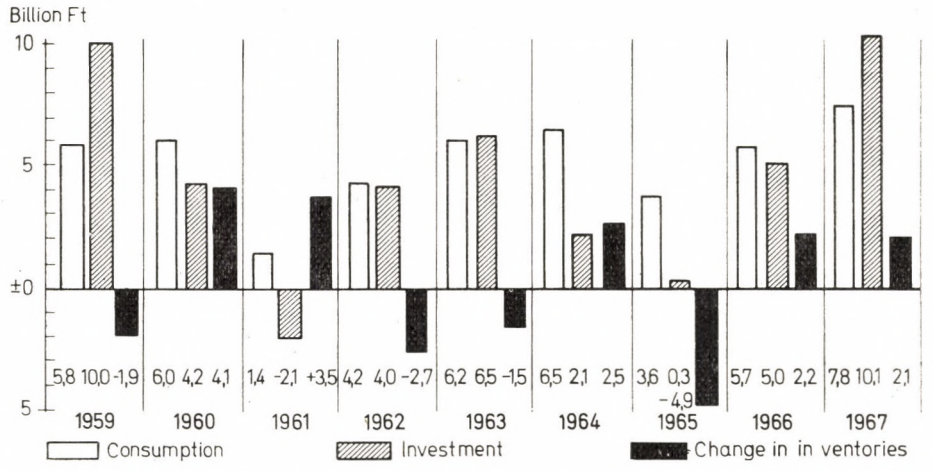

Fig. 6. Annual changes in private consumption, investment and inventories (billion forints)*

Fig. 6 illustrates some of these relationships. In the knowledge of the fact that industrial output increased more or less evenly over the period, it may be stated that in several years when consumption and investments grew at a rate above the average (thus in 1959 and 1963, but also in 1962) the additions to stocks were relatively smaller than in the corresponding previous years. In 1961 and partly also in 1964, when on the basis of the annual plan measures were taken to restrict utilization, a relatively greater amount of the increased production went into stockpiling than in the preceding year.

* Stocks increased in each individual year. The diagram expresses the changes from one year to the other in the part going into increasing stocks. Thus, a negative sign means that e.g. in 1959 stocks increased to a smaller extent than in 1958, and in 1962 to a smaller extent than in 1961 and so forth.

1965 deserves particular attention. In that year industrial output increased by only 5 per cent and imports of industrial commodities remained on the level of the preceding year. At the same time, industrial exports grew by 11 per cent, investments remained on the level of the preceding year and consumption increased by 3 per cent. The extent of inventory changes was also much lower than in 1964. (In 1964, additions to stocks amounted to 8.6 billion forints, in 1965 to 3.7 billion forints.)

In 1966 and 1967 with industrial output increasing again, also stocks began to rise, although to a lesser extent than investment and consumption.

To sum up. The uneven rate of development did, under the conditions prevailing in this country, not have the same effects as in the capitalist countries, i.e. it did not react on industrial output and employment. With an even growth of industrial output, the deliberate cutbacks of the rate of development in certain years in order to improve the foreign trade situation were compensated by a relative increase in additions to stocks. (This was the case in 1961 and partly also in 1964.) There were also years when, even with a reviving investment activity and a relatively greater increase in consumption, the additions to stocks were rather sizable (in 1960, 1963 and partly also in 1964). In these years, however, the foreign trade deficit was greater.

Temporary increases and decreases in investments as well as varying changes in the additions to stocks — which under capitalist economic conditions characterize or indicate the different phases of the business cycle — are not necessary concomitants of a socialist planned economy. From this point of view the development in 1966 and 1967 is worth attention. In 1966 the funds used both for investments and for stockpiling surpassed considerably those of the preceding year and the balance of trade still showed a surplus at the end of the year.

This was rendered possible by several, partly interrelated, circumstances. In 1966 national income grew at a much higher rate (8.4 per cent) than the average of several preceding years. Private consumption also increased more than usual (6 per cent) though to a smaller extent than national income. The remaining surplus sufficed to increase investments and to devote a larger amount than in 1965 to increase also inventories. In addition, also the balance of trade could be improved.

Two comments are, however, necessary.

— Though the additions to stocks were greater in 1966 than in 1965 in absolute terms, as a percentage of national income they were smaller than in any year since 1960, except 1965.

— A good harvest in 1966 enabled us to increase the active foreign trade balance of agricultural and food products by a further 17 per cent over 1965.

The achievements of 1967 were in many respects similar to those of 1966. National income rose by a further 7 per cent; the rate of growth was thus

nearer that of 1966 than that of the preceding years. Investments also grew considerably; the level of consumption was higher by about 6 per cent and there was a rather sizable increase in additions to stock. However, in a single respect 1967 differed from 1966, namely, in that the balance of trade showed a deficit.

Development in 1967 was, however, influenced not only — and perhaps not even mainly — by the events of the preceding years but also by preparations for the changes expected from the forthcoming reform of economic management. The lively investment activity which went beyond the central decisions indicated that part of the enterprises wished to secure for themselves the greatest possible share of the funds which in 1967 were in their majority still allocated centrally and without any special economic conditions (obligations). Similar endeavours manifested themselves also in stockpiling activities. The balance of foreign trade continued to play a central role in 1967, and export activity increased accordingly. All that was accompanied by a faster increase in industrial output. Increased production involved higher outlays on wages. Investments, stockpiling, an increased purchasing power and growing exports together acted towards boosting demand for industrial products (and for imports). Industrial capacities expanded. The favourable foreign trade position which emerged as a result of the surplus achieved in the preceding year enabled us to increase imports. Industrial output and imports essentially satisfied increased demand even if there were some difficulties in certain fields.

It is another question whether these circumstances did not put a greater strain on the capacities and reserves of the economy than would have been desirable for the better foundation of the transition to 1968. However, if we disregard this problem now and restrict our investigations to the period closing with 1967, the experience of the last two years may be said to bear out in practice the statement, which may be considered as theoretically already proven, that under the conditions of a planned socialist economy periodical declines are not inevitable in any of the main fields of economic development.

The economic reform now introduced may be expected to provide both the central authorities and enterprise management with the means necessary to ensure an uninterrupted and therefore quicker growth in the rate of economic development.

No economist can, however, expect the reform to bring immediate or sudden changes when it starts on January 1st, 1968. As a matter of fact, the reform is not only based on the lessons but also conditioned by the past. A long time may elapse before the lessons derived from past experiences will be made widely known and utilized. Nor will it take less time for the favourable changes expected from the reform to assert themselves gradually in the structure of the economy. It can also be foreseen that there may be some ideas and also measures taken on their basis now thought correct which it might become

necessary to change later on in practice. The problems of the following year (and, maybe, the next two or three years) are thus rooted to a great extent in the past and the present. But notwithstanding the problems, both those arising from the past and others, the reform now starting will, by doing away with earlier taboos and by setting new requirements, create a situation where enterprises sooner or later find it easier to carry out their activities in conformity with the interests of the national economy than they did in the period surveyed in this article.

ОБ ЭКОНОМИЧЕСКОМ РАЗВИТИИ ВЕНГРИИ ЗА ДЕСЯТИЛЕТНИЙ ПЕРИОД 1958—1967 гг.

Ю. ЗАЛА

За 10 лет, предшествовавших введению экономической реформы, венгерское народное хозяйство значительно развилось. Масштабы этого роста по сравнению с предыдущими периодами, а также и в международном плане заслуживают внимания. Все же наблюдались и проблематичные явления. Экономический рост Венгрии в последние десять лет не был достаточно равномерным, а поэтому — не был и достаточно быстрым, дефицит внешнеторгового баланса временами вызывал необходимость сокращения масштабов роста.

Неравномерность развития отражалась, в первую очередь, в годовых темпах роста объема *капитальных вложений*. В последние 10 лет изменения ассигнованных на капиталовложения годовых сумм колебались от 5% сокращения до 34% повышения.

Существенно равномернее складывалось годовое изменение объема *потребления*, однако, и оно не было лишено некоторых колебаний.

Между изменениями обращаемых из года в год на капитальные вложения сумм и динамикой сальдо внешнеторгового баланса — с запозданием на один год — можно установить довольно тесную связь. Проблемы в связи со сбалансированностью внешней торговли возникали прежде всего в 1960, 1963 и 1964 годах. Представленные в статье данные наглядно показывают, что изменение величины обращаемых на капиталовложения сумм в последующем за внешнеторговым дефицитом году обычно было отрицательным и лишь иногда в небольшой мере положительным (в 1961, 1964 и 1965 годах).

В связи с этим автор указывает на следующую проблему: директивы, издаваемые центральными органами о повышении или сокращении объемов капитальных вложений и потребления с одного года на другой, указывали очень небольшое влияние на динамику продукции, в первую очередь, промышленной. В те годы же, когда ограничивался рост объема капитальных вложений или потребления населения, промышленная продукция значительно увеличивалась (например, в 1961 году). Из этого следовало в эти годы в Венгрии явление накопления неиспользованных продуктов (образования запасов) сверх обоснованной меры.

В дальнейшем автор указывает на более положительные черты развития последних трех лет, ибо в эти годы, при восстановлении общего равновесия внешнеторгового баланса, не происходило чрезмерного накопления запасов.

Отдельно рассматриваются в статье те элементы развития 1967 года, которые, вероятно, уже связаны с ожиданиями предприятий, касающимися введения в 1968 году экономической реформы.

M. AUGUSTINOVICS

A COMPARATIVE ANALYSIS OF FOREIGN TRADE IMPACTS ON THE HUNGARIAN ECONOMY

The impact of foreign trade on the volume and sectoral pattern of production, on primary inputs, on foreign trade turnover itself and on various final uses is investigated by comparing the Hungarian economy to that of EEC countries with respect to the discrepancy between the actual economic structure and an assumed autarkic one as defined by input-output data.

To characterize the importance of foreign trade and its role in the economy it is usually considered sufficient to express the value of exports as a percentage of national income. The anxieties relating to foreign trade, the practical problems and the ideas about their solution would then concentrate mainly on the positive or negative *balance* of trade amounting to but a few per cent of the total trade figure. Now, it is obvious that if the balance had come about not under the influence of random fluctuations but as a result of a trend, the causes will have to be sought in the pattern of foreign trade and even in the structure of the whole economy. It should be equally obvious that the impact of foreign trade on the economy as a whole and the *intensity* of the mutual interrelations between foreign trade and economic structure are not necessarily proportionate to the ratio of exports to national income. The interrelations between foreign trade and economic structure have, accordingly, to be investigated thoroughly and from many aspects; instead of establishing a single indicator, a multitude of facts must be explored in order to obtain a clear picture of the role of foreign trade in a country's economy.

The tools of modern analysis, with the input-output table and its mathematical model among them, enable us to approach this problem gradually. The wide-spread use of these methods makes it possible to analyse the pattern of the Hungarian economy not only in itself but also in international comparison. Some results of an analysis carried out along these lines are surveyed in the present article.*

In our analysis, an approximative quantification of the autarky concept plays a central role. Autarky is, of course, neither a workable hypothesis, nor

* The investigations were conducted at the Institute of Economic Planning, National Planning Office. A detailed survey of the results is given in [1]. The model which served as a basis for the investigations has been described in [2].

a genuine alternative for most countries; the concept serves only as a yardstick to characterize — in lack of a better one — the role and importance of foreign trade in production and in the various fields of utilization. Let us work out first approximately the situation that would prevail "without any external trade", the economic structure likely to emerge under autarky, and relate to this hypothetical situation the actual trade-influenced structure of the economy. The difference between the two situations will serve to characterize the effects of external trade on economic structure.

An autarkic situation in the economy, can, of course, not be quantified with full accuracy, since the input-output tables at our disposal reflect a reality which "comprises" also the effects of foreign trade. Under total autarky the input coefficients reflecting production conditions and technology would be different — but we do not know what they would be like. The supposed autarky is thus, strictly speaking, a situation where *a country satisfies both final and productive demand from its own production carried out with the present sectoral input pattern.**

The autarkic economic structure, as interpreted here, was computed and compared by means of the aggregate, 14-sector input-output tables for Hungary (1961), France, Italy, Belgium, the Netherlands (all 1959) and the Federal Republic of Germany (1960). Then, it was examined whether the differences between the autarkic and the actual situations in the various fields of production and utilization — i.e. the intensity of the effects of foreign trade — are *proportionate* to the ratio of the volume of foreign trade to national income. The latter, too, was computed from the input-output tables. The data thus obtained will serve throughout this paper as a basis of comparison. (Table 1.)

A *single* computation of this type can, of course, not yield conclusive results, relying as it does on the statistically not unobjectionable input-output tables** of a few countries pertaining to a single year, and lacking the full quantification of the autarky concept. In order to arrive at final and firmly reliable results, similar computations will have to be performed on the basis of more accurate tables with various sector breakdowns, covering more years and a greater number of countries. But even until technical conditions enable us to do so, it will be worth while to study the first approximate results since — if we consider them correct until further verification or refutation — they

* A comparison of the actual situation with an autarky thus supposed was first used by W. W. Leontief to characterize the production pattern of countries with different levels of development [3]. Our analysis differs from his in that we have quantified the level and pattern under autarky not only for total output by industries but also for output for the various final uses, and for primary inputs. (This was possible because import data were available not only in a breakdown by commodity groups but also in a breakdown by *users.)*

** Since then, the Statistical Office of the European Economic Community has published a revised version of the input-output tables used: a repetition of our computations on the basis of the new tables could, however, for the time being, not be undertaken.

may provide a thought-evoking basis for many an important conclusion — even if not determining in themselves the direction of the conclusions to be drawn.

Table 1*

	Exports	Imports	
	as a percentage of		
	national income	exports	national income
France 1959	16.5	81.4	13.4
Italy 1959	15.8	100.5	15.9
German Fed. Rep. 1960	23.9	80.8	19.3
Hungary 1961**	32.4	97.7	31.7
Belgium 1959	48.4	100.5	48.6
The Netherlands 1959	59.1	84.3	49.8

* *EEC data:* imports at CIF prices, exclusive of imported transportation and trade services, net of re-exports; exports, imports and national income exclusive of what according to Hungarian methodology are termed "non-productive" services; net of depreciation. (Net Material Product in UN terminology.) *Hungarian data:* imports at prices conforming to the domestic price level of exports but reflecting the actual relative purchase price proportions; national income corrected accordingly. — Since all data relating to the individual countries refer to the year here indicated, the reference will henceforth be omitted.

** Control computations based on rather simple methods show Hungarian exports to amount at world market (dollar) prices to only about 20—22 per cent of national income. The higher percentage obtained from the computations based on the input–output tables must, therefore, be due to the peculiar proportions of the domestic price system prevailing in 1961. This fact could, however, not be accounted for in the complex investigations surveyed here since in the input-output table used the proportions of production and utilization are based on the same domestic price system and are thus commensurable with the 32.4 per cent export share only.

The volume and sector pattern of production

The effect of foreign trade on the volume and pattern of production, more exactly the intensity of this effect, is fundamentally determined by the similarities or differences between the sector patterns of exports and imports.***

In most countries the products of nearly every industry are both exported and imported. Thus, there is a part of the turnover which is balanced within

*** Our computations relate to identical volumes of exports and imports, since only in this manner can they be considered as aggregates of commodities substituting each other, exchanged for each other and representing each other's inputs and outputs, respectively. This identical volume will be called henceforth *volume of turnover*. (Export surpluses or deficits figure in domestic final demand as items increasing or decreasing the national wealth and in a commodity composition corresponding to the average pattern of exports.) Thus, here and henceforth our results will really depend only on the structural differences between exports and imports. The differences in volume — the problems of the balance of foreign trade — will not be treated in this paper.

the industries themselves; let us call this the *assortment exchange*, assuming that e.g. machinery exported and imported differ from each other in some aspect of assortment — let us say, quality. Another part of the turnover consists of positive or negative sectoral balances, let us call this the *sectoral exchange*.

In the countries examined, trade is divided between these two characteristically different parts as follows:*

Table 2

	Sectoral exchange	Assortment exchange	Total turnover
France	41.7	58.3	100.0
Italy	38.1	61.9	100.0
German Fed. Rep.	52.2	47.8	100.0
Hungary	31.4	68.6	100.0
Belgium	34.0	66.0	100.0
The Netherlands	37.0	63.0	100.0

If the share of sectoral exchange is examined in conjunction with the relative volume of turnover, the following graph may be drawn:

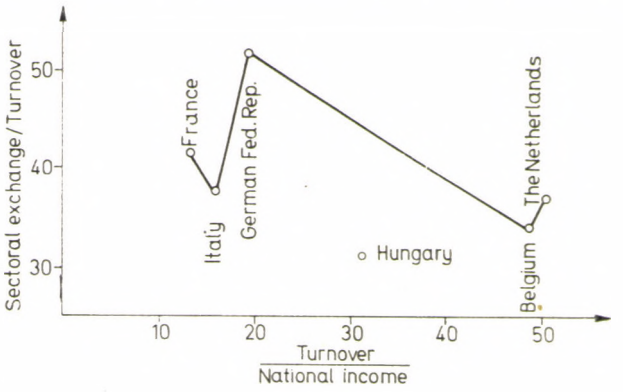

Fig. 1

The share of sectoral exchange obviously does not grow proportionately with the relative volume of turnover; in fact, in small countries with an "open" economy this ratio is smaller than in the great countries with a "more closed"

* Division of trade into these two parts depends to a greater extent on the sector breakdown applied than do the other indicators treated in the paper. With different aggregation other values would be obtained. It is assumed, however, that this would affect all countries in the same direction, if not to the same extent, and thus their order would not change.

economy. It seems as if sectoral exchange — meaning the specialization of individual industries in exports or in imports — could not grow unlimitedly. Beyond a certain extent the relative growth of foreign trade must necessarily take the form of an assortment exchange, especially in small countries.

It is, however, remarkable that the share of sectoral exchange in total turnover is the smallest in Hungary both in absolute and relative terms, which implies that *the patterns of exports and imports differ here from each other the least.* The foreign trade specialization of industries, or, to put it in another way, the specialization of foreign trade turnover by industries, is below the level that could — by analogy with the countries examined — be expected on the basis of the relative volume of foreign trade. As a consequence, the global indirect material requirements of exports and imports (i.e. the materials actually used for exports and the materials which would be used if the imported goods were domestically produced), in other words, the "multiplier" effects of exports and imports on production are in Hungary identical, while in the other countries they differ from each other.

Table 3

	Total output* necessary for the domestic production of a unit of		Exports / Imports
	Imports	Exports	
France	1.640	1.808	1.103
Italy	1.983	2.012	1.015
German Fed. Rep.	2.005	2.016	1.005
Hungary	2.260	2.260	1.000
Belgium	2.201	2.366	1.075
The Netherlands	2.373	2.178	0.919

* Similarly to the accounting of national income and of exports and imports, total output is computed, in accordance with the Hungarian methodology, exclusive of "non-productive" services.

Thus, the total output "saved" through imports as compared with the production requirements under autarky is of the same magnitude as the "additional output" necessary for exports. In the other countries, the two output requirements are, of course, different (Table 4).

As can be seen, in Hungary the actual level of output does not differ from that under supposed autarky; in other words, *the international exchange of goods does not modify the level of total national production.* In the other countries under investigation such a modifying effect can, however, be shown. It is present to a smaller extent even in the great countries whose economy is much

Table 4

	Output under autarky	Deduct for imports	"Self-sufficiency" 1—2	Add for exports	Actual output 3 + 4	Difference 1—5
	1	2	3	4	5	6
France	100.0	11.9	88.1	13.1	101.2	—1.2
Italy	100.0	14.7	85.3	14.9	100.2	—0.2
German Fed. Rep.	100.0	18.3	81.7	18.4	100.1	—0.1
Hungary	100.0	28.7	71.3	28.7	100.0	—
Belgium	100.0	48.5	51.5	52.1	103.6	—3.6
The Netherlands	100.0	48.9	51.1	44.9	96.0	+4.0

more "closed" than the Hungarian one, and in the smaller countries with an "open" economy it amounts to about four per cent of total production.

The international exchange of commodities influences, of course, not only the level but also the sector pattern of production. The sector patterns of exports and imports differ from each other, if only slightly. Their indirect material requirements, though equal in global terms, are drawn from the output of different industries; in other words, their "multiplier effect" does not affect the same industries. The modifying effect means therefore that a certain volume of output is brought about *in other industries* than would be the case under autarky.

The volume of this production "diverted" into other industries can also be established. (It represents half the sum of the absolute values of relative discrepancies between the actual and autarkic sectoral outputs.) The relation of this production volume to the volume of turnover shows the *intensity* of the influence of trade on the sectoral pattern of production; its share in total production, on the other hand, is a comprehensive indicator of the impact of foreign trade on the *structure of production.*

Table 5

	Volume of output "diverted" to other industries as a percentage of	
	foreign trade turnover	total production under autarky
France	52.4	3.8
Italy	49.5	3.6
German Fed. Rep.	66.3	6.0
Hungary	40.0	5.1
Belgium	47.1	10.4
The Netherlands	46.9	9.7

As can be seen, it is in Hungary that trade effects the sectoral structure of production least intensively. However, the relative volume of turnover is greater than in the "great" countries. Accordingly, the "diverted" production still represents a higher share in the total than in France or Italy, but a smaller one than in the Federal Republic of Germany where intensity is rather high — not to mention the "small" countries. Again, the lag can be most clearly seen in connection with the relative size of turnover:

It may, accordingly, be stated that in Hungary *the effect of the international exchange of commodities on the sectoral structure of production is considerably weaker than could be expected in view of the relative volume of turnover.*

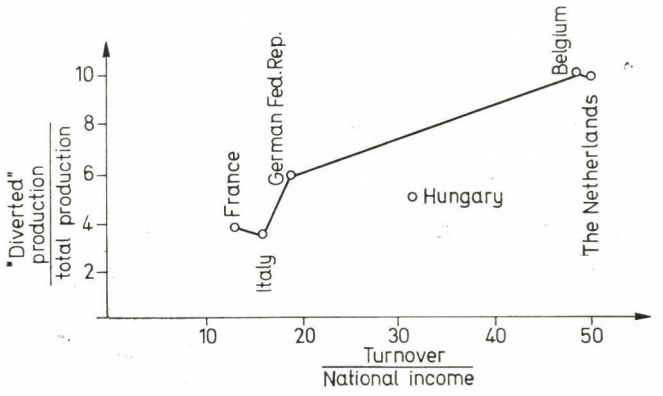

Fig. 2

If now we want to establish the sectoral differences between the actual and the autarkic situation not only in global terms, in relation to total production, but also from the point of view of the individual industries themselves, the following simple procedure may be applied.

Let us work out for the individual industries the differences between the actual and autarkic production level as a percentage of the autarkic level. Let us determine the unweighted mean of these relative differences and call it the *average difference.* Again, let us establish the deviations in individual industries from this mean and call it *"dispersion"*. Finally, let us compute the ratio of dispersion to the average difference and call it *"relative dispersion"*. The following numerical results will be obtained (Table 6, p. 152.):

As a matter of fact, the average difference shows only another aspect of a phenomenon already discussed, relating as it does to the relative proportions of the production "diverted" to another industry. The indicators of dispersion and relative dispersion, on the other hand, provide new information: they show how the average level of "diversion" has come about. Is it due to

Table 6

	Average difference	Dispersion	Relative dispersion
France	8.4	6.7	79.8
Italy	13.4	12.4	92.5
German Fed. Rep.	11.9	8.3	69.7
Hungary	12.2	6.3	51.6
Belgium	20.8	16.5	79.3
The Netherlands	23.7	17.7	74.7

large deviations in a few industries or to small deviations in many? Does the actual level of output show great differences from that under autarky in a few industries or only small ones in numerous industries? Is the modification in the structure of production *concentrated* to a few industries or spread over many?

According to the data in Table 6, dispersion and relative dispersion are smallest in Hungary. The exchange of goods affects thus the production level of individual industries more evenly than in the other countries where it diverts some industries from their own autarkic level to a great extent while leaving others almost unaffected. *The effect of the international exchange of commodities on the sector pattern of production is — besides being relatively weaker — more deconcentrated in Hungary than in any of the other countries under investigation.**

It will be worth while to examine the concentration of the effect separately in the case of "exporting" industries, i.e. of those *producing more* than the autarkic level, and in that of the "importing" ones, i.e. of those which *produce less*. Instead of listing the data, we present the graph (Fig 3 p. 153.).

In the great countries with a "closed" economy the difference between the actual and the autarkic production is greater in the industries which turn out less than needed for domestic requirements. In these countries the "deficit" is concentrated to a few commodities (coal, oil and agricultural products) while there are several industries producing greater or smaller surpluses for export. The share of "exporting" industries, i.e. of those producing above the autarkic level, is 60 to 70 per cent of total production.

In smaller countries with an "open" economy the situation is the reverse. Here, the "deficit" is deconcentrated, there are many industries whose actual

* Though posing the problem in a different way and proceeding with other methods, but relying also on West-European input-output data, T. *Szira* also arrives at similar conclusions in his article [4].

production level is to a smaller or greater extent lower than it would be under autarky. On the other hand, the surplus destined for export is produced by one or two industries specialized for the purpose (such as metallurgy, clothing and transportation in Belgium; transportation, almost exclusively, in the

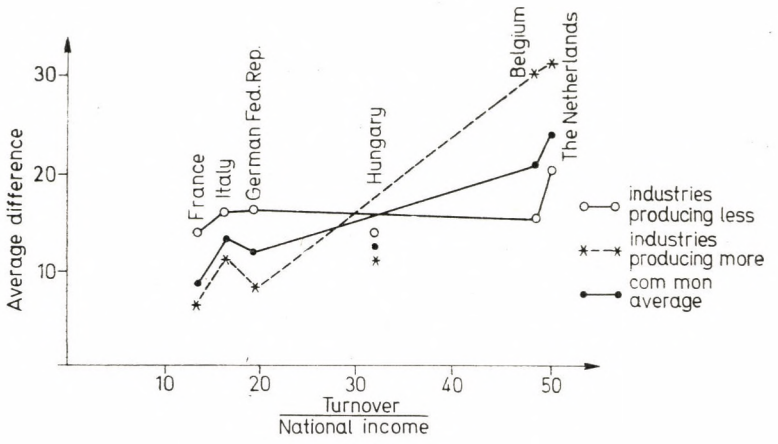

Fig. 3

Netherlands where its actual performance is nearly double than under autarky). These industries are mostly not even the greatest ones. In both countries, the exporting industries account for 37 per cent of total production.

It is rather difficult to present a clear picture of the situation in Hungary. Most Hungarian industries are "importing" ones, i.e. producing less than needed for domestic requirements. Only a few are of "exporting" character. Thus, from this point of view, Hungary would resemble the small countries. However, the "importing" industries are small and the "exporting" ones are the greatest and, therefore, the difference between the actual and the autarkic levels shows a higher percentage in the case of the "importing" industries. The latter produce on the average 14.2 per cent less than their own autarkic level while the "exporting" industries are turning out 11.5 per cent more on the average. From this point of view Hungary resembles therefore — as can be seen also from the graph — rather the "great" countries.

But not only the averages, also the extreme differences lie between narrower limits in Hungary than in other countries:

It may be seen that only in France are both "extreme" industries closer to the autarkic level; in all other countries at least one, in the smaller countries both extreme cases are really more extreme than in Hungary.

Table 7

	Industry producing			
	least		most	
	in comparison to autarkic level and its output as a percentage of autarkic level			
France	petroleum industry	80.4	clothing industry	116.1
Italy	coal mining	14.6	transportation	125.2
German Fed. Rep.	agriculture	67.5	transportation	120.4
Hungary	wood-working industry	77.3	clothing industry	127.8
Belgium	agriculture	67.9	metallurgy	167.7
The Netherlands	petroleum industry	56.4	transportation	194.8

Thus, the patterns of both imports and exports contribute to the fact that in this country the modification of the sectoral structure is less concentrated than in other countries. While in a large number of industries less is turned out than under autarky, the phenomenon of a few industries with a much lower output than under autarky is missing. On the other hand, a higher level of output than under autarky occurs only in the case of the largest industries; there are thus no industries specializing expressly in exports which would produce much more than domestic requirements.

It appears that a mere relative growth of foreign trade turnover will not necessarily render the economy "open" to the same extent. *The mutual interrelations between external trade and sectoral production structure are less close in the Hungarian economy than could be assumed from the relative volume of turnover.*

Primary inputs

All countries engaged in foreign trade use part of the labour and capital available for exports and save at the same time a certain amount of labour and capital through imports. The problem, what factors determine the proportions prevailing in this exchange has been a central and unsettled problem of the theory of international trade ever since Ricardo. It was a turning point when — with the aid of input-output tables — the relative capital intensity of foreign trade in some countries could be quantified and the facts mostly contradicted the generally accepted theorems. The results of the first computation of this type are known as the "Leontief-paradox" [5]. This was followed by several similar investigations.*

* A general survey of the whole problem and a rich bibliography may be found in Part 3 of a series of articles by J. S. Chipman [6]. The countries examined in the present study are dealt with by K. W. Roskamp [7] and by A. Rácz [8].

A discussion of the theoretical problem would be beyond the limits of this paper, only some results of our comparative investigations shall be presented here.

The primary input data of the West European countries (such as the labour force, the value of fixed assets, etc.) were not available in the required sector breakdown. Thus only the ratio of amortization to wages could be used since this could be established from the input-output tables at our disposal.* It may be assumed that *within* a country, in the comparison of different bills of goods, this ratio sufficiently characterizes the relation between fixed assets and labour inputs, although it cannot be used for comparisons *between* different countries.** The results relating to Hungary have been proved to hold even when checked on the basis of the available manpower and fixed capital data.*** Still, for the sake of comparability and uniform treatment, in this study only the amortization/wage ratio is presented. The data are the following:

Table 8

	Ratio of amortization to wages				Exports / imports 2 : 1	Actual / autarkic production 4:3
	In imports	In exports	Average for production: Autarkic	Average for production: Actual		
	1	2	3	4	5	6
France	0.233	0.224	0.191	0.191	0.961	1.000
Italy	0.267	0.249	0.229	0.227	0.933	0.991
German Fed. Rep.	0.180	0.192	0.175	0.176	1.067	1.006
Hungary	0.306	0.303	0.258	0.256	0.990	0.991
Belgium	0.210	0.233	0.207	0.218	1.110	1.053
The Netherlands	0.187	0.228	0.188	0.206	1.219	1.096

First, the ratio of amortization to wages is in most cases considerably lower in the average of production than either in imports or in exports. It seems, therefore, that *foreign trade is generally more capital-intensive than the production of the participating countries on the average.* Summarizing what may

* Even the data on wages had to be corrected by estimations based on employment figures, so that they may be comparable with the Hungarian figures which comprise the total income from work of the working population including after-tax incomes of self-employed farmers and artisans.

** Justification of this assumption under certain conditons was given in a paper presented at the 4th International Conference on Input-Output techniques [9]. It still needs proving whether the proportions prevailing in the Common Market countries meet these conditions.

*** See e.g. A. Rácz [8].

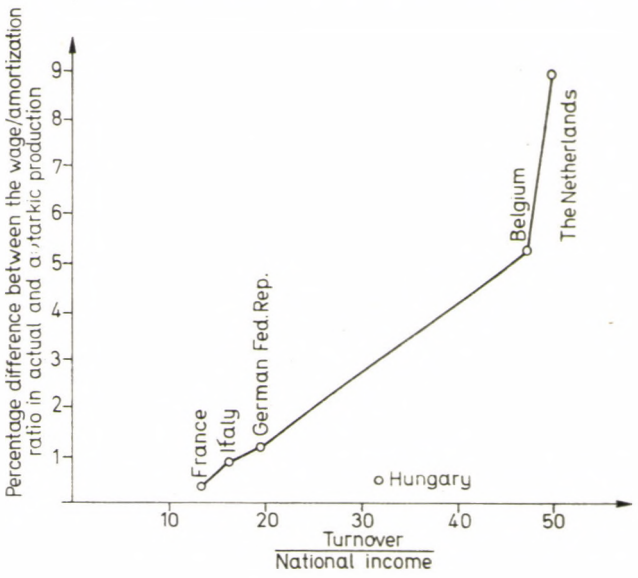

Fig. 4

be considered as common to all countries, we find that — beyond the complicated sectoral factors which are different in each — the basic reason is the greater share of the outstandingly capital-intensive *sources of energy and raw materials* both in exports and in imports than in total production. At the same time, *construction*, the least capital-intensive industry, does not play any essential role in external trade.

Further, the data show that in France, Italy and *Hungary exports are more labour intensive and contain more labour in comparison to capital than imports*. With the Federal Republic of Germany, Belgium and The Netherlands, on the other hand, the case is the reverse, their exports being more capital-intensive than their imports.*

The question, whether the situation is paradox or not, could be answered only in possession of data on the relative supply of capital and labour in the countries concerned. As regards Hungary, capital is, beyond doubt, a scarcer factor than labour; *from this point of view, the pattern of the country's foreign trade may be said to be favourable* and in conformity with the theorems of the general theory of international trade.

It is, however, remarkable, that the difference between exports and imports is smallest again in Hungary. As it is shown in Fig. 4 above, the difference between actual and autarkic production is also small, since the slight difference between exports and imports cannot influence to any considerable extent

* In the study quoted above, K. W. Roskamp reaches the same conclusion regarding the Federal Republic of Germany.

the average of total production even with a medium volume of trade. The effect of foreign trade on the relative capital-intensity of total production is of the same order of magnitude as in the great countries with the "most closed" economy, it cannot be considered significant and is well below the 5 to 10 per cent difference appearing in the small countries with an open economy.

It can thus *be established that the international exchange of commodities influences the utilization ratios of primary inputs* — that is, the capital intensity of total production — *in the Hungarian economy in a favourable direction but to an extremely small extent in comparison to the relative volume of trade.*

"Cumulation" in foreign trade

In the foregoing, a brief survey was given of the effects of foreign trade on *production*, its volume, sectoral pattern, capital or labour intensity. Another aspect of the problem is, *what final uses* does this exchange of commodities serve.

The international exchange of goods provides, first of all, for its own requirements. Obviously, the purpose of export is import* but it should be equally obvious that whenever a country uses imported materials in its production, these serve partly the production for exports. Thus, a definite part of imports will be exported and a definite part of exports consists of imported materials transformed and processed in domestic production.** Let us call this part the *import content of exports.*

In the countries under investigation, the import content of exports — compared with the import content of average final product — was the following:

Table 9

	Import content as a percentage of		Ratio of 2 : 1
	average final product	exports	
	1	2	3
France	8.1	10.6	1.30
Italy	10.0	13.0	1.30
German Fed. Rep.	11.6	12.0	1.04
Hungary	17.1	20.9	1.22
Belgium	23.5	30.6	1.30
The Netherlands	25.4	26.3	1.03

* As export surpluses are not dealt with here.

** These two parts are identical if — as was done in our computations — the volumes of exports and imports investigated are taken as identical.

It is remarkable that the import content of exports is in all countries higher than that of production in general. In another wording this means that from imports used in production a higher proportion goes into exports than from production as a whole. If it has been established before that foreign trade is more capital-intensive, the statement may now be ventured that *foreign trade turnover is more "foreign trade intensive" than the economy of the participating countries in general.*

A closer examination will also reveal that the *import content of exports is on the whole proportionate to the relative volume of the turnover:*

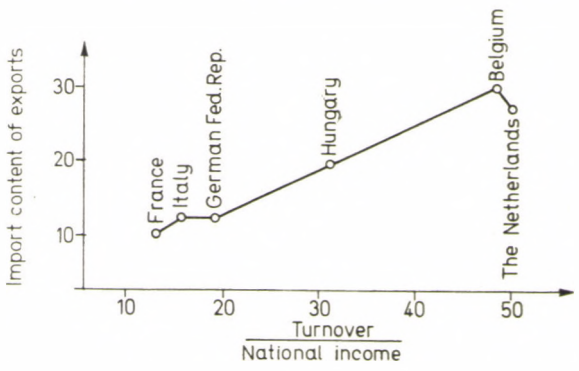

Fig. 5

If these two statements could be proven to hold in a wider scope, for more countries and several periods, it would directly follow that *the relative growth of foreign trade — as related to national income — is, in a sense, a self-accelerating process.* If the share of imports in domestic final use is increasing, total export-import turnover is bound to increase at a higher rate — because with a greater volume the share of the "self-providing" part is also greater: the part of import going into exports, or the import content of exports.

As regards the structure of the Hungarian economy, the opinion is often voiced that the country's imports "mainly" serve exports, that "we import only to export" and that "the import content of our exports is too high". In the light of international comparison, these anxieties seem, for the time being, to be unfounded. From the data in Table 9 and Fig. 5 it appears that *in Hungary the import content of exports is on the whole proportionate to the relative volume of foreign trade;* further, that the *difference* between the import contents of export and of total final product cannot be considered excessive, either.

It is, however, true that of all the interrelations between foreign trade and economic structure this is one of the most critical points which may — particularly with a relatively rapid rate of growth — directly affect the

equilibrium of the balance of trade. It is precisely on this account that the relatively reassuring *global* picture obtained from the *static* comparisons performed up to now will require complementation in several directions, partly to account for the changes in proportions which have taken place since 1961 and partly to intensify the analysis of the whole problem, extending it to a thorough investigation of details by industries and especially by different markets.

Consumption and capital formation

The remaining part of imports, destined for the domestic market, include imports for direct final use as well as the imported materials used in the domestic production for domestic final use. How are then these imports distributed among the various final uses, what is the proportion of imports incorporated in the bills of goods serving different purposes?

The following table shows the import contents of consumption and gross capital formation (including renewals):

Table 10

	Import content in percentage of		Consumption / capital formation 1 : 2
	consumption	gross capital formation	
	1	2	3
France	11.2	10.3	1.09
Italy	12.1	13.4	0.90
German Fed. Rep.	17.0	13.3	1.28
Hungary	18.4	27.7	0.66
Belgium	28.8	33.9	0.85
The Netherlands	30.9	41.5	0.75

As can be seen, *the ratio of import content of consumption to that of capital formation is relatively lowest in Hungary.*

As a consequence, as compared to the level under autarky, the part "saved" by imports is smaller and "self-sufficiency" is greater in total production for consumption purposes than in production for capital formation. In the other countries the situation is either the reverse or prevailing only to lesser extent (Table 11).

Thus, it is in Hungary that we find the greatest difference between consumption and capital formation from the point of view of the effects of the

Table 11

	"Saved" by imports as a percentage of total output for		Consumption ratio
	consumption	investment	investment ratio 1 : 2
	1	2	3
France	10.7	10.6	1.01
Italy	12.1	14.4	0.84
German Fed. Rep.	17.2	14.0	1.23
Hungary	18.9	28.2	0.67
Belgium	31.1	37.0	0.84
The Netherlands	33.0	44.3	0.75

international exchange of goods on total production. It is thus *in Hungary that production for consumption is most autarkic in character as compared to production for capital formation.*

A further remarkable difference between the structure of the Hungarian economy and those of the other countries covered by this comparison exists in the utilization ratios of primary inputs. *It is only in Hungary that capital formation is more capital-intensive than consumption* while in all remaining countries examined the case is the reverse. The data — reflecting the ratios under the assumed autarky — are as follows:

Table 12

	Ratio of amortization to wages in		Ratio of 2 : 1
	consumption	investment	
	1	2	3
France	0.201	0.162	0.63
Italy	0.235	0.216	0.92
German Fed. Rep.	0.184	0.154	0.84
Hungary	0.230	0.305	1.33
Belgium	0.222	0.171	0.78
The Netherlands	0.205	0.140	0.68

The capital intensities of various bills of goods depend, of course, on the sectoral composition of these bills and on the relative capital intensities of the sectors. Even without examining in detail the sectoral patterns of these bills of goods in the individual countries, it is obvious that in the production of

consumer goods the role of agriculture is decisive, while in that of investment goods metallurgy, engineering and construction play the dominant part. (It is sufficient to mention separately these sectors, because as regards the relative capital intensities of the rest — i.e. their *ranking* according to capital intensity — there is no fundamental difference between Hungary and the other countries examined.) The relative capital intensities of the sectors mentioned are characterized by the data in Table 13.*

Table 13

	Ratio of amortization to wages; agriculture = 1		
	Metallurgy	Engineering	Construction
France	2.03	0.99	0.42
Italy	1.43	1.07	0.76
German Fed. Rep.	1.53	0.99	0.61
Hungary	8.38	2.52	1.13
Belgium	2.10	1.21	0.79
The Netherlands	1.31	0.88	0.41

In the western countries examined *metallurgy* is one and a half, or two times more capital-intensive than agriculture — in Hungary more than eight times. In western countries *engineering* is about as capital-intensive as agriculture, in Hungary its capital intensity is two and a half times as high as that of the latter. *Construction* is in western countries less capital-intensive than agriculture, in Hungary it is more capital-intensive.

Thus, *in comparison to the most investment-oriented industries, agriculture is supplied with capital to a much lower degree* in Hungary than in western capitalist countries. The disparity is due to both sides of the comparison: in Hungarian agriculture the amortization/wage ratio is lower, but in Hungarian heavy industries it is higher, than in the western countries. This qualitative difference explains at any rate the inverse relation of consumption to capital formation from the point of view of relative capital intensity.

Now, the international exchange of commodities diminishes to some extent the difference between the capital intensities of Hungarian consumption and capital formation; it does, however, not eliminate nor does it change

* These data are inaccurate from several points of view. In the case of western countries not the original but corrected data were used (see Note to. p. 155). As regards Hungary, amortization in agriculture figures among the data of the 1961 table presumably with a low value: it should be raised approximately by 25—30 percents. Moreover, the amortization/wage ratio reflects by sectors less truly the capital/wage ratio of individual sectors considering the discrepancies between actual amortization rates. However, even considering the widest margins of error, these inaccuracies cannot account for the striking qualitative differences emerging from the figures in Table 13.

the inverse situation in comparison to western countries. In the final analysis, actual production for capital formation is only 1.2 times more capital intensive than consumption as against the 1.33 coefficient under assumed autarky.

To sum up, it may be stated that *Hungarian foreign trade serves consumption to a lesser and capital formation to a greater extent than either Hungarian domestic production or the foreign trade of the western countries examined does.*

*

In conclusion it is necessary to call the reader's attention repeatedly to the fact that all statements ventured here rely on highly aggregate input-output tables, imperfect from the statistical point of view and covering but a single year and a few countries.

In spite of these facts, the majority of the statements arrived at seem to agree with common sense and with what is well known to or surmised by those familiar with the conditions prevailing in the Hungarian economy. Of course, this is no proof in itself, just as the contrary will not prove the inaccuracy of any statement. All these statements — similarly to many other generally accepted theorems considered commonplace — await further investigation, checking and interpretation.

At the same time, these facts — even though accepted as such — are insufficient for forming a comprehensive, qualitative judgement on the role of foreign trade in the Hungarian economy. To differ from or to resemble other countries is in itself neither good nor bad — even if these be richer countries. What is unfavourable from one point of view may be favourable or, at least, necessary from some other. For a comprehensive judgement many qualifications, conditions and factors should be considered which could not be examined in this paper, with the factors of economic geography and economic history among them.

If the results of this analysis should still be summed up in a single conclusion, this could be worded as follows. The role, effect and relative importance of foreign trade in an economy are much more complex than to lend themselves to characterization by a single indicator such as the ratio of exports to national income. Comprehensive characterization by the impacts on the volume and the sectoral pattern of production and on primary inputs will show that this generally applied indicator somewhat exaggerates the role of foreign trade in shaping the structure of the Hungarian economy. *The reciprocal effects between international trade and economic structure are weaker and the Hungarian economy — especially consumption — is less foreign-trade-oriented than indicated or justified by the given volume of external trade.*

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СРАВНИТЕЛЬНЫЙ АНАЛИЗ ВЛИЯНИЙ ВНЕШНЕЙ ТОРГОВЛИ НА ЭКОНОМИКУ ВЕНГРИИ

М. АУГУСТИНОВИЧ

В статье анализируется влияние внешней торговли на объем и отраслевую структуру производства, а также на конечные цели потребления, и при этом венгерское хозяйство сопоставляется со странами Европейского Экономического Сообщества с точки зрения величины расхождений между предполагаемой автаркической и действительной хозяйственной структурой. Анализ основывается на межотраслевых балансах рассматриваемых стран.

Основное заключение, вытекающее из рассмотренных данных, заключается в том, что единственный показатель, обычно применяемый для характеристики роли внешней торговли, — процентное соотношение экспорта к национальному доходу — несколько преувеличивает действительное значение внешней торговли в венгерском хозяйстве. Многосторонний анализ показывает, что взаимозависимость международного товарообмена и хозяйственной структуры слабее, что венгерское хозяйство — в особенности потребление — в действительности ориентируется на внешнюю торговлю в меньшей мере, чем как на это указывает объем внешнеторгового оборота.

Это заключение подтверждается следующими положениями:

— В Венгрии имеются наименьшие расхождения между отраслевой структурой экспорта и импорта.

— В результате внешнеторгового обмена в Венгрии — в отличие от остальных стран — не изменяется величина совокупного общественного продукта.

— Слабее влияние внешней торговли на отраслевую структуру совокупного общественного продукта, и это влияние менее концентрируется по отдельным отраслям, чем в странах с аналогичным внешнеторговым объемом.

— Венгерский экспорт является несколько более трудоемким, чем венгерский импорт; таким образом внешняя торговля изменяет трудоемкость и фондоемкость общественного производства в благоприятном направлении, однако, в весьма незначительной степени.

— В Венгрии ниже всего соотношение удельного содержания импорта в фонде потребления и удельного содержания импорта в фонде накопления; венгерская внешняя торговля служит в меньшей мере целям потребления и в большей мере целям накопления, чем венгерский национальный доход или же внешняя торговля в остальных рассматриваемых странах.

Анализ самого внешнеторгового оборота приводит к тому — еще требующему на основании дальнейших анализов доказательства — предположению, что появляющаяся в международном товарообмене масса товаров является более капиталоемкой, чем средняя продукция участвующих в нем стран и что относительная — отнесенная к национальному доходу — величина внешнеторгового оборота в силу необходимости растет быстрее, чем относительная величина импорта, используемого для отечественных целей.

J. Kovács

LES COUTS DE LA FORMATION PROFESSIONNELLE ET LES RAPPORTS DES SALAIRES

L'étude prend pour point de départ les coûts sociaux de la reproduction de la main d'oeuvre, les coûts de la formation professionnelle, considérés en tant qu'investissements sociaux, puis les frais nécessaires pour maintenir la capacité de travail. L'auteur établit une hypothèse pour le calcul de ce dernier facteur. Il élabore un modèle de salaires, à partir duquel on peut déterminer «les rapports de salaires de base» des grands groupes de travailleurs, ayant des formations différentes.

A l'analyse des rapports de salaires

Dans cette étude je vise à esquisser un système de salaires qui peut servir comme point de départ dans la définition des rapports de salaires à une étape du développement de la société socialiste, où le marché et la valeur ont encore un rôle important, sinon dominant, et où les mouvements de la main d'oeuvre sont encore influencés par certains mécanismes du marché.

1. Les recherches prennent pour point de départ l'hypothèse selon laquelle le degré de complexité du travail est en rapport direct avec les coûts socialement nécessaires de la formation professionnelle.

Bien que la vérification de cette hypothèse exigerait une étude spéciale [9], il nous semble utile de résumer ici les principaux points du raisonnement:

Si la société veut maximiser son revenu national et si les fonds servant à couvrir les coûts de la formation professionnelle sont strictement définis, elle partagera le «fonds d'investissement pour la formation professionnelle» entre les diverses branches professionnelles de manière à assurer que le rendement par unité (du point de vue du revenu national) soit égal dans les différents secteurs. Si les fonctions du rendement des différents secteurs se comportent d'une manière identique, alors le rendement lui-même sera identique, et non seulement marginalement, mais aussi en moyenne. Dans ce cas, on peut légitimement supposer que l'effet exercé par les catégories de formation différente sur le revenu national est proportionnel avec les coûts de la formation professionnelle. Bien entendu, une telle structure d'équilibre optimal n'existe jamais dans la pratique. Tout de même, en analysant le rendement des

catégories de formation différente, on peut partir d'une telle situation. Le concept du rendement de la formation professionnelle ainsi défini s'approche de près de la notion de la complexité du travail définie par Marx. Il nous semble donc que l'approximation des rapports de complexité de travaux à l'aide des coûts de formation il est meilleure que les solutions précédentes. Par la suite de cette étude je ne reprends plus l'examen de ce problème.

2. Le point suivant du raisonnement se rapporte à l'interprétation du principe de la distribution selon le travail. Dans un système économique où le marché et la valeur jouent encore un rôle prépondérant, les rapports des salaires doivent être fixés suivant la considération de ce que la consommation des travailleurs accomplissant des travaux de complexité différente doit être en rapport avec leur contribution au revenu national.

3. A la troisième étape, on reprend le principe de distribution esquissé sous 2), en le corrigeant de deux facteurs:

a) la majeure partie des frais de formation professionnelle n'est pas couverte par l'individu, mais par la société entière;

b) les prestations non liées aux performances de travail exercent aussi un effet sur le niveau de la consommation, par conséquent, le principe de la distribution suivant le travail doit être modifié pour tenir compte de cet effet.

4. A la fin de cette étude, j'essayerai de comparer les rapports de salaires déduits du modèle établi selon les principes esquissés dans ce qui précède, et les rapports de salaires actuellement valables en Hongrie.

Une définition possible du principe de la distribution selon le travail

Examinons le revenu national. Du point de vue de notre analyse, le revenu national (y) peut être divisé en deux. La première partie consiste des frais de reproduction de la main d'oeuvre participant à la production du revenu national (y^u), l'autre partie reste le revenu net (y^s).

$$y = y^u + y^s \tag{1}$$

Quel est cependant le montant des frais sociaux de reproduction des travailleurs performant des travaux de complexité différente? Pour pouvoir déterminer ce montant, on subdivisera en diverses catégories les frais de reproduction de la main d'oeuvre. On établira d'abord deux grandes catégories:

1. La partie des frais se rapportant à une unité de temps (au cas de l'analyse du revenu national annuel, ce sera une année), en d'autres termes, l'amortissement des investissements de la formation professionnelle. Cette partie des frais sert à couvrir les fonds nécessaires pour assurer une formation

du niveau déjà atteint. En effet, la fonction sociale de cette partie des frais est de former de main d'oeuvre pour remplacer la main d'oeuvre sociale «usée».

Il faut noter qu'en parlant des frais de formation professionnelle, on ne se borne pas uniquement aux frais directs d'enseignement. On y inclut tous les coûts sociaux, lesquels se présentent dans la vie de chacun, depuis sa naissance jusqu'à l'entrée en travail, en préparant l'individu pour remplir une fonction définie dans la production sociale.

2. Les frais assurant le niveau donné de la force de travail, formé pour remplir des fonctions sociales et économiques déterminées.

Il y a une différence remarquable entre les deux parties. La première partie peut être facilement établie à la base des coûts concrets de la formation professionnelle et de la durée de vie économiquement active des travailleurs. Il faut répartir les frais se présentant au cours de la formation professionnelle en proportions égales, ou suivant une fonction de productivité, tenant compte de changement de la productivité selon l'âge, à la durée entière où le travailleur d'une catégorie donnée est économiquement actif.

Quel est cependant le montant de la seconde partie? Il est bien difficile de répondre à cette question. Le minimum vital physiologique peut être déterminé avec une précision approximative. A une étape donnée du développement, on peut définir, plus ou moins exactement, le minimum vital social aussi, qui corresponderait aux coûts de reproduction de la main d'oeuvre non-qualifiée à un moment donné du développement économique et social. (En déduisant de ce montant les frais de formation professionnelle de cette catégorie, on peut calculer les frais de maintien de cette main d'oeuvre.) Il paraît cependant que l'on ne peut donner que des réponses très incertaines à la question concernant le rapport entre les frais de maintien de la main d'oeuvre non-qualifiée et ceux de la main d'oeuvre d'une formation professionnelle plus élevée et accomplissant, de ce fait, un travail d'une plus grande complexité. En tout cas, il est certain que même les frais de maintien de la main d'oeuvre accomplissant un travail plus complexe seront plus élevés que ceux de la première catégorie, car ils doivent couvrir les besoins de formation professionnelle, les besoins culturels etc. plus élevés.

Partons alors d'une hypothèse. Supposons que les frais de reproduction de la main d'oeuvre sont proportionnels avec les frais de formation professionnelle de celle-ci, ou bien, ce qui correspond parfaitement à notre hypothèse de départ, notamment, que la participation au fonds de consommation individuelle des travailleurs, performant un travail de complexité différente, est proportionnelle avec l'efficacité de leur travail.

Cette supposition est en accord avec le principe socialiste de la distribution selon le travail. Elle est d'autant plus acceptable qu'au moment de l'entrée au travail, c'est la somme immense couvrant la formation professionnelle qui est la partie dominante des frais de reproduction.

Si, donc,

$$y = B^1 b^1 + B^2 b^2 \text{''} + \ldots + B^m b^m \tag{2}$$

où

b^1 correspond au revenu national produit par le travail du degré de complexité i (le rendement du travail de complexité i)

B^1 correspond à la quantité du travail de complexité i utilisée dans la production du revenu national

y correspondera à la somme des produits de ces facteurs.

$$y^u = B^1 u^1 + B^2 u^2 + \ldots + \ldots B^m u^m \tag{3}$$

où u^1 désigne le coût de reproduction du travail de complexité i. En supposant donc que:

$$\frac{u^1}{b^1} = \frac{u_2}{b^2} = \ldots = \frac{u^m}{b^m}$$

et en introduisant le symbole:

$$\frac{u^i}{b^i} = \mu$$

$$y^u = \mu(B^1 b^1 + B^2 b^2 + \ldots + B^m b^m) \tag{4}$$

$$y = \frac{1}{\mu}(B^1 u^1 + B^2 u^2 + \ldots B^m u^m) \tag{5}$$

et

$$y^s = (1 - \mu)(B^1 b^1 + B^2 b^2 + \ldots + B^m b^m) \tag{6}$$

Cela équivaut, en régime capitaliste, à supposer un taux de plus-value égalisé. En effet, Marx a décelé l'existence d'une telle tendance:

«Le fait que les capitaux, mettant en mouvement des quantités différentes de travail vivant, produisent de la plus-value de différente quantité, présuppose, dans une certaine mesure, que le degré de l'exploitation, voire le taux de plus-value soit partout identique ou que les différences existantes dans ce domaine s'égalisent pour des raisons réelles ou imaginaires (conventionnelles). Cela suppose la concurrence entre les ouvriers et l'égalisation venue de leur migration incessante d'une sphère de la production à l'autre. L'hypothèse concernant l'existence d'un taux global de la plus-value, ou plutôt, comme c'est le cas de toutes les lois économiques, d'une telle tendance signifie une simplification théorique. Dans la réalité cependant, c'est la condition préalable d'une mode de production capitaliste, bien que des frictions fré-

quentes, lesquelles amènent de différences importantes locales, comme par exemple les lois de colonisation (settlement law) anglaises concernant les journaliers d'agriculture, l'empêchent dans une mesure plus ou moins grande de se réaliser. Dans la réalité ce n'est qu'une approximation, mais son échéance est d'autant plus établie que le mode de production capitaliste est plus développée, et à mesure que s'éliminent les vestiges des relations économiques précédentes [10].»

Cette hypothèse signifie en même temps que si nous répartissons les frais de reproduction de la main d'oeuvre en deux parties, voire en des coûts de la formation professionnelle (que nous pouvons considérer comme les coûts de formation de la main d'oeuvre), puis en des coûts de «maintien» de la main d'oeuvre, alors les coûts de maintien seront aussi proportionnels aux coûts de formation professionnelle.

Désignons par k^i les frais de formation du travail ayant une formation i, et par f^i les coûts de maintien du travail ayant une formation i.

Si

$$u^i = k^i + f^i$$

et

$$\frac{u^i}{u^j} = \frac{k^i}{k^j}$$

alors

$$u^j = k^j + f^j = \frac{k^j}{k^i}(k^i + f^i)$$

et

$$\frac{f^j}{f^i} = \frac{k^j}{k^i} \tag{7}$$

Le principe exprimé par les équations ci-dessus désigne, en l'appliquant au socialisme, le point de départ du principe de la distribution selon le travail dans une forme mathématique précise. La différence formelle ne paraîtra pas significative, mais le contenu apparaîtra comme une bien autre chose:

1. Tandis que dans le capitalisme la loi du taux égal de la plus-value ne peut se manifester que spontanément, dans une lutte de concurrence et par la violation constante de la loi, dans le socialisme, on peut faire valoir consciemment la loi du surtravail égal au moment de la formation des rapports de salaire.

On doit cependant apercevoir que la loi de l'égalisation de la plus-value, ou plutôt le principe du surtravail égal dans le socialisme est une loi «à double tranchant», D'un côté, elle contribue à ce qu'un principe de justice social s'affirme mais d'un autre côté elle permet à une injustice sociale de se mani-

fester. En effet, nous raisonnons comme si les frais de reproduction de la main d'oeuvre étaient proportionnels aux frais de formation professionnelle, bien que ces derniers ne soient qu'une part des premiers et rien ne prouve que les coûts de maintien de la main d'oeuvre soient «objectivement» proportionnels au niveau de formation professionnelle ou à l'efficacité. Sans doute, la mise en vigueur de ce principe signifie l'existence d'un monopole. C'est, en effet, le monopole des aptitudes individuelles, qui sous un régime capitaliste, se rattache à d'autres monopoles socio-économiques.

Une formation d'un niveau élevé ne peut être atteint que par ceux qui disposent des aptitudes requises pour la formation en question, au moins à un niveau minimum. Dans la société capitaliste, il y faut encore disposer des moyens économiques nécessaires pour la continuation des études, ce qui crée un monopole socio-économique supplémentaire de ceux qui en sont pourvus. Dans la société socialiste ce monopole socio-économique disparaît graduellement, sans que le monopole de l'aptitude disparaisse aussi (au moins pour un bon temps). En effet, ce n'est qu'une fraction de la population qui dispose des aptitudes requises pour assimiler les connaissances nécessaires, pour acquérir une formation d'un niveau supérieur. Ce monopole de l'aptitude se transforme en monopole économique par l'intermédiaire du principe de la distribution selon le travail, s'exprimant dans la loi du plus-travail égal.

2. C'est justement le fait que l'injustice sociale de la loi en question est consciemment reconnue, que l'on est en mesure d'en attenuer graduellement les conséquences de cette injustice,

a) en restituant à la société entière les fonds sociaux de la formation professionnelle;

b) en attribuant des allocations qui sont indépendantes de la performance du travail.

Le salaire, cependant, n'est pas déterminé uniquement par la formation professionnelle ou par la complexité. D'autres facteurs y jouent aussi un certain rôle.[1] Néanmoins, nous nous efforcerons de construire notre modèle en faisant abstraction des autres facteurs.

Il faut souligner aussi, que nous considérons comme identiques la complexité du travail et la formation professionnelle, tandis que d'autres sont d'avis que la complexité elle-même est une notion plus complexe.

[1] Les facteurs principaux paraissent être les suivants;
1) La complexité du travail;
2) Les efforts physiques exigés par le travail;
3) L'intensité du travail;
4) L'évolution de l'offre et de la demande du travail;
5) L'évaluation (le prestige) sociale du travail;
6) Les conditions du travail et du lieu de travail (lieu de travail sain ou malsain, éloigné ou proche, loisirs, conditions culturelles, emplacement central ou regional);
7) capacités individuelles.
(Voir la bibliographie, item [4].)

La complexité du travail et le salaire

Quels seraient donc les rapports des salaires conformes au principe développé dans le chapitre précédent, c'est-à-dire si c'était uniquement la complexité du travail qui déterminerait le salaire? C'est donc en partant de cette supposition simplificatrice que nous allons examiner les conséquences du principe de définition des salaires, ce qui suppose que chacun travaille selon ses capacités, et que chacun jouit des valeurs venues de son travail. Dans notre modèle cela se traduit comme suit:

a) La valeur ajoutée créée par la force de travail en oeuvre, en une unité de temps, est proportionnelle au degré de complexité du travail.

b) Les frais de reproduction de la force de travail sont aussi proportionnels au degré de complexité du travail.

c) Le revenu net social créé par le travail est également proportionnel au degré de complexité du travail.

d) Les rapports entre les travaux de complexité différente sont déterminés par les rapports des frais totaux de la formation professionnelle.

Partons maintenant des conditions *a* et *b*,

soit

$$\frac{\beta^i}{\beta^j} = \frac{b^i}{b^j} = \frac{u^i}{u^j} \tag{8}$$

où β^i désigne le degré de complexité du travail de formation i.

Ici, sans nuire au caractère général de la formule, nous pouvons substituer b^j par $b^1 = 1$. Cela signifie que l'on applique les formules aux frais de reproduction du travail simple, n'exigeant pas de formation. Dans ce cas:

$$u^i = k_s^i + k_c^i + f_s^i + f_c^i \tag{9}$$

où:

- k_s^i la fraction des coûts de formation couverte par des fonds sociaux, échéant à la période considérée (toute la vie, un an, un mois),
- k_c^i la fraction des coûts de formation couverte par l'individu ou la famille, échéant à la période considérée,
- f_s^i la fraction des frais de maintien de la force de travail couverte par la société,
- f_c^i la fraction des coûts de maintien de la force de travail couverte par l'individu.

En introduisant

$$\frac{b^i}{b^1} = \beta^i, \quad \text{on a}$$

$$u^i = \beta^i u^1 = \beta^i (k_s^1 + k_c^1 + f_s^1 + f_c^1)$$

où β^i signifie le degré de complexité du travail de type i.

Comme, en même temps, on considère les rapports de complexité de travaux comme étant proportionnel aux rapports des coûts de formation, il s'ensuit, par définition, que:

$$k_s^i + k_c^i = \beta^i (k_s^1 + k_c^1) \tag{10}$$

Donc, afin que la condition supposée au départ soit remplie, il faut que tienne

$$f_s^i + f_c^i = \beta^i (f_s^1 + f_c^1) \tag{11}$$

En effet, en partant de (9) et de (10), nous avons

$$k_s^i + f_c^i + f_s^i + f_c^i = \beta^i (k_s^1 + k_c^1 + f_s^1 + f_c^1)$$

et, en tenant compte de (10) et en soustrayant $k_s^i + k_c^i$ des deux côtés de l'équation, nous obtenons (11).

Avant d'aller plus loin, il faut préciser ce que nous entendons sous l'expression f_s^i, c.-à-d. par la fraction des coûts de maintien de la force de travail couverte par la société. J'entends par là cette partie des allocations sociales, dont les travailleurs ne bénéficient pas sous forme de salaires en fonction de leur performance au travail, mais qui leur est octroyée plus ou moins indépendamment de leur sphère d'activité et de leur rendement, tels que les sommes allouées à la protection sanitaire, les allocations familiales, les vacances subventionnées, etc. On peut affirmer de ces sommes que les catégories des travailleurs de formation différente tendent à en bénéficier dans une mesure identique:

$$f_s^i = f_s^1$$

qui me permet de remplacer par la suite le symbole f_s^i par le symbole f_s.

A partir de (11), on a

$$f_c^i = (\beta^i - 1) f_s + \beta^i f_c^1$$

D'après cette formule, la somme payable aux travailleurs sous forme de salaire se composerait par la fraction des coûts annuels de la formation professionnelle dont l'amortissement est échéant au cours de la période en question, puis des coûts de maintien individuel échéants à la même période.

$$v^i = k_c^i + f_c^i$$

où v^i représente le salaire de la catégorie i.

$$v^1 = k_c^i + (\beta^i - 1) f_s + \beta^i f_c^1 \tag{12}$$

et si $i = 1$, le salaire payable contre le travail simple est égal à:

$$v^1 = k_c^1 + f_c^1$$

Ce qui précède signifie que si les conditions suivantes étaient remplies:

a) les rapports entre les degrés de complexité des différents travaux étaient définis par les rapports entre les coûts de formation;

b) les coûts de reproduction de la force de travail (la valeur de la force de travail) étaient proportionnels au degré de complexité du travail;

c) le salaire payable n'était fonction que du degré de complexité de travail, c'est-à-dire des facteurs qui déterminent ce dernier, alors les salaires seraient déterminés par les rapports entre eux, par les frais de formation professionnelle et par l'importance des allocations dans les autres coûts de reproduction.

L'équation $v^i = k_c^i + \beta^i f_c^1 + (\beta^i - 1) f_s$ (12) remplit les conditions énumérées, elle fausse cependant la destination originelle de f_s. En effet, l'objectif visé par les allocations sociales distribuées indépendamment du salaire ou du travail est justement d'assurer au travailleur, et ceci indépendamment de son rendement, qu'il puisse bénéficier de certains services élémentaires de subsistance ou de culture. Ces allocations peuvent être considérées comme les premiers signes d'une distribution de principe communiste. C'est pourquoi n'est-ce pas nécessaire de corriger ultérieurement ces montants, par l'intermédiaire des salaires, suivant le rendement.

Indépendemment de cette considération, la correction $[\beta^i - 1]f_s)$ des allocations calculée d'après le degré de complexité doit être jugée comme frais de travail, mais lequel doit être retiré du travailleur par la société sous forme de taxe sur les revenus. Le fonds ainsi constitué peut être alloué par la société soit à la reproduction élargie de la main d'oeuvre, soit à couvrir les allocations sociales proprement dites (Σf_s).

Il s'ensuit qu'après la déduction des taxes sur le revenu, le salaire effectif devrait se former comme suit (toujours sous la réserve à relâcher plus tard que le salaire est déterminé uniquement par la complexité):

$$v^i = k_c^i + \beta^i f_c^1 \tag{13}$$

Le salaire est donc égal à la fraction des coûts de formation couverts par la famille échéant à la période pour laquelle le salaire est payé, puis au produit formé par les coûts de maintien du travail simple couverts par la famille, multiplié par le degré de complexité du travail.

En même temps, la société doit recevoir de la valeur produite par le travailleur la fraction des coûts de formation professionnelle couverts par la société, échéant à la période considérée, puis le résultat du plus-travail et,

finalement, dans le cas des travailleurs qui n'accomplissent pas un travail non-qualifié (simple), la correction des allocations sociales dues à la complexité du travail:

$$m_s^i = m^i + k_s^i + (\beta^i - 1) f_s \tag{14}$$

où m_s^i désigne le montant allant à la société du résultat du travail d'un travailleur productif de catégorie i,

m^i le revenu net social,

k_s^i est la fraction des coûts de formation professionnelle couverte par la société (c'est-à-dire la partie de cette somme échéant à la période considérée),

$(\beta^i - 1) f_s$ est la taxe au revenu.

Le modèle offre une possibilité pour tenir compte de l'intensité du travail et de son caractère plus ou moins pénible, mais nous ne traiterons pas ce problème à présent. Les autres facteurs déterminant le salaire sont négligés par le modèle.

Les rapports de salaires calculés

Notre modèle nous a conduit à affirmer que le point de départ pour déterminer les salaires moyens des différentes couches de qualification est défini par la formule:

$$v^i k_c^i + \beta^i f_c^1$$

C'est-à-dire le salaire de la catégorie i est la somme totale des facteurs suivants:

a) La partie des frais de formation couverte par la famille;

b) Le produit formé par les coûts de maintien individuels du travail simple, multiplié par le degré de complexité du travail.

Le calcul numérique auquel j'ai procédé à l'aide de ce modèle fut exécuté sans tenir compte de l'intensité du travail.

A l'occasion de mes premiers calculs, concernant les coûts de formation professionnelle, j'ai formé quatre catégories (notamment: manoevres et ouvriers semi-qualifiés avec les 8 classes de l'école primaire; ouvriers qualifiés avec trois années de formation; travailleurs ayant fini l'école secondaire signifiant 4 ans de formation, puis diplômés d'universités, avec 4 ou 5 ans de formation), et j'ai retenu ces catégories en calculant les rapports des salaires.

Du point de vue de l'intensité de travail, les quatre catégories mentionnées sont très hétérogènes. Ainsi par exemple, le groupe des manoeuvres inclut les femmes de ménage aussi bien que les débarqueurs. Parmi les diplômés nous retrouvons des constructeurs, des chercheurs et certains diplômés qui

ne font qu'un travail administratif. Il s'ensuit qu'il serait difficile de définir même au sein d'une catégorie donnée, quelle est l'intensité moyenne du travail. Il s'avère encore plus problématique de comparer l'intensité moyenne des différentes catégories. Personnellement, je ne connais aucun cas où l'on ait essayé de définir l'intensité du travail dans le cas des travaux non-manuels. (Bien que l'on peut considérer les recherches des experts de nutrition concernant la quantité de calories requises dans les différentes professions comme des approximations indirectes de ce problème.) Puisque les intensités peuvent être très différentes, on devrait corriger les rapports de salaires déjà obtenus suivant ces différences. Cependant, je n'ai pas élargi mes recherches dans cette direction.

L'appendice contient les salaires calculés sans l'intérêt des coûts de formation professionnelle.*

Les rapports de salaires ainsi calculés restent légèrement inférieurs aux rapports établis à la base de la complexité du travail. C'est que l'effet diminuant des frais de formation couverts par la famille a fait sentir son effet, mais — puisque la quote-part de cet item n'est pas trop grande — cet effet n'est que peu important. Les rapports finals que l'on obtient à l'aide de cette variante sont les suivants: 3,7 : 1,86 : 1,32 : 1 dans le cas de 5 années d'études universitaires, et 3,3 : 1,86 : 1,32 : 1, si l'on prend pour base 4 années d'études supérieures. [6.]

Examinons, pour terminer, comment les salaires calculés d'après les principes exprimés dans le modèle se conforment-ils aux salaires effectifs, ou quelles sont les divergeances?

Certaines difficultés se présentent à l'analyse des salaires effectifs. D'abord, pour les catégories définies par moi suivant le niveau d'études on ne trouve guère de données statistiques suffisantes. C'est pourquoi ai-je choisi de représenter les deux catégories plus hautes par certaines professions: la catégorie des bacheliers est représentée par les techniciens, celui des diplômés par les ingénieurs. Même les données de cette catégorisation font souvent défaut. Néanmoins, voilà quelques-unes, au moins en guise d'illustration:**

* Le calcul a été exécuté de la manière suivante: J'ai pris pour base le salaire moyen d'un manoeuvre, figurant dans une prublication de l'Office Central de Statistique («La situation des ouvriers aux entreprises industrielles») [3]. De ce montant j'ai soustrait d'abord la somme des allocations par tête, qui est indépendante du rendement au travail, puis l'amortissement des investissement consacrés à la formation professionnelle. Le résultat ainsi obtenu fut considéré en tant que f_c^1. Les frais de formation par catégories proviennent de mes estimations. (Voir [8].)

** Mentionnons en passant que si l'on tient compte du caractère plus ou moins pénible du travail en se basant sur le besoin en calories calculés par les experts de la nutrition, alors le salaire du manoeuvre des mines sera de 1,7 fois plus élevé que celui d'un «ouvrier non qualifié» de bureau, p.e. d'un sous-agent.

Salaires en 1929

	Ouvriers	Employés et fonctionnaires	Ingénieurs
En pengős	110	200—250	350
Rapport	1	1,8—2,2	3,2

Salaires en 1938

	Journaliers (210 heures par mois)	Ouvriers qualifiés (210 heures par mois)	Contre-maîtres	Cadres technique
En pengős	96,6	147	265	322
Rapport	1	1,53	2,74	3,33

Salaires au 1er janvier 1948

	Manoeuvres	Ouvriers		Techniciens	Ingénieur
		semi-qualifiés	qualifiés		
En Forints	338	413	542	1047	1239
Rapport	1	1,22	1,6	3,09	3,66
En prenant ensemble manoeuvres et ouvriers semi-qualifiés					
En Forints		380	542	1047	1239
Rapport		1	1,42	2,75	3,26

Salaires en 1957

	Moulineurs	Tourneurs	Bacheliers de lycées techniques	Diplômés de Faculté
En Forints	1243	1750	2200	2540
Rapport	1	1,42	1,77	2,06

A l'heure actuelle on peut estimer que le salaire des ingénieurs est environ 2,5 fois plus élevé que celui des manoeuvres. Quant aux autres catégories, les rapports entre elles ne doivent pas être trop loins de ceux prévalant en 1957.

En évaluant les tableaux présentés et en comparant les rapports y figurant avec ceux du modèle, il faut noter certaines circonstances:

a) Avant (et même tout de suite après) la libération, le niveau d'études des ouvriers était inférieur à leur niveau actuel. Ce niveau était particulièrement bas chez les manoeuvres et les journaliers. Par contre, l'école secondaire signifiait alors à peu près le même niveau que de nos jours. Il s'ensuit que la différence entre le niveau d'études des manoeuvres et des ouvriers qualifiés d'une part, ou entre celui des ouvriers en général et des travailleurs ayant des études secondaires de l'autre, était plus grande alors que maintenant.

b) La comparaison est biaisée à cause du fait que les coûts d'une année d'études sont certainement différents aujourd'hui de ce qu'ils étaient de quelques décennies plus tôt.

c) Il est probable que les données reflètent encore d'autres biais. (Ainsi par exemple dans la moyenne des salaires des ingénieurs figurent les salaires des quelques ingénieurs-directeurs aussi qui, bien que peu nombreux, jouissaient jadis des revenus extrêmement élevés.)

Bien que sous toutes ces réserves, les rapports calculés et les rapports effectifs des salaires sont étonnamment proches les uns des autres. En examinant de plus près les données relatives à 1958, tout ce que l'on peut dire, c'est que le salaire moyen des ingénieurs par rapport à celui des techniciens était trop bas, ne pouvant exprimer la différence entre les deux formations. (C'est ce que l'on constate au moins au moment de l'établissement des statistiques.)

Quelques conclusions peuvent être tirées de ce qui était dit dans ce chapitre:

a) En analysant les données relatives aux groupes de niveau de formation différent, dans la catégorisation compréhensive figurant dans l'étude, on voit que, parmi tous les facteurs déterminant les rapports des salaires, un rôle prééminent revient au facteur qu'est la complexité du travail.

b) Il nous paraît que sur ces bases, en partant des rapports entre les coûts des formations de niveau différent, on peut établir un centre de salaire. Ce terme désigne les rapports entre les salaires de quelques groupes très compréhensifs formés des professions de type différent, où les rapports déterminés seraient conformes aux principes de distribution du socialisme. Bien sûr, la politique économique peut faire dévier les salaires de ce centre, même, dans le cas de certaines catégories, les déviations peuvent être absolument nécessaires. Mais quand on procède à des déviations, il faut savoir, de quoi fait on dévier les salaires. Les déviations volontaires peuvent causer autant de dégâts dans ce cas que dans celui où l'on fait dévier les prix des valeurs ou d'une forme modifiée de la valeur, sans tenir compte des interrelations économiques existantes.

APPENDICE

Salaires calculés, sans les taux d'intérêt

$$v^i = kc^i + \beta\, {}^i\mathrm{f}_e^t$$

	Travailleur sans qualification (8 classes élémentaires)	Ouvrier qualifié (Formation de 3 ans)	Niveau secondaire (4 années)	Niveau supérieur (4 ou 5 années)
$i =$	1	2	3	4
β^i	1	1,33	1,92	3,45 (4 ans) 3,81 (5 ans)
k_e^t	2 200	2 770	3 330	5 290 (4 ans) 5 780 (5 ans)
f_e^t	14 000	18 620	26 880	48 300 (4 ans) 53 340 (5 ans)
$v^i = k_e^t + \beta^i f_e^t$	16 200	21 390	30 210	53 590 (4 ans) 60 120 (5 ans)
	1	1,32	1,86	3,3 (5 ans) 3,7 (4 ans)

c) Quand on passe à des catégorisations plus raffinées, on ne peut plus se passer de prendre en compte l'intensité du travail. (Malheureusement, pour le moment on ne dispose pas de méthodes adéquates pour rendre l'intensité mesurable.)

d) Tout ce qui vient d'être dit ne représente, bien entendu, qu'une des approches possibles visant à établir les rapports de salaires adéquats. D'autres approches, d'autres conceptions sont aussi possibles.

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ИЗДЕРЖКИ ПО ПОДГОТОВКЕ КВАЛИФИЦИРОВАННОЙ РАБОЧЕЙ СИЛЫ И ПРОПОРЦИИ ЗАРАБОТНОЙ ПЛАТЫ

Я. КОВАЧ

В своем труде автор пытается обрисовать такую систему оплаты труда, которая может стать исходным пунктом при определении пропорций заработной платы на данном этапе социалистического развития, когда рынок и стоимость играют еще значительную или даже доминирующую роль и когда на движение рабочей силы оказывает воздействие влияния рынка.

1. Исследования исходят из предположения, что сложность труда пропорциональна общественно необходимым издержкам при подготовке квалифицированной рабочей силы.

2. Вторым шагом в ходе мыслей автора является такая трактовка принципа распределения по труду, согласно которой — в хозяйственной системе, где рынок и стоимость имеют большое значение — исходный пункт определения пропорций заработной платы должен заключаться в том, что потребление, производимое рабочей силой, выполняющей труд различной сложности, должно быть пропорциональным участию в создании национального дохода.

3. Третьим шагом изложенный в пункте 2. принцип распределения корректируется воздействием двух факторов, а именно:

а) значительную часть издержек по подготовке квалифицированной рабочей силы несет не сам обучающийся, а все общество,

б) в формировании пропорций потребления определенную роль играют также различные выплаты и льготы, не зависящие от продуктивности выполненной работы, в распределении которых, таким образом, не может быть реализован принцип распределения по труду.

4. В конце своего труда автор пытается сопоставить с действительными в Венгрии пропорциями заработной платы пропорции, полученные им из модели оплаты труда, построенной на основании вышеизложенных принципов.

Gy. Cukor

THE GROWTH OF THE ENGINEERING INDUSTRIES IN THE DEVELOPING COUNTRIES*

The study describes and presents statistically the importance of the engineering industries for the industrialized and the developing countries, in particular within the framework of an overall economic development and industrial development of the latter. The development level and structure of the engineering industries in developing countries is discussed for three main groups of countries, representing at the same time a "normal pattern" of the development of this group of industries. As a conclusion, the main factors influencing the growth of the engineering industries and as well as development policies at different stages are described.

I. The role of the engineering (metal transforming) industries in economic development**

The engineering industries account for about 30% of the world industrial production and for about one third of the total manufacturing production. Their rate of growth has been considerably higher than the growth of total

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** In this, study, the engineering (metal transforming) industry will be considered, as comprising the industrial sectors and products belonging to the following classes of the International Standard Industrial Classification (ISIC); *Manufacture of Machinery, except Electrical Machinery* (ISIC 36), *Manufacture of Electrical Machinery* (ISIC 37), *Manufacture of Metal Products, except Machinery and Transport Equipment* (ISIC 35), *Manufacture of Transport Equipment* (ISIC 38), *and Manufacture of Professional, Scientific, Measuring and Controlling Instruments* (ISIC 391). ISIC 35 contains mainly simple metal products or simple metal manufactures, like containers, metal structures, cutlery etc. The other denominations are self-explanatory. As it is well known, ISIC classification is utilized in the industrial statistics of the United Nations. Foreign trade statistics of the UN are published according to the Standard International Trade Classification (SITC). It was sometimes necessary to utilize statistics available in this latter system, the following classes of which correspond more or less closely to the ISIC classes given above; *Machinery other than Electrical* (SITC 71), *Electrical Machinery, Apparatus and Appliances* (SITC 72), *Manufacture of Metal not elsewhere specified* (SITC 69), *Transport Equipment* (SITC 73), *Professional, Scientific and Controlling Instruments, Photographic and Optical Goods, Watches and Clocks* (SITC 86).

industry and of manufacturing, both in the industrialized countries and in the less industrialized ones. For the world as a whole as well as for the industrialized countries the rate of growth of the engineering industries was the highest among all industrial branches recorded in the "Index numbers of industrial production" of the United Nations Statistical Office, except for Chemicals, Petroleum and Coal Products (ISIC 31—32). For the less industrialized countries, the growth rate of the engineering industries was the highest among all industrial branches. (See Table 1.)

Table 1

Index numbers of industrial production in 1965
(1938 = 100)

	Industry total	Mining	Manufacturing	Metal products
	ISIC 1—3, 51	1	2—3	35—38
Industrialized-countries	362	193	378	564
Less industrialized countries	480	640	425	900
Share of less industrialized countries in total production in 1958 (percentage)	10.4	25.2	8.9	3.9

Source: *Monthly Bulletin of Statistics*, Nov. 1966. Special Table A; Index numbers of industrial production, excluding USSR and Eastern Europe, United Nations; and the Growth of World Industry, 1938—1961. New York 1965, United Nations.

It is more difficult to give a comprehensive picture of the share of the engineering industries in national income. This share depends primarily on the share of industry and in particular of the manufacturing industry in national income, and of course on the share of the engineering industry in total manufacturing. No comprehensive data for the world as a whole or for the main regions are available but the data for selected countries are given in Table 2. As it will be discussed later, not only does the share of manufacturing in total national income increase with an increasing level of economic development, but generally also the share of the engineering industries in manufacturing.

The fact mentioned above, namely the close relationship between general economic and industrial development and the development of the engineering industries is reflected in the percentage contributed by the less industrialized countries as a group to the world total of industrial production as a whole and to the world total of industrial production of the *different branches*. The weight of the developing countries in 1958 was 10.4 per cent for industry as a whole, 25.2 per cent for mining, 8.9 per cent for manufacturing and only 3.9 per cent for the engineering industries, the lowest out of all industrial branches which were separately recorded and that despite of the highest rate of development experienced in this branch. (See Table 3.)

Table 2

Importance of the manufacturing sector and of the engineering industries in selected industrialized and less industrialized countries

Country	Share of manufacturing in Gross Domestic Product 1960, per cent	Share of metal-products in manufacturing, per cent in 1958
Canada	26.0	25.2
France	57.4	35.0
Italy	32.4	27.3
Japan	30.0	31.5
Netherlands	32.1	30.9
Norway	26.7	26.7
United Kingdom	36.9	39.4
United States	29.6	35.9
Argentina	21.3	20.7 (1953)
Burma	15.6	5.4 (1953)
Chile	18.7	9.7 (1957)
Columbia	16.6	8.0
Pakistan	12.7	8.6
Philippines	15.8	10.7
Venezuela	12.5	6.1 (1953)

Source: *Yearbook of National Accounts Statistics.* New York, 1963. United Nation Patterns of Industrial Development. New York, 1962. United Nations.

In order to evaluate the problems connected with the growth of the engineering industries in less industrialized countries, it seems useful briefly to review first the present state of thinking and experiences on "underdevelopment", on the industrialization of developing countries and on the role played by the engineering industries in the industrialized countries.

Underdevelopment is generally characterized by low levels of per capita national income together with low shares of the manufacturing sector in the production of the national income as well as in employment. Investment is equally low when compared with the levels of the developed countries, both as to its absolute amount per capita and as to its share in national income. This situation is very closely connected with the low level of development of the "human resources" of the country, expressed mainly in the low levels of education (e.g. the low rates of literacy) and of the health services (e.g. in the low numbers of hospital beds or physicians per 10 000 of the population). The developing countries show considerable differences in every respect men-

Table 3

Share in world industrial production in 1958

(percentage)

ISIC	Industrial sector	Less industrialized countries — total	Asia	Latin-America
1— 3, 51	Industry — total	10.4	2.3	4.1
1	Mining	25.2	4.7	8.4
2— 3	Manufacturing	8.9	2.1	3.7
20—22	Food, beverages, tobacco industries	15.3	3.8	7.3
23	Textiles	20.8	6.4	6.6
24	Clothing, footwear and made-up textiles	10.4	2.4	4.8
25—26	Wood products	11.9	2.9	3.5
27	Paper and paper products	4.4	0.6	2.2
31—32	Chemicals, petroleum and coal products	10.8	2.2	4.9
33	Nonmetallic mineral products	11.6	2.0	5.1
34	Basic metals	7.8	1.1	3.5
35—38	Metal products	3.9	0.8	1.5
51	Electricity and gas	8.6	2.6	3.3

Source: *Monthly Bulletin of Statistics*, February, 1965. Special Table A. Index numbers of industrial production, excluding USSR, Eastern Europe, China (mainland) and North-Vietnam.

tioned above, according to every statistical "indicator of development". When reviewing the developing countries from this respect, we can find numbers of per capita gross national income ranging from 40 to 400 US $, the share of manufacturing in GNP from 3 per cent to 30 per cent; the percentage of the population in agriculture from 30 per cent to 90 per cent, the rates of illiteracy from 30 per cent to more than 90 per cent, the number of inhabitants per physician from about 2000 to 90 000.

As it is well known, the historical, climatic and geographical conditions of developing countries and their wealth in natural resources are equally highly different. Obviously, because of all these differences it is hardly possible to find some unique or uniform approach or economic policy, equally suitable to solve the problems of economic development of every developing country.

However, there is an increasing unanimity as to the crucial importance of *industrialization* in economic and social development (although there is still a wide discussion about the question *"how to industrialize"*). Even the present unanimity on the importance of industrialization is a rather recent one and

has been brought about by widespread discussions about this subject. The evolution of thinking in this respect can be characterized — of course in a very schematic way — by three main stages.

In the first stage the thinking characteristic of many economists concerned with insufficiently developed regions reflected a kind of "economic liberalism", namely the belief, that a free play of market forces is the best (or even the only) way to ensure economic development. The market forces should accordingly, with some possible exceptions, be left uncontrolled — not only within a single country, but also in an international setting. This policy was advocated in the belief, that a free play of the market mechanism would serve the development of every country through the action of the "comparative advantages". Thus there is no need for any special industrialization policy and in many cases industrialization itself was considered unnecessary. It was advocated that national specialization in primary production, might, through foreign trade, promote economic and social development as well as, or even better than, domestic industrialization.

The next stage of thinking can be characterized as an approach advocating *limited industrialization*. The change against the previous argumentations was brought about mostly by the recognition of the demographic pressure, i.e. by the impossibility of employing the increasing labour force in primary production. In this second stage, the main emphasis was placed on the relative scarcities of labour and capital, pointing out, that in the less industrialized countries, where labour is abundant and capital scarce, the small-scale, cottage and light industries have to be favoured and capital goods need to be further imported. It was assumed in this approach that the above kind of industrialization would help development in overpopulated countries, but that it was unnecessary in countries, which have already become relatively developed while specializing in primary production [1], without experiencing major unemployment problems.

The third stage of thinking, the one generally prevailing nowadays, stresses the necessity of an *industrialization policy*, oriented towards the creation of a diversified domestic industry emphasizing, of course at the same time the importance of international specialization. This approach is reflected in the United Nations "World Economic Survey" 1961 [2] which states:

"What the ultimate objective of underdeveloped countries should be, is clear enough: it is to construct industrial economies as diversified as those which now exist in the advanced countries". In the framework of the present approach the efficiency of industrialization is considered not only from the limited point of view of short term advantages, but it also takes into account the growth leading to changes in the structure of comparative costs. This approach is dynamic also in considering not only the direct effects of industrialization, but also the indirect implications visualizing industrialization as one

of the principal economic levers to break the barrier of underdevelopment and accelerate economic and social development.

The change from the second stage of thinking, which we characterized as advocating "limited industrialization" to the third stage of "diversified industrialization" has been caused mainly by the recognition of the foreign trade pressure, i.e. by the manifest impossibility of increasing foreign exchange earnings, by exporting primary products or by substituting and/or exporting products of the light industry at a rate and pace compatible with the increase of the need for capital and other goods, which are needed and have to be imported in a growing economy. This circumstance is in close connection with the well known fact, that a change in the pattern of consumption, the development of technology resulting in a more economical use of raw materials and the creation of synthetic substitutes for primary products has resulted in a much slower increase of the consumption of primary products than of manufactured goods.

Industrialization — of course — is the general framework within which the development problems of the engineering industry have to be considered. In this study industrialization will be understood according to the approach of the third stage (i.e. diversified industrialization) and at the same time, in conformity with the definition accepted by the United Nations Committee for Industrial Development [3]. This definition, emphasizing the dynamic aspect of industrialization and the preponderant role of the manufacturing sector, is as follows: "Industrialization is a process of economic development in which a growing part of the national resources is mobilized to develop a technically up-to-date, diversified domestic economic structure characterized by a dynamic manufacturing sector having and producing means of production and consumer goods and capable of assuring a high rate of growth for the economy as a whole and of achieving economic and social progress."

Thus, there is unanimity — or quasi unanimity — concerning the role to be played by industrialization in the future economic and social development of developing countries. There is, at the same, time sufficient clarity as to the present role of the engineering industries within the economies of the *industrially developed* countries. It has been already mentioned, that the engineering industries account for about 30 per cent of the world industrial production and for 1/3 of the total manufacturing production. This share is considerably lower for the developing countries taken as a group and somewhat higher for the developed countries. (See Table 4.)

However, the importance of the engineering industries seems to be far higher, than indicated merely by its share in industrial output (or in employment). This importance is closely connected with the impact of the engineering industries on the production and productivity in all major branches of the economy. One large part of the production of the engineering industry consists

Table 4

Share of selected branches in industrial production
(per cent)

Industrial branch	World-total*	Industrialized countries	Less industrialized countries
Industry — total	100.0	100.0	100.0
Mining	9.3	7.8	22.5
Manufacturing	85.6	87.0	73.3
Food	12.2	11.5	17.9
Textiles	4.9	4.3	9.8
Clothing	4.2	4.2	4.2
Wood products	3.7	3.6	4.2
Paper	3.0	3.2	0.1
Chemicals	9.4	9.4	9.8
Nonmetallic mineral products	3.6	3.6	4.0
Basic metals	6.8	7.0	5.1
Metal products	28.9	31.0	10.8
Electricity and gas	5.1	5.2	4.2

Source: *Monthly Bulletin of Statistics.* United Nations, February, 1965.
* Excluding centrally planned economies.

of means of production, like electrical and non-electrical machinery, transportation and other equipment, industrial instruments etc., which serve to modernize technological processes and products and thus to increase production and productivity and to decrease costs.

As it is well known, the engineering industry is providing the necessary input (or at least one of the necessary inputs, as increased skills and better quality of raw materials are equally important) to further development in the manufacturing industry itself, in mining, agriculture, communications and in most of the service industries. In this respect the engineering industry is a necessary precondition to increase production and productivity in every other sector of the economy. Of course, it is not necessary — not even possible — to produce domestically every engineering commodity but — as we will see — the gradual increase of home production is both necessary and useful.

In addition, the engineering industry or, more precisely, some sectors of the engineering industry, are among the most dynamic ones from the point of view of technological and scientific progress. The engineering industries are creating and at the same time, utilizing a very considerable part of new skills and knowledge, which will be later directly or indirectly utilized also in

other branches of the economy. This aspect of the engineering industries can be exemplified by reviewing the participation of this sector in research and development. (See Table 5.)

Table 5

Type of activity	All industries (per cent)	Engineering industries
Cost of research and development[1]	100	66.2
Scientists and engineers in all activities[2]	100	40.7
Scientists and engineers in research and development[2]	100	62.6

[1] 1956.
[2] January, 1957.

Source: *Science and Engineering in American Industry*. Washington, 1959. U.S. Department of Labor, Bureau of Labor Statistics.

The considerable efforts put into research and development are an effect and, at the same time, a cause of the very great number of different products manufactured in this branch and of the high rate, at which this product mix is partly increased and partly supplemented by new, more efficient products. Result of this situation is an increasingly important *foreign trade* in engineering products. There is no country today, not even the greatest and most developed one, which would or reasonably could limit itself to the utilization of only domestically manufactured engineering products. The result is, that *every country* is importing a considerable part of the use in engineering products. The difference between the industrially developed and the developing countries in this respect is that, while both import more or less engineering products, the former export at the same time a considerable part of their domestic production (20 to 50 per cent) while the exports of the latter group are non-existent or insignificant.

It is an important fact, that the internal structures of the engineering industries in the industrially developed countries are rather similar, at least when measured by the broad statistical sectors, as presented in the footnote on page 197. Within the total production of the engineering industries in the developed countries, the typical share of the major sub-sectors is as follows:

The existence of an important volume of foreign trade in the products of the engineering industry has already been mentioned. The fact, that the internal structure of engineering production in the developed countries seems to be — with some deviations of course — sufficiently similar, shows that

Table 6

Subsector	Per cent
Simple metal products	6
Machinery except electrical	33
Electrical machinery	24
Transport equipment	33
Instruments, watches and clocks	4
Total of engineering industries	100

national specialization, the basis of foreign trade, is operating rather concerning *single products*, while the same main subsectors of the engineering industry have been developed in every country.

It is obvious and does not require any further proof, that the availability of machinery, equipment, instruments, etc. is an important prerequisite of the development of the manufacturing industry, mining, transportation, agriculture, etc. in the developing countries. It is as obvious, that with increasing levels of living in these countries there is and will be an increased demand for such durable consumer goods as bycicles, radio-receivers, refrigerators, etc. produced by the engineering industry. However, the necessity of *domestic utilization* does not prove in itself the necessity of *domestic production*. All that can be said without further investigation is, that it does not seem feasible or desirable to try to produce all domestically needed engineering goods within a developing country, and that it is at least worth while to investigate whether and how far the promotion of at least some engineering industries can be considered as desirable. The investigation of the present level of the engineering industries in the developing countries may contribute to answer this question.

II. Level of development and structure of the engineering industries in developing countries

Within the limits of available data, the developing countries can be classified into three distinct groups as regards the level of development of the engineering industries. This classification is based on the following statistical indicators:

a) Number of persons engaged and value added in engineering production — to characterize the size of the industry.

b) Value added in total manufacturing and total yearly steel consumption — to characterize the size of the "modern" sector of the economy.

c) Share of metal products within total manufacturing (in per cent) — to represent the importance of the engineering industry within manufacturing.

d) The percentage of imports in domestic consumption and the percentage of exports in domestic production — to characterize the interrelations of the production and utilization of engineering goods with foreign trade.

The classification itself is based on the — partly incomplete — data of 36 developing countries, which seem to represent the whole regions of Africa, Asia and Latin-America reasonably well. The whole set of data is given in Annex I. and the system of classification with the characteristic data of the different classes of the engineering industries in less industrialized countries in Table 7.

The engineering industries of the *developing* countries can be classified, with the help of the above-mentioned statistical indicators into three, sufficiently distinct groups, namely into

Group I — countries with already developed and diversified engineering production

Group II — countries with engineering production at an initial stage, and

Group III — countries with no engineering production or with engineering production restricted to repairs and simple metal manufactures.

The engineering industries belonging to these groups can be distinguished fairly well from each other or from the engineering industries of the industrialized countries. The latter differ from Group I. of the developing countries mainly in respect of the following characteristics: a) a higher share of engineering industries in the *developed* countries in total manufacturing (25 to 30 per cent or more against 15—20 per cent); b) a more important part played by the domestic industry in satisfying domestic requirements (percentage of imports in domestic consumption 10—50 per cent against 50 to 75 per cent in the case of Group I. of the developing countries) and c) a significant percentage of domestic production being exported, while the exports of developing countries are insignificant.

The available information seems to indicate that the three categories of the developing countries present quite distinct problems, requiring distinct measures for the development of their engineering industries.

Four countries — India, Argentina, Brazil and Mexico — belong to Group I, characterized by an already important manufacturing industry, with the total number of those engaged being well over one million and, as a part of it, with an already diversified manufacturing of engineering products. Steel production, already appreciable in these countries, is expected to increase

Table 7

Engineering industries in industrialized and less industrialized countries. Selected indicators of development

	Engineering industries		Engineering goods			Value added in engineering production (million U.S. dollars)	Value added in total manufacturing (million U.S. dollars)
	Number engaged, (thousands)	Percentage in total manufacturing (value added)	Total yearly steel consumption (thousand metric tons)	Percentage of imports in domestic consumption	Percentage of exports in domestic production		
Industrialized countries	over 200	25—30 or more	1000 or more	10—50	20—50		
Less industrialized countries with							
I. Developed and diversified engineering production	over 200	15—20	1000 or more	50—75		400—800	2000—5000
II. Engineering production at an initial stage	20—50	8—12	400—800	80—90	insignificant	50—100	400—1000
III. No engineering production or engineering restricted to repairs and simple metal manufacture	20 or less	8 or less	400 or less	85—100		up to 50	up to 400

Sources: *The engineering industries in Europe OECO 1960.* Paris, 1961 OEEC. Annex 1. *Production and export of mechanical and electrical engineering goods.* Geneva, 1960. United Nations Economic Comission for Europe. *The industrial development of Peru.* New York, 1959. United Nations, and *national statistics* of India, Mexico, Argentina, Brazil, Columbia, Pakistan.

further at a very quick pace and to essentially satisfy the increasing domestic consumption (except in the case of Argentina) in the foreseeable future, bringing into existence the most important base of domestic supply of raw materials for, among others, the engineering industry. This group is very distinctly separated from the next according to all meaningful economic indicators in absolute terms, like value added and/or number of persons engaged, both in total manufacturing and in the metal transforming industries, steel production and consumption, etc. Group II. (with some ten countries, e.g. Chile, Colombia, Indonesia, Pakistan, Venezuela etc.) is characterized by a manufacturing industry engaging about 200—500 thousand persons, by an accordingly lower engineering production and by the manufacture of machinery and equipment restricted to some relatively simple items. Steel production is in an infant stage (or sometimes practically non-existent) in the countries of this group, but their steel consumption of about 400—800 thousand tons already opens a possibility — especially when foreseeable increase is also taken into consideration — of economically justified domestic steel production. This circumstance is actually reflected in the economic plans or previsions of several countries in the group. However, it is generally not planned to satisfy the domestic consumption by domestic production to an extent exceeding 70—75 per cent in the next 10—15 years. Groups II and III are less clearly separated and the latter is less homogeneous, comprising countries with an already appreciable amount of manufacturing, together with countries in which there is barely any manufacturing at all. This group is characterized by engineering production being restricted to simple metal manufacturing and repair work and without (or with a negligible amount of) machinery production, by low steel consumption, and by more remote prospects of a substantial development of domestic steel production. However, small steel-plants of the re-smelting type are being installed also in some countries of this group.

The different categories indicated in Table 7 are at the same time characterized by distinct internal structures of the total engineering production, as measured by the share of the main engineering branches. The typical structure of the engineering industry in industrialized countries was already indicated in Table 6. In less industrialized countries with already developed engineering industries (Group I), the share of simple metal products is substantially higher (20—30 per cent can be considered as being typical), with a tendency to decrease as engineering production increases. Further, in developed countries the production of non-electrical machinery is generally more important than that of electrical machinery (typically 30—40 per cent higher), while, in Group I of the developing countries, the production of electrical machinery is as much as two times more important than that of non-electrical machinery. In Groups II and III, the share of simple metal manufacture

is — according to available statistics — even higher (typically 35—40 per cent for Group II and more than 50 per cent for Group III of total engineering production). The share of total machinery production (electrical and non-electrical) which is very low or even non-existent in Group III, increases with the progress in the stages of development and is more than 50 per cent in the typical structure for industrialized countries.*

The three groups described above can be interpreted as a simplified scheme of a "normal pattern" of development of the engineering industry in less industrialized countries, this development being an integral part of the over-all process of industrialization. The pattern in question can be considered as characteristic only in the case of *less industrialized* countries, implying by that the existence of and the close connections with industrialized areas. The explanation of this succession of stages, or of the "normal pattern" can be given as follows. There is evidence, that the two major and interdependent factors determining the level and the rate of development of the engineering industry are the size of demand for engineering goods (which is largely determined by the home market in the countries in question) and the supply of raw materials, mainly steel products. The development of domestic production of engineering goods largely takes the form of a substitution process, namely, substitution of domestically manufactured goods for goods produced by the handicraft (cottage) industry or for imported goods. Among the engineering products, the domestic manufacture of simple metal products is technically possible and economically sound even with a relatively small size of the economy. Design and production processes are relatively simple; the requirements from the point of view of skills, education and training of the labour forces are not too exacting. Due to the nature of demand and the uniformity of products, a scale of production is easily attained, where domestic manufacture can operate with lower costs and higher productivity than handicraft industry, arriving at a generally higher and more uniform quality of products. Further economies of scale attainable are not so overwhelming in cutting costs and in increasing productivity as to make the domestic industry non-competitive when compared with units operating on a much larger scale in industrialized countries. With some products, generally fabricated mainly from metal sheets, like containers, stoves, etc., the high costs of transport (as compared to the costs of transport of raw materials) give relative advantages to the domestic industry. Repair work of already installed machinery or, very frequently, of transport equipment is obviously necessary already at a very early stage of economic development. Both simple metal manufactures

* The subsequent data are mainly based upon the sources indicated in Table 2. Since different statistical sources differ as to the system of classification or content (e.g. value added or deliveries), they are not fully comparable. However, with necessary corrections, they reflect reasonably well the proportions of the subsectors of the engineering industry.

and repairs are to be viewed also as preparatory activities by introducing similar machinery and providing training for the skills necessarily involved in a subsequently more complicated machinery production.

With an increase in the *size of the economy* in Group II expressed in a higher demand of both consumption and capital goods and characterized by a higher output of the manufacturing industry (which was found to be of about $ 400—$ 1000 million in value added) the manufacture of more complicated machinery goods becomes economically possible. The greater share of electrical machinery, when compared with the engineering industry of industrialized countries, is due to advantages similar to these mentioned for simple metal products, namely, a relative simplicity of the production process and uniformity of products.*

Further increase in the size of the economy, characterized in Group I by value added in manufacturing of about $ 2000—$ 5000 million, creates an important demand for machinery and, consequently, the production of industrial machinery proper, power-generating equipment, metal-working machinery, and special industrial machinery, as paper, textile, leather and food processing and chemical machinery, etc. However, even countries in Group I are characterized by a less important share of industrial machinery in total engineering production than are the developed countries. Along with this "normal pattern", it can be said as a very rough approximation of the complicated development process that the manufacturing of engineering products of standard design and serial (or mass) production appears at an earlier (or lower) stage than individual manufacturing of machinery and equipment according to individual design. The whole development of the engineering industries is influenced by the availability of domestic raw materials, mainly of steel. While a total self-sufficiency in steel products is obviously not necessary, and often not even advantageous, the lack of domestic supply adequate to the level to be attained may slow down the development of the engineering industry.

The following can be mentioned in connection with serial (or mass) production and production according to individual design: one of the methods to introduce new lines of production in developing countries (and sometimes even in developed ones) is assembly on the basis of foreign design, technology and parts, with the aim of successively substituting parts of domestic origin and decreasing the share of imports. This is, in general, an appropriate method which can help to bridge the gap of technical know-how, but — as it will be pointed out later — excessive dependence on foreign enterprises can have also adverse effects. On the other hand, repair workshops servicing great mining, transportation, etc. enterprises are often the basis of engineering production of individual design.

* This, of course, does not apply to heavy and special electrical machinery.

III. Economic and technical problems, connected with the establishment and development of the engineering industries in developing countries

The economic problems connected with the establishment and development of the engineering industries can be meaningfully investigated only within the general framework of industrial development, taking into account that the relevant question to be answered is not "whether to industrialize or not" but "how to industrialize". Similarly, if we accept the approach to industrial development we labelled as "diversified industrialization", the question is not whether to develop engineering industries at all, but "how and when" although a more detailed investigation might indicate a rather low priority for large-scale metal transforming industries in the foreseeable future in the case of some small developing countries.

As it is well known, there is no universally meaningful answer concerning the priorities to be assigned to single economic branches in the process of industrial development in developing countries. Every case has to be analyzed and investigated separately. General theoretical considerations are useful mainly to select the principal points of view of this analysis and investigation. Although there are several methods known to evaluate given industries or projects, the main criteria of choice are from the point of view of the national economy as a whole, based on or related to the resources to be devoted to *investment*, the impact on *foreign exchange* expenditures and earnings (or savings) and on the impact on *manpower resources*. On the one hand, they are in some respect the primary inputs of the production process, to which other, in particular material, inputs can be traced back. On the other hand, there are usually specific tensions regarding these resources: scarcity of capital, foreign currencies and skilled manpower and unemployment or underemployment of the unskilled labour force.

In regard to the engineering industry, even the elaboration of geneeral guidelines is not free from difficulties, as the subsectors of the engineering industry have very different characteristics from the angle of the investment, foreign exchange and manpower criteria. The engineering industry as a whole has a capital intensity (capital-output ratio) near the average of total manufacturing, being lower than that of most of the branches of the heavy industry, like metal producing and chemical industries and higher than that of most of the light industries. The foreign exchange effect depends largely on the proportion of domestic raw materials. If this latter is important, the engineering industry ranks high in foreign exchange earnings and savings. As to the manpower situation, it is well known, that the engineering industry is labour-intensive, compared with the average of the manufacturing industries, in terms, for example, of the capital /labour or output/ labour ratios, or the shares of labour costs in the

value of output. This feature is generally considered as advantageous in developing countries, an advantage counterbalanced by the high requirements concerning the skills and education of the labour-force. It has to be emphasized, however, that there are considerable differences among subsectors or individual plants of the engineering industry concerning capital- as well as the labour-intensity.

In answering the question "how and when" to establish and develop engineering industries in developing countries, it may be useful to consider the "normal pattern" of development which was described earlier more in detail, since this pattern reflects real and basic economic and technological relations. If we consider repair workshops and the manufacture of simple metal products as part of the engineering industry, we may conclude, that nuclei of the engineering industry are already present in practically every developing country, even in countries belonging to Group III. This is a very important fact, because the workshops in question utilize and develop the same kinds of skills, which are necessary in engineering plants on a higher level from the point of view of the technology of operations and the complexity of the products. Now, if we try to point out the basic prerequisites of the establishment and development of the engineering industries, we may affirm with certainty that one of the most important prerequisites and maybe even the most important one is the factor "knowledge". This factor is appearing principally in the quality of the labour force of the industry, from the skilled or even semi-skilled worker to the engineer or the scientist. In this respect the existence of some, even small workshops is important and can be considered as the starting point of a smooth and organic growth in this field. In general, unlike more capital-intensive industries, as heavy chemicals or the metallurgical industries, the engineering industry lends itself to a smooth and organic growth, to development by small steps. This is true for every level of development, but probably even more so for the higher, than for the lower levels and it is true both in relation to capital equipment and to the skilled labour force. This feature should be obviously considered as advantageous for developing countries, where skills as well as capital are rather scarce factors.

A substantial part of the knowledge, which is necessary to develop and operate engineering industries can be and is in fact imported from industrially more developed countries. This import may take different forms, going from contracts to provide blueprints, know-how and training of the personnel to establishing subsidiary companies. Technological knowledge obtained by these means from abroad is a natural, useful and often the only possibility open to a developing country. However, an excessive dependence on foreign sources of technological information may, at a higher level of development, also cause adverse effects, as for example a slowing down of the adaption process of product design and production methods to local conditions, or a lessening of the

possibilities of competition in foreign markets. Engineering industries in developing countries actually depend largely on foreign sources for technological knowledge and know-how, channeled at least partly through subsidiary enterprises of foreign firms. Obviously, it is generally easier to "import" knowledge than to develop it in the country. Doubtlessly there are cases where substantial foreign help should be considered an indispensable precondition to the beginning of the manufacture of certain products. The problem is more ambiguous when considering future development. There are indications, that subsidiary plants set up mainly to surmount tariff or foreign exchange barriers have no general policies favoring the extension of their activities towards exports [4]. However, as it will be pointed out below, the long-term development of the engineering industries in developing countries will be hardly possible without increasing the export of engineering goods.

Next to the factor "knowledge", the most important prerequisite to the economically efficient activity and development of the engineering industries is, like in the case of most of other industrial branches, a sufficient *scale of operations*. This fact hampers considerably both the establishment and the development of engineering plants, as the domestic market for engineering goods is generally not very important in developing countries. However, there are several methods permitting to profit from the favourable effect of the economies of scale even in the case of a restricted domestic market.

The most important means for influencing the effectiveness of operation in the field in question, with regard to costs and productivity and even partly with regard to technical achievements, is the *increase of the relative scale* of production. The economies of scale do not result mainly from an increase in the volume of production if this is achieved only by a proportionate increase in the diversity of production (i.e., by producing completely new items), though several overhead costs will decrease even in this case. Economies of scale result much more from a *relative* increase in the scale of production; by a shift towards serial from individual production; by the increase of seriality, and by a shift towards mass from serial production. This means an increase of identical (or similar) items produced or operations performed at the same time on the same machine or equipment, with the same tool or instrument, according to the same design, etc. In this context, there are wide possibilities of increasing the scale of operations, even within the limits or a given volume of production and/or a given size of final demand. The most important methods being put forward are standardization, co-operation among different factories (subcontracting) and concentration on the production of widely utilized parts (and/or raw materials). It is to be noticed that all these methods are generally utilized in the engineering industries of developed countries.

The "scale-increasing" effect of standardization is exercised by all its forms, from in-plant standardization through special industry-wide standardi-

zation to national standardization. The first intends to reduce the variety of similar parts and components within one plant; the second has the same effect within a whole industry (machine-building in this case); the third has to reduce the diversity of final products through agreement between suppliers and consumers. It is probable that, due to the very large number and variety of parts and components utilized in machine building, the second kind of standardization has the most important impact on the economies of scale of the industry as a whole.

In machine building in general (except mass production), a part of the special equipment, e.g., machine tools producing large and heavy parts, are never utilized to full capacity when operated only for one particular factory. In order to utilize more effectively such equipment which is often very expensive and complicated, different factories may co-operate through a system of *sub-contracting*, which can be developed as a very useful and general method to ensure effective utilization of plant facilities and skills within the industry. A high proportion of parts, components, raw materials or accessories utilized in machine building are identical, similar or produced by identical production processes, while the amount required by one single factory is below the limit permitting the operation of plant facilities with advanced and highly productive technologies. The method proposed in such cases, principally for *castings and forgings*, is the concentration of production into a few, well-equipped plants serving a large number of factories.

The methods mentioned above involve principally technical problems and problems within the engineering industry. To ensure the uniform utilization of productive facilities, there is a need for economic forecasting, and planning and co-ordination among different industrial branches. Otherwise, it may happen that periods of overloading alternate with periods of idling, especially in heavy engineering and in view of the rather restricted demand in developing countries.

Even in the case of an optimal utilization of the methods indicated above, it seems improbable that the engineering industries of developing countries could attain a satisfactory scale of operations without an active participation in the international division of labour, i.e. without exports. The size of the engineering industries of developing countries belonging to Group I is comparable, at least as regards the number of those engaged, to that of the smaller industrialized countries. But, while exports of the former are insignificant, the latter export around 50 per cent of their engineering production, importing as much or more, with the resulting economies of scale due to the possibilities of a narrower specialization of the domestic production. For countries belonging to Group III, pooling of their resources and planning on a sub-regional or regional scale can be considered as a pre-requisite even at an initial stage in the manufacture of more sophisticated engineering products.

The complicated problems of finance, tariffs, goodwill, etc. of the export promotion of machinery are not investigated here. However, some remarks concerning the importance and possibilities of export promotion seem necessary. As far as the potential access to markets is concerned, planned co-operation between developing countries seems to be an easier way to promote exports of machinery than exporting to industrialized areas. The high labour intensity of machine building is an advantage to exporting machinery as far as the competition with industrialized countries is concerned. The potential demand in developing countries, taken together or by regions, is important enough to permit a sharp increase in the production of industrial machinery in the countries in question. An ECLA study [5] reviewing the equipment required for the projected expansion in 1961—1970 of the petroleum, electric, steel, cement and paper and pulp industries, found the share of equipment that could be made by domestic industry at about 80 per cent of the total at prices competing fairly well with imported equipment. Another ECLA study put the share of domestic production in machine-tool consumption for the period 1967—1971 to 65 per cent (against 38 per cent in the period 1955—1961). The industries in question are representative for the heavy industry as a whole. Machinery and equipment for the light industry and durable consumer goods are obviously even easier to produce.

It has to be pointed out that the importance of machinery exports cannot be evaluated only by the foreign exchange earnings. Exporting always raises the industry's effectiveness regarding costs as well as technical achievements. Export has to be viewed as a major incentive to the development of the production of engineering goods. The importance of this latter is not measured only by its output but rather by its impact on the whole course of industrial development.

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ANNEX I.

Developing countries: selected statistical indicators of industrial development

Country	Value added in million dollars		Share of metal products in total manufacturing per cent		Steel		Number of persons engaged in total manufacturing
					Production	Consumption	
	all manufacturing ISIC 2—3 (a)	metal products ISIC 35—38 (a)	Value added (b)	Number engaged (b)	Thousand metric tons (c)	(c)	thousands (d)
Group I							
India	4701.1	753.3	14.5	12.9	4071	5154	1870.5
Brazil	3643.3	654.2	14.3	11.5	1843	2701	1547.0
Mexico	2999.4	557.0	14.3	13.8	1728	1840	1978.0
Argentina	2412.7	480.0	20.7	25.3	441	2379	1411.0
Group II							
Turkey	1012.6	100.1	7.4	10.9	282	549	295.3
Venezuela	886.6	85.9	6.1	6.0	...	448	137.8
Pakistan	803.1	101.6	8.6	11.6	9	192	397.8
Colombia	658.2	70.8	8.0	12.6	176	405	236.8
Chile	643.4	71.1	9.7	13.3	363	506	206.6
Korea (Rep. of)	571.6	58.5	9.9	10.3	61	...	260.6
United Arab Republic	497.6	44.6	6.0	7.0	...	373	260.8
Philippines	447.6	53.3	10.7	11.2	...	504	228.4
Indonesia	...	...	10.9	11.6	...	439	334.5
Iran	...	...	...	...	...	351	...
Group III							
Peru	367.6	28.4	6.1	7.8	...	246	116.3
Federation of Rhodesia and Nyasaland	356.4	57.4	24.6	22.4	60	244	109.6
Cuba	351.8	...	...	...	277	...	...
Algeria	341.4	66.1	22.0	20.0	...	402	146.7
Uruguay	313.7	57.6	...	18.9	...	86	191.4
Morocco	303.1	50.8	19.0	...	...	152	...
Thailand	253.5	...	...	10.3	...	257	189.8
China (Taiwan)	253.1	39.7	6.1	8.2	198	287	173.0
Burma	181.8	...	2.8	3.6	...	...	120.9

Country	Value added in million dollars		Share of metal products in total manufacturing per cent		Steel		Number of persons in total manufacturing
					Production	Consumption	
	all manufacturing ISIC 2—3 (a)	metal products ISIC 35—38 (a)	Value added (b)	Number engaged (b)	Thousand metric tons (c)	(c)	thousands (d)
Ceylon	180.6	32.2	23.6	36.0	...	89	49.9
Ecuador	121.2	...	1.5	1.7	...	...	30.4
Guatemala	71.7	...	3.9	6.9	...	...	27.6
El Salvador	48.3	...	4.1	3.8	...	...	60.3
Honduras	41.1	...	2.8	3.0	...	...	20.1
Nicaragua	31.1	...	1.3	2.1	...	...	18.9
Paraguay	24.2	0.3	3.7	5.3	...	...	34.3
Ethiopia	23.2	...	...	...	...	...	20.0
Nigeria	...	...	5.4	...	...	182	...
Tunisia	...	...	...	...	...	79	12.9
Ghana	...	...	9.3	13.8	...	67	21.7

Source: a) Non-published estimates of the Statistical Office of the United Nations.
b) *The growth of world industry, 1938—1961.* New York. 1964. United Nations.
c) *Statistical Yearbook* 1962. New York. 1962. United Nations.
d) Sames as in b).

РОСТ МАШИНОСТРОИТЕЛЬНОЙ ПРОМЫШЛЕННОСТИ В РАЗВИВАЮЩИХСЯ СТРАНАХ

ДЬ. ЦУКОР

1. Машиностроению принадлежит выдающаяся роль как в индустриализации, так и в экономическом росте; доля его продукции составляет в общем объеме продукции обрабатывающей промышленности прибл. 30%; темп его роста намного превышает темпы роста обрабатывающей промышленности в целом. В 1958 году 10,4% мировой промышленной продукции производилось в развивающихся странах, в отношении добывающей промышленности эта доля составляла 25,2%, в обрабатывающей промышленности — 8,9%, а в машиностроении лишь 3,9%.

Роль машиностроительной промышленности может быть правильно оценена лишь в общем комплексе проблем, связанных с индустриализацией развивающихся стран. В настоящее время уже общепризнанным является то, что в ходе индустриализации развивающихся стран следует стремиться к диверсификации промышленности, т. е. к осуществлению промышленной структуры, аналогичной уже сложившейся в развитых странах. Необходимость роста машиностроения мотивируется тем обстоятельством, что в то время как в развитых странах доля машиностроительной продукции составляет более 30% промышленной продукции, в развивающихся странах она достигает всего прибл. 15%. Значение машиностроения, однако, намного больше, чем это показывают цифровые соотношения, так как ему принадлежит особая роль с точки зрения технического развития, а также роста продукции и производительности труда всех отраслей народного хозяйства.

II. Развивающиеся страны можно подразделить на три, довольно отличимые друг от друга группы в зависимости от уровня развитости и внутренней структуры их машино-

строительной промышленности. За основу группировки принимаются продукция и занятость в обрабатывающей и в машиностроительной промышленностях, экспорт и импорт продуктов машиностроения и общее потребление стали в стране.

Страны, относящиеся к группе I, уже в настоящее время обладают развитой и диверсифицированной машиностроительной промышленностью, удельный вес которой в общей продукции обрабатывающей промышленности — по созданной новой стоимости — составляет 15—20%; в странах, относящихся к группе II, машиностроение собственно уже начало развиваться, однако, удельный вес его составляет всего лишь 8—12%; в группе III производятся только простые товары ширпотреба и ремонт оборудования, удельный вес машиностроения здесь не достигает 8%. Характерны расхождения и во внутренней структуре машиностроительного производства. В развитых странах удельный вес товаров ширпотреба составляет около 6% от общей продукции машиностроения, удельный вес продукции неэлектромашиностроения — 33%, электрооборудования — 24%, продукции транспортного машиностроения — 33%, продукции приборостроения — около 4%. В развивающихся же странах в группе I доля товаров ширпотреба составляет 20—30%, а доля электрооборудования выше, чем доля неэлектрических машин и оборудования. В группах II и III доля товаров ширпотреба еще выше, причем она составляет около 35—40% в группе II и более 50% — в группе III.

III. Экономические и технические проблемы, связанные с созданием и развитием машиностроения в развивающихся странах, довольно сложны. Возможности развития в этой области зависят от целого ряда факторов, преобладающими из числа которых мы считаем величину внутреннего рынка и снабжение материалами. Величина отечественного рынка характеризуется масштабами отечественного производства обрабатывающей промышленности, так как последняя является важнейшим непосредственным рынком для продукции машиностроительной промышленности (производственного оборудования), в то же время она дает представление о самом современном секторе хозяйства, тесно взаимосвязанном с прочими рынками машиностроения. Вышеуказанная группировка развивающихся стран в зависимости от степени развитости их машиностроительной промышленности, представляет информацию о возможных путях развития и может быть воспринята и как его «нормальный» процесс. Страны, относящиеся к группе I, таким образом, могут уже стремиться к достижению машиностроительного производства, соответствующего структуре машиностроения в развитых странах, так как его внутренний рынок достаточно велик, а отечественное потребление стали мотивирует развитие ее производства. Внутри группы II внутренний рынок более ограничен, но не мал, что позволяет развивать определенные профили машиностроения, а также — в большинстве случаев — приступить к отечественному производству стали. В странах группы III развитие машиностроения может быть направлено скорее лишь на производство более простых изделий, а возможности отечественного производства стали, в большинстве случаев, являются отдаленными. Таким образом, каждая страна может развивать свое машиностроение параллельно со своим общим экономическим развитием, но, естественно, в каждом отдельном случае по разному.

I. WIESEL

CUBAN ECONOMY AFTER THE REVOLUTION

The author briefly describes the main features of Cuba's economy prior to the revolution.

Three periods of the revolutionary era are discussed. The first one brought about the polarization in the political and economic life of the society. In the second period socialist production relations became prevalent and the second agrarian reform was carried through. The third phase is characterized by a new economic conception. The chief aim is to develop the sugar economy to a high level, bring about a further improvement of the related branches and a quick development in agriculture.

Economic structure of pre-revolutionary Cuba

Should somebody be asked to give an example of the monocultural economy, it is most likely that — thinking of sugar cane — he will, without hesitation, answer: Cuba. Indeed, the pattern of the economy was determined in Cuba by the preponderance of the production of sugar cane and sugar. 61 per cent of the arable land area is covered by sugar cane which yields, together with sugar, nearly one third of national income. The share of sugar in exports amounts to some 85 per cent.

Cuban monoculture is of a closed character: all vertical stages of production from the cultivation of sugar cane to sugar refining were already in the era of half-colonial dependence, carried out in the country itself. This feature distinguishes Cuba from the countries with open monoculture whose raw material products are processed in vertical industrial stages abroad. In the case of Cuba the foreign — mainly American — capital did not deem it profitable to transport the raw material, and developed the insular country into a specialized supplier of a finished commodity (as regards sugar cane production and sugar exports, the country occupied the first place in the world). A sharp contrast arose thus between the sugar industry and the other industrial branches. Under the wings of American capital Cuba became the biggest factor in the world market of sugar and considerably influenced the trends of the latter. The closed monoculture represented a kind of superiority over the rest of the Latin-American countries. Before the victory of the revolution already, per capita national income in Cuba amounted to $ 330.

In the Cuban revolution, sugar cane and sugar were symbols of colonial dependence, in the minds of the people sugar cane became associated with the vision of colonial fate and this had its effect on the formulation of economic concepts after the victory of the revolution.

Before the revolution the economic character of Cuba was determined by the *agricultural production carried on on large estates*. About 40 per cent of the labour force was employed in agricultural production. Agricultural ownership was highly concentrated: 10 per cent of landowners owned about three quarters of the land area. The large estates were most backward technically and production yields were extremely low. Cheap labour, however, still ensured profitability and competitiveness both in the domestic and the international markets.

The main characteristics of the economic backwardness of Cuba was the low level of industrialization or rather its practical lack. Apart from the sugar refining industry and some highly mismanaged mining, no national industry could develop even after the abolition of Spanish colonial rule, in spite of the fact that with the exception of the energy basis the natural endowments were favourable. Nor could the modest industrialization experiments of the national bourgeoisie bear any fruit since the United States used their economic and political position to secure for themselves the advantages of the international division of labour. The neighbourhood of the United States with their overwhelming superiority also hindered industrial development in Cuba.

In the early fifties a new attempt was made by the national bourgeoisie to develop the Cuban industry by means of what was called a compensatory economic policy. The essence of this policy consisted in promoting the development of industry by measures of monetary policy (such as the establishment of the Cuban National Bank, advantageous state or state-guaranteed loans, etc.). However, the Batista régime used the state subsidies, whose main source was the state budget, partly to finance the American monopolies (!), partly to set up enterprises with low economic efficiency. The period was marked by corruption, swindle, embezzlement and a rapid growth of the public debt. The last capitalist attempt at industrialization did thus not strengthen the *national* industry.

As opposed to the failure of the experiments to develop Cuban national industry, with its natural wealth and cheap labour Cuba was an attractive terrain for the influx of American capital. According to some estimates, at the time of the revolution American capital invested in Cuba amounted to some thousand million dollars; actually, Cuba shared the first place with Venezuela in American investments in Latin-America. The United States squeezed out 12 per cent net annual profits from its investments. Before the revolution, the influx of American capital into Cuba showed an average yearly increase of about 30 million dollars, which means that from the profits amounting to

an annual $ 120 million, 90 million were repatriated each year to the United States. This factor contributed considerably to the country's balance of payment difficulties and to the increase in the stock of international debts. In the wake of American capital investments, 90 per cent of the Cuban mining and energy industries came under American control. Rail and road transport, too, were in British and American hands.

With the given structure of the economy foreign trade has always been of prime importance; as regards its commodity pattern, exports were highly concentrated and imports most diversified. In the pre-revolutionary period exports amounted to about 35 per cent of GNP (computed according to the recommendations of UN). In the years before the revolution foreign trade was essentially stagnating. Both exports and imports were dominated by the United States.

An important place in the economy of Cuba was occupied by tourism. Here, too, American capital played a leading role. The finest hotels (such as the Havana Hilton, Capri, Riviera, etc.) and the most famous casinos in Havana and elsewhere in the country were owned by Americans. The huge income from tourism could not become a factor in developing the national economy, because the American tourist paid to the American owner of the hotel, restaurant or casino.

Cuba's balance of international payments was continually passive in spite of the surplus from trade and tourism. The main reasons were payments to foreign firms for international transport and forwarding, and profits and interest paid on foreign capital. In the years preceding the revolution, the flight of domestic capital had also an unfavourable effect on the Cuban balance of payments.

The economic concepts of the Cuban revolution

In the situation outlined above, the new revolutionary regime set the following objectives to economic policy:

— to carry out an agrarian reform and to increase diversification of agricultural production;

— to industrialize the economy;

— to abolish the monopolistic position of the United States in the country's foreign trade;

— to abolish the economic rule of foreign capital, to secure Cuban ownership of the national wealth;

— to do away with mass poverty and to raise the standard of living.

The leaders of the revolution intended to realize the economic objectives gradually. The most urgent one was the *agrarian reform*. This was realized in Cuba in two stages; in May 1959 and in 1963.

In the first stage of the reform the maximum size of land area to be left in individual or group ownership was set at 400 hectares. The large estates were nationalized. Nationalization was facilitated by the fact that the Cuban peasantry was not as land-hungry as the peasants in the European people's democracies had earlier been. Their productive activity resembled that of the European proletarians who worked as wage labourers. The agrarian reform started from the realistic assessment of class relations when setting so high the maximum area left in private ownership in the first stage.

In this first stage of the land reform, the right-wing reformists who supported the revolution had also to be reckoned with. They were for "a reform based on law and order". But the revolution transcended these "reformist" ideas already in the first stage since, by nationalizing about 45 to 50 per cent of the land area without compensation, it directed the development of the country towards socialist ownership relations. After the victory of the revolution this step was the first to show the true social and economic aspect of the Cuban revolution and thus necessarily brought the period of broad transitory unity to an end, starting a social and ideological polarization process. However, the character of the agrarian reform did not enable the United States openly to intervene because this would have brought them into conflict with a great number of Latin-American sympathizers.

Immediately after the victory, the Cuban revolution had to take measures to improve the population's standard of living. These measures were the following:

— The Urban Reform (Reform Urbana) fixed the rents (prior to the revolution more than 30—35 per cent of the income of working-class families was spent on rent) and secured housing for the working masses in the villas left by the fleeing foreign and domestic bourgeoisie.

— Low wages had to be regulated and the level of wages fixed. (After these measures the lowest Cuban wages reached 75—80 pesos per week; the earlier starvation wages were thus abolished. Fixing the level of wages served to strengthen the feeling of security among wage and salary earners.)

— By abolishing land rents and regulating the credit supply for peasant farms, the agrarian reform increased the income of those engaged in agriculture.

— The rates of major public services (electricity, telephone, etc.) were lowered.

— Several kinds of taxes were abolished.

— Education was made free of charge.

From the point of view of the class struggle these measures intensified the process of polarization, raising at the same time the confidence of the working masses in the revolution. From the economic point of view the measures led to certain difficulties since material production did not keep pace with the rate of the general increase in incomes.

After the victory of the revolution the process of nationalization started also in the Cuban industry. First foreign, then domestic capital was nationalized. In the nationalized industry the revolution intended to realize vast industrialization programs and to abolish thereby the monocultural economic structure at a quick rate.

As regards foreign trade, the dominating position of the US came to an end when in 1960 it one-sidedly put the sugar agreement out of force. The leading circles of the US hoped to paralyze in this manner the Cuban economy and also to stop the revolutionary process with its socialist aims.

In the first weeks after the revolution the gold and foreign exchange stocks of the country began to diminish rapidly and the smuggling of capital from the country began on a large scale. Under the conditions of the class struggle at that time and because of problems of internal policy, this could not be radically stopped. The first steps were undertaken in March 1959, when a conversion of foreign-exchange assets into peso was made compulsory. In 1960, the Cuban Foreign Trade Bank was founded, an important step in creating the monopoly of foreign trade. Also in 1960, the currency was changed by the withdrawal of the old dollar banknotes from circulation. (Up to 1960, the peso and the dollar had circulated parallelly.) In 1961 the Ministry of Foreign Trade was created and the state monopoly of foreign trade and foreign exchange transactions were introduced.

The era of the rule of the national bourgeoisie lasted only for a short time in the Cuban revolution; the development of the relation of forces between the classes acted towards accelerating the transition to socialist revolution. In the words of a progressive Costa-Rican politican, Moro *Valverde*, "In Cuba the national bourgeoisie proved incapable to participate in the solution of a substantial part of the tasks of the democratic and anti-imperialist revolution. In fact, when the anti-imperialist features of the revolution came to the fore, the bourgeoisie was against them. As a result, the revolution's rate of progress was accelerated" [1]. By 1961 the first stage of the revolution was essentially concluded because it had achieved its aims.*

Progress of the Cuban economy between 1961 and 1963

In 1961 an economic program was drawn up in Cuba which set as its aims the radical transformation of the structure of the economy by rapid industrialization of the country. Cuba wanted to break away from the mono-

* I rely here on Charles *Bettelheim*, an outstanding expert on the Cuban economy and revolution and on the periods established in his article "Cuba in 1965; economic results and perspectives" [2], as well as on Humberto Perez, who in his article; "The fundamental economic law of communist society and its form of appearance in Cuba" marked October 1960 as a milestone [3].

culture based on sugar production and wanted to replace imports within a short time by domestic products, i.e. to increase the self-sufficiency of the economy as an element of national independence.

But the conditions for comprehensive rapid industrialization were not yet ripe in Cuba. The economic concept of a drastic transformation of the production structure was irrealistic. As a result, several mistakes were made in economic policy and inconsiderate measures were taken between 1961 and 1963. This was aggravated by the unfavourable effect of certain non-economic factors.* In this period Cuban economy was characterized, in spite of diverse initiatives, by general signs of a relative stagnation.** Agricultural production was stagnating and even dropped in certain branches of cultivation, the economic efficiency of investments was low and the results of industrial development did not sufficiently show in the indexes of production and productivity.

The country had embarked on a wide industrialization program beyond its powers. In this manner forces were divided and this worked against an economic equilibrium. This development concept did not sufficiently reckon with the following facts:

— the material resources of the country were limited and the measures taken to increase the standard of living in the first years of the revolution tended to reduce the investment possibilities;

— the splitting up of investments is detrimental to their efficiency and small countries with a high population density and an open economy should concentrate their investments in the industries which can be most efficiently developed;

— the country had envisaged a radical reduction of imports while consumption expanded, demand for capital goods increased and domestic production could not yet meet the requirements;

— economic and technical specialists were lacking; the socialist system of economic control had not yet been developed and consolidated, the methods of planned economy had not yet been formulated.

Economic stagnation was caused mainly by the radical reduction in the area under sugar cane and in the production of sugar.*** At the time, due partly to the lack of experience, partly to marketing problems caused by the loss of

* In 1961—63 draughts devastated the country. In 1963 the cyclone Flora caused grave distructions. Into this period fall the establishment of the imperialist economic blockade, several grave incidents caused by counterrevolutionary terrorists in the Escambray mountains, as well as the intervention attempted at Playa Giron. The force of the Cuban revolution is testified by the fact that its political stability increased in spite of such difficulties.

** Economic stagnation was relative since the volume of industrial production (an important indicator of economic progress) was 22 per cent higher in 1962 and 29 per cent higher in 1963 than in 1958, while the number of unemployed decreased by about 300 000.

*** On an area of 130 000 hectares new cultures were planted instead of sugar cane.

the sugar market in the US, but mainly to psychological factors, an economic public opinion emerged which was "hostile to sugar". However, this situation prevailed but for a short time. In a speech held on August 10th, 1963. Fidel Castro revised the earlier concept and declared that sugar production will continue to provide a basis for the development of the Cuban economy.

Table 1

Sugar production in Cuba between 1961—1964

	1960/1961	1961/1962	1962/1963	1963/1964
Quantity in 1000 long tons (raw-sugar units)	6660	4739	3821	4329

Source: Czarnikow Ltd. London, Nov. 11th, 1965.

The marketing problem of sugar was eased by the important and long-term purchasing of the Soviet Union.

Because of the US blockade the country had to reconsider its position in the system of international division of labour and fall back on the socialist countries as the main suppliers. Relations with the socialist markets involved, however, several difficulties. First, the long distance led to a change in stock-keeping and warehousing policies. Even greater difficulties were caused by the fact that industrial technology and mechanical equipment had been built out in Cuba according to American standards and measurement units and their level corresponded to the American level of 1958—1959. Industrial goods from the socialist countries, with their different standards and measurements and their lagging in certain cases behind the American technology caused considerable difficulties in the Cuban economy. The Cuban leaders held some rather idealistic ideas about the socialist international division of labour, nor did they sufficiently know its practices.

All that led to distortions and tensions in the Cuban economy which may be summed up as follows:

— In the consumption sector a disproportion was created between the purchasing power and the fund of available commodities. As a remedy, strict rationing had to be introduced for the majority of consumer goods. Unspendable incomes and the stock of the population's saving deposits increased.

— A tension was created by the fact that the commodity production of agriculture did not grow at the expected rate. The reasons were that the own consumption of the peasantry increased; nor did agricultural production come up to expectations.

— There was a general and increased demand for investment goods which could not be met out of domestic accumulation.

— The manpower situation remained also unbalanced. Unemployment was high, mainly as regards the unskilled urban labour force. A surplus of labour arose in the servicing industries as a result of the decline in tourism. At the same time, there was a great shortage in skilled labour. There were tensions also in the regional distribution of manpower. At the time of the sugar campaign there was a general shortage of labour.

— The foreign trade balance of the country and the balance of payments showed a continued deficit which hindered the expansion of trade connections.

Late Ernesto Guevara, then Minister of Industry wrote concisely and with self-criticism about this era as follows: "We have learnt much from the mistakes of the first years, when we wanted to build everything at once, at one stroke. This led to the splitting up of forces and resources" ... "Of course, we do not underrate the results achieved up to now in transforming our industry according to the principles of socialism." [4]

The economic difficulties of Cuba were eased by the readiness of the socialist countries to help. To restore the equilibrium of the balance of payments, the socialist countries granted Cuba large credits. Within the framework of scientific and technical assistance programs, the socialist countries helped to ease the lack of cadres by sending out their specialists and by training young Cubans; they also assisted in a rational utilization of the experiences of the socialist countries.

In the period between 1961—1963 social developments gained in momentum. The most respected and qualified elements of the old villages turned against the revolution. This circumstance, as well as the changed international situation of Cuba necessitated to carry out the second agrarian reform. In this stage of the reform about 2 million hectares of land were nationalized and thus about 70 per cent of all land suitable for plant cultivation and animal husbandry came under state ownership. With the second land reform all holdings bigger than 67 hectares were nationalized, with compensation offered.*

As a result of the sweeping social transformation, by the end of 1963 95 per cent of industry and transportation, 100 per cent of foreign trade and 75 per cent of retail trade were brought under state ownership. The rapid transformation of society led to an increased centralization of the economy and the foundations of economic planning on a national scale were laid down.

When drawing the balance of the period examined, we must not forget the production results showing the positive aspects of economic development. The output of cement had attained, and that of nickel and cobalt even sur-

* In comparison to European standards, 67 hectares may seem high. It should, however, be taken into account that agricultural technology is lagging much behind the European standards. Compensation is only partial and monthly income from this source can not surpass 250 pesos.

passed by 30 per cent the highest level reached before the revolution. Thanks to the regular deliveries of the Soviet Union, daily production of the petroleum refineries also surpassed the highest level ever attained under capitalism. Steel production was launched in this period, paper output doubled and helped the cultural revolution going on in the country. After the wasteful management of resources by the Americans, geological prospecting discovered new deposits. Shipbuilding and fishing began to prosper essentially in this period.

The present stage of economic development in Cuba

The present stage of development may be said to have begun in 1964. It was ushered in by the critical evaluation of the mistakes made in 1961—63. In 1964, new results were attained in the Cuban economy; as compared to 1963, industrial production rose by 5 per cent. Sugar output reached 4.4 million tons, fishing and animal husbandry grew rapidly, state purchasing of agricultural produce increased, the organization of the economy also improved.

The main characteristic of economic policy in this new stage was the rehabilitation of sugar cane and of the industry relying on it; output targets were accordingly raised. Plans were made gradually to raise sugar production by 1970 to an annual capacity of 10 million tons, to develop the industries complementary to sugar cane production in order to process and utilize — contrary to previous practice — also the by-products of sugar cane.

The Soviet Union concluded with Cuba a long-term agreement under which sugar shipments are to increase gradually and to reach the yearly level of 5 million tons by 1970. Unfortunately China, which was the second greatest trade partner of Cuba, repudiated at the end of 1965 the agreement for the barter of rice and sugar, to which the Cuban partner had been attaching great expectations.*

In Cuba it was expected that sugar price — manipulated by America in the free market — cannot be held down for long even in the capitalist world and must, sooner or later, become stabilized on a higher level. Unfortunately, in 1965 and 1966 these expectations were not yet realized; the world-market price of sugar continued to decrease. Cuba's economic policy aims at concluding bi-lateral agreements also with the capitalist countries not participating in the economic blockade, in order to expand the marketing possibilities of sugar and thus increase exports to capitalist countries.

The revived interest in sugar production does, however, not mean a revert-

* Detailed information on this subject may be found in a speech by Fidel *Castro* on Jan. 2nd, 1966 and the following Chinese-Cuban press debate. China is undoubtedly the greatest potential purchaser of Cuban sugar since the increase of per capita sugar consumption in China still constitutes an unlimited reserve.

ing to monoculture. On the contrary, it serves its gradual abolition, only not by cutting down sugar production but by developing other production alternatives. An important step in this direction is to develop the complementary industries. In the Cuban economy sugar is now the means to create the accumulation necessary for further development.

Let us briefly examine the reserves available to Cuba for developing its sugar economy. Sugar cane is produced on an area of 1.35 million hectares. In sugar cane production the sugar yield of the different varieties is relatively low in comparison to the developed ones and the degree of mechanization is also low. According to the French expert René *Dumont* [5] by the application of modern techniques, 5.5 to 6 million tons of sugar could be produced in Cuba on an area of 700 000 hectares, and 800 000 hectares could yield 8 to 9 million tons of sugar. The planned output of 10 million tons could be achieved according to this estimate on an area of about one million hectares.

Let us examine the productivity of Cuban sugar production in comparison with other sugar-cane producing countries:

Table 2

Major productivity indicators of sugar production

Country	Sugar cane production per hectare, tons	Sugar content derived from one ton of sugar cane, kilograms	Sugar yield per hectare, tons
Mexico (1960—1961)	56.7	108	6.2
Puerto Rico (1961—1962)	68.7	120	8.2
USA (1961—1962)	63.9	91	5.8
Hawai (1961—1962)	204.1	114	23.3
Argentina (1961—1962)	39.5	80	3.2
Brazil (1961—1962)	—	60	—
Peru (1960—1961)	155.1	111	17.2
Taiwan (1960—1961)	80.6	129	10.4
Mauretania (1961—1962)	62.2	100	6.3
Australia (1961—1962)	64.4	139	8.9
Cuba (1964—1965)	45.0	120	5.4
(1970 planned)	52.0	120	6.3

Source: Industrial Development in Cuba. Study prepared by the UN Economic Commission for Latin-America (ECLA). See: Cuba Socialista, 1966, No. 56.

Sugar production in Cuba was based on extensive methods of cultivation, its relative level of development is not high. According to Dumont, a yield of 10 tons per hectare may be reached in Cuba. It should, however, be taken

into account that sugar cane is a perennial plant and the yield is extremely low in the first years. The period of highest yield begins when the plant has five years and lasts up to its 20th to 25th year of age. Development of species with a higher yield will thus take a rather lengthy time until then productivity can be increased only by complementary methods. There are, however, extensive reserves even in this respect, and so the estimate given for 1970 in the Table may be considered realistic. This also implies that in order to increase sugar production, in the following 3 or 4 years the area under sugar cane will still have to be increased in Cuba (according to estimates to 1.5 million hectares). An objective possibility exists for this, since there are still free lands in the country suited for agriculture, particularly with animal husbandry becoming more intensive.

Considerable results have been achieved by the research workers of the sugar industry in technically developing Cuban sugar production and the related industries.* The main road to developing sugar cane production is mechanization. Mechanization of the hardest work, the cutting of the cane, is a most difficult task to solve. Soviet specialists have designed and produced a sugar-cane harvester combine. However, with the present varieties and soil conditions its field of application is rather limited. To mechanize the cutting, first the producing cultures must be transformed since at present only about 8 per cent of the crop is suited for mechanical harvesting, and soil conditions must be rendered more even. As mentioned before, this will take some time.**

Climatic conditions in Cuba would enable the continuous production of sugar cane, which means that the intermittent character of sugar-cane cutting and sugar production could be done away with. The suitable productive species have already been established experimentally and this is of the utmost importance from the point of view of utilizing the possibilities of the sugar market, warehousing and employment.

Sugar cane production has by now become a national cause in the insular country. Voluntary workers participate in millions in cane-cutting.*** Ministers, Party leaders and workers take part side by side in the "zafra". This movement has an immense political mobilizig force and is, transitorily, also economically useful. No doubt, with time the work done by "voluntarios" will diminish in economic importance, but its political importance will remain.

In developing its sugar economy, Cuba has to make increased efforts in order to create further export possibilities in the markets of the socialist

* From waste of sugar cane 30 tons of high-quality paper were produced in 1963.

** In 1966, in mechanical cutting and loading waste amounted to 13—14 per cent, while in the hand-made processes it was only 2.7 per cent.

*** Prior to the revolution a considerable part of cane cutting was performed by seasonal workers from the surrounding islands, whose wages were even lower than those of the Cubans. This contributed to unemployment in Cuba and also explains why there is now a shortage of labour at the time of cane-cutting.

countries. This is a complicated problem mainly as regards the sugar beet producing countries (Czehoslovakia, Poland, Hungary, Rumania etc.) which export sugar produced beyond domestic requirements. With a certain specialization of agricultural production under the socialist international division of labour this difficulty may be somewhat eased though high transportation costs will constitute a limiting factor.

In the new stage of the country's economic development animal husbandry is another branch of outstanding importance. Animal husbandry has long-standing traditions in Cuba and livestock was further developed after the victory of the revolution, with the stock of cattle amounting at present already to 7 million. However, the stock is raised in the open air and composed of individual animals with a low meat and milk yield; the productivity of animal husbandry is accordingly low. The figures in Table 3 are from the ECLA report, already quoted.

Table 3

Average annual meat and milk yield per 100 cattle raised
(1961)

Country	Meat	Milk
	tons	
Austria	6.5	122
Belgium	7.4	143
Bulgaria	3.7	56
Czechoslovakia	4.1	90
Denmark	6.6	154
France	7.3	122
German Democratic Rep.	3.9	120
German Federal Rep.	7.3	154
Italy	5.9	97
USA	7.6	59
Australia	4.9	102
Argentina	4.6	36
New Zealand	3.9	84
Cuba	2.7	11

Source: Cuba Socialista, 1966. No. 56.

As illustrated by the statistical data, the backwardness of Cuba, due mainly to zootechnical reasons, is considerable in comparison to the results achieved by advanced animal husbandry. Therefore, a general program has been drawn up to improve the country's livestock; vaccination was introduced

and a veterinary network established.* In animal husbandry they intend to promote modern methods of keeping and to apply up-to-date methods of foraging. Potentially, Cuba has at its disposal green forage in every season of the year; the hydrocarbon basis can be created from the by-products of sugar production and the protein basis can be secured from sea fishes.

Both the domestic requirements of meat, milk and dairy products and the fact that there is a demand for Cuban meat in the West-European capitalist markets, call for the development of animal husbandry which is of high importance from the point of view of the balance of payments.

Table 4

Meat, milk and egg production

	1962	1963	1964	1965
Beef, thousand tons	196.4	221.7	269.2	295.4
Pork, thousand tons	—	13.3	16.5	18.4
Milk, million litres	219.4	217.4	226.0	234.2
Eggs, millions	174.0	191.0	298.0	920.3

Source: Commercio Exterior, 1966. No. 3.

Cuban meat production has considerably grown in spite of the fact that, in order to increase the livestock, slaughtering remained far below the annual increment in the stock. Also milk output has grown, but here the rate of growth was moderate and lagging behind expectations. Egg production increased rapidly, a fact which testifies to the productivity of the modern poultry plants.

In Cuba favourable conditions exist for fishing. Fish and crab are important sources of the Cuban diet; they are also important as industrial raw material and fodder basis. In view of the world-wide protein shortage, their exports can be also increased. By considerable craft imports, the state has enabled the fishing cooperatives to increase their fleet.

The plans to develop animal husbandry do not neglect the earlier concepts about a more diversified structure of agriculture. This is an important means to reduce imports, and helps also to do away with the one-sided eating habits based on rice and peas, and to develop an up-to-date diet more abundant in protein and vitamin.

* Important assistance is rendered here by the socialist countries. In addition to the help offered by the Soviet Union, Czechoslovakia and Bulgaria, substantial work has been done by the Hungarian veterinaries sent to Cuba. Cuban experts have a high opinion of their performances.

Realization of the plant production program was seriously hindered by the draught in 1965 and the cyclone Alma in 1966, which hit particularly the fruit-growing areas (Isla de Pinos).

Table 5

Plant production, based on sales of the major crops
(thousand tons)

Produce	1958	1959	1960	1961	1962	1963	1964	1965
Rice	207.1	282.8	306.5	212.8	206.8	204.3	123.0	—
Maize	148.1	193.2	213.9	197.8	80.0	88.0	35.5	—
Potatoes	94.3	70.5	82.9	89.6	87.9	85.8	73.3	83.5
Peas	10.0	13.8	37.1	59.5	29.1	17.5	13.3	—
Tomatoes	—	—	—	—	44.7	92.5	111.6	120.0

Source: Commercio Exterior, 1966. No. 3.

In plant production the new stage has not yet been reached. In fact, as regards the main products, 1964 witnessed even a setback. Though in Cuba soil and climatic conditions favour the production of a wide variety of plants and high yields could be achieved, actual yields are still very low (e.g. in maize 0.9—1.1 tons, in peas 650 kg, in potatoes 7—10 tons, in tomatoes 20—22 tons and in rice 1.2—2.0 tons per hectare). The yields could be increased even under conditions of extensive cultivation. Owing to the deficient knowledge of agricultural technology and to the hegemony of sugar cane, the Cuban peasantry cannot sufficiently utilize the production possibilities. The government wants to increase the production and import of fertilizers in order to raise yields. The Cuban Communist Party sent in 1966 some of its best young cadres to the agricultural areas to give an impetus with their revolutionary zeal to agricultural production and to lift it from its backward state. Price measures were also taken to promote agricultural production and they had some effect on the output of malanga and tomatoes. In 1966, the interest of producers in coffee was also increased by the regulation of coffee prices.

Tobacco is grown in Cuba on an area of 60 thousand hectares, mainly on small farms but with great competence. In 1961—63, there was, however, a decline both in quality and in quantity. The tobacco crop amounted to 51.5 thousand tons in 1962, 47.6 thousand in 1963, 43.8 thousand in 1964 and 43.3 thousand in 1965. This decline in tobacco production was due to market reasons such as the suspension of imports by the United States, the gradual ceasing of orders from Latin-America, as well as a strong reduction in cigar purchases by Spain. Today wider horizons are opening to Cuban tobacco thanks

to the purchases of the German Democratic Republic, Czechoslovakia, the Soviet Union and Spain. Orientation towards the European markets necessitates, however, the increase of the cultivation of fair and light tobacco varieties and this calls for a considerable transformation of the production pattern.

In the years following the victory of the revolution, tobacco production fell considerably. In 1964, an important program to increase production was started mainly in the province of Oriente. Increased production was justified by high domestic demand; for some time, even the needs of controlled consumption could be covered only by imports. An increased coffee production serves also the interest of foreign trade as European capitalist countries are ready to increase barter business based on Cuban coffee and lasting demand is manifesting itself also on the part of the socialist countries.

From the point of view of industrial plants, forestry should also be examined. At the beginning of this century some parts of Cuba were still covered by dense virgin forest and more than half of the total area of the country was covered with trees. As a result of capitalist colonial exploitation, part of the virgin forest was destroyed and its place often taken by fallow land. There is a diversified and growing demand for lumber in the country (lumber consumption amounted in 1961 to 18.8 million dollars and in 1965 already to 33.4 million dollars). To spare the existing stock, a major part of demand is being met by imports. Prior to the revolution forestry and care for trees were unknown. After the revolution the planting of trees has become a national movement. It was decided to raise the present 1.1 million hectares of forests to 2.9 million hectares at a quick rate, raising thus the share of forests in the total land area to 25 per cent. By the end of 1966, 300 million new trees were planted and by 1970 their number should reach the thousand million mark.

The import of agricultural machinery constitutes an important factor in the development of Cuban agriculture. Between 1961 and 1965 agricultural machines worth more than 140 million dollars were imported; more than half of them came from the Soviet Union. In 1965 imports of agricultural equipment amounted to nearly 30 million dollars.

For some time to come, the main task of economic development policy will be to raise the standards of sugar production, animal husbandry and plant cultivation. These activities will determine also the general ideas of industrial policy in the new stage.

1. Progress must be concentrated. Those industries should be developed primarily

— which are connected with sugar production and animal husbandry, by supplying either machinery or complementary materials (fertilizers);

— whose capital intensity is low and whose raw material requirements take into account domestic resources;

— which help to solve the general shortage of spare parts;

— which mitigate the pressing problem of supplying the population with articles of mass consumption;

— which enable the economy to fit increasingly into the pattern of the demand of the socialist and the capitalist international markets and thus help to solve the country's foreign-exchange problems.

The location of industry must be aimed at improving regional distribution, taking into account the differences in development level between the various provinces of the country and the natural endowments. The structural distortions due to the concentration of industry in and around Havana should be remedied.

2. Industrial activity should be organized as rationally as possibilities would permit. Therefore,

— a scientifically founded system of industrial organization and management should be created which is free of bureaucracy;

— performance norms should be widely introduced;

— technological discipline should be increased and quality improved;

— a broad rationalization programme should be carried out, aimed at bringing about a suitable level of productivity, an optimum employment of workers and engineers within the factories and the realization of production according to schedule.

Throughout the economy, a new wage system must be worked out, the existing prices revised, financial discipline and thrift increased.

These concepts show that medium-term planning in Cuba does not reckon with a substantial development of the metallurgical and engineering branches. This is an important change as against the earlier period when more than half of all industrial investment served these industries.* The investment projects already started in these fields will be completed, though at a slower pace than planned. A less rapid development of engineering is justified also by the fact that this branch requires most of direct and indirect material imports.**

The new stage in Cuban economic policy, initiated in 1964, brought with it, of course, also changes in foreign trade. Most characteristic of the change is that the problems affecting foreign trade are given greater emphasis in the country's economy. The chronic trade deficit which has persisted ever since the victory of the revolution is to be eliminated not by autarkic means such as forced industrialization or the transformation of agriculture from one

* Between 1959 and 1964 the share of metallurgy, engineering and mining in total industrial investment amounted to 50.2 per cent, but that of mining to only 4.6 per cent.

** In 1964, direct and indirect per unit import material inputs in engineering amounted to 41.3 per cent (!).

day to the other — as was the intention in the earlier stage — but by an increased exploitation of the traditional export possibilities of the Cuban economy.

Table 6

Cuba's foreign-trade balance
(million dollars)

Year	Exports f.o.b.	Imports c.i.f.	Balance
1959	638	742	—104
1960	618	638	— 20
1961	625	703	— 78
1962	521	759	—238
1963	544	867	—323
1964	714	1015	—301
1965	686	865	—179

Source: International Financial Statistics, Jan. 1967.

The efforts to restore the equilibrium by considerably restricting imports were unsuccessful and the passive balance became most pressing precisely in the years of heaviest industrialization when the imports of consumer goods were reduced to the greatest possible extent.

Table 7

Commodity pattern of Cuban imports

Products	1954/1958	1959/1962	1963/1964
Consumer goods	39	29	24
Raw materials	36	41	51
Investment goods	25	30	25
Total	100	100	100

Source: Cuba Socialista, 1966. No. 57.

The reduction of imports of consumer goods was achieved by the total abolition of the import of luxuries and severe cuts in the consumption of other imported goods. The latter often led to transitory disturbances, especially because the increase in the domestic production of the goods concerned did not compensate the reduction in imports. The industrialization drive acted mainly towards increased import of raw materials and intermediary goods.

According to the new concepts of economic progress, not only will exports increase but the import of consumer goods is also to grow. As a result of the change in industrialization policies, the relative weight of raw materials and intermediary goods will diminish. Between 1964 and 1970 the annual growth rate of exports will reach an average of 14 per cent. This is much higher than the average rate of economic growth.

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РАЗВИТИЕ ЭКОНОМИКИ КУБЫ ПОСЛЕ РЕВОЛЮЦИИ

И. ВИЗЕЛ

Автор в качестве вступления характеризует основные черты экономического положения страны в период до революции. Он выявляет причины экономической и общественной отсталости, последствия полуколониальной зависимости от США. Автор рисует картину замкнутого монокультурного развития сахарного хозяйства Кубы, его относительного преимущества по сравнению с монокультурным развитием открытого характера.

Период после революции подразделяется автором на три этапа.

Первый этап продолжался от победы революции до 1961 года. Для него было характерно осуществление аграрной реформы и национализации. Этот этап имел переходный характер и привел к значительной поляризации в политической и экономической жизни общества. Второй период продолжался до 1963 года. Для него характерно, что господствующими стали социалистические производственные отношения, осуществляется вторая аграрная реформа, превратившая отношения собственности уже и в сельском хозяйстве в социалистические. На хозяйственной жизни сказываются репрессивные мероприятия США, вместе с тем складывается тесное международное разделение труда с социалистическими странами. В экономической политике стали характерными быстрая диверсификация сельского хозяйства и форсированные темпы индустриализации. В этих целевых наметках не учитывались должным образом экономические условия и развитие международных экономических связей, поэтому были приняты и некоторые опрометчивые экономические меры. Развитию экономики серьезно препятствовало направленное против Кубы международное политическое давление, поощряемое американским капиталом, а также неблагоприятно складывавшиеся природные и климатические условия.

Третий период продолжается с конца 1963 года по сей день. Для этого периода характерна новая экономическая концепция. Ее суть заключается в том, что наряду с развитием сахарного хозяйства до высокого уровня должны развиваться, в первую очередь, сопряженные отрасли промышленности, а также должно быстро развиваться сельское хозяйство.

В статье при анализе отдельных этапов развития дается богатая статистическая информация. Автор в статье опирается на приобретенные им на месте впечатления и опыт.

REVIEWS

Á. SCHMIDT

SOME PROBLEMS CONCERNING THE CALCULATION OF SOCIALIST NATIONAL INCOME

I. The national income is not only a highly important problem of political economy and economic statistics, it's also one of the categories most debated. Economists — both socialist and non-socialist — generally agree that this synthetic indicator is most suited to express and characterize the economic performance of a country, its level of development and world standing. Economists also agree that national income expresses a net result of national performance, which remains after the deduction of inputs, use of means. There are, however, differing opinions and renewed debates about the exact definition, contents, and scope of the concept of national income and about the appropriate methods for its calculation. In the socialist countries, including Hungary, the debate on the national income has been revived and animated in recent years.

The reason the problem has become so topical and has taken a forefront position may be traced back to several circumstances. Socialist economists, planners and political economists have become aware of the increasing role of the services, particularly regarding examinations of living standards. Through these studies the idea of revising the national income concept which had neglected the services, emerged. With international comparisons becoming broader and increasingly far-reaching, it seemed desirable that this principal synthetic indicator should be unequivocally comparable between various countries, including capitalist and socialist ones as well. The improvement of planning the national economy raised the requirement that there be a closer harmony between the system of national balances and of national income as a central part of planning. The fact that theory has freed itself from the ties of dogmatism, undoubtedly created the atmosphere of free scientific discussion, necessary for raising and discussing the problem. Study of the question and the revival of debate have also been promoted by the experience gained regarding the methods applied in national income calculation abroad, and by the various forms of international scientific cooperation.

The Hungarian debate on the national income, which is still continuing, covers a number of problems. Only the most important of these can be discussed here. First the concept of national income must be examined, then some methodological problems regarding national income calculation will be dealt with, and finally — by somewhat broadening the scope of problems — we shall analyze the relations between national income and national wealth.

II. Regarding the *concept of the national income* the fundamental problem has been, indeed since the concept was born, to define the scope of activities

that can (and must, respectively) be taken into account when calculating national income. The main dispute which originally arose between certain bourgeois economists, and more recently divided socialist and bourgeois economists has been the question of whether the national income should include only material production or go beyond that point, particularly regarding the services. Marxist economists limited the concept of the national income to the net result of material production and, in addition, reduced the latter to a rather narrow sphere. Still, power production, transport of goods and trade could not, despite their servicing character, be excluded from the concept of material production. Bourgeois economists began to include the services in their national income calculations and interpreted them rather loosely, for they included the services offered by public institutions, as e.g. education, health, administration, defence, etc.

With the creation of the conditions mentioned in the introduction (increasing importance of services, spread of international comparisons, development of the system of national balances, etc.) conditions have become ripe for revising the concept and interpretation of the national income in the socialist countries. In Hungary debate on the concept of national income in both statistics and theoretical economics became intensive in the mid-fifties and again in the mid-sixties.

However, discussion on the concept of national income has longer traditions in Hungary. Definition and interpretation of the concept had already engaged the bourgeois economists of their time. *F. Fellner,* who was well known abroad and held in high esteem by men such as Stamp and Studensky, defined national income, relying on Smith's production conception, as the amount of newly produced economic goods and values remaining after the deduction of production costs (complementing it with the balance of foreign assets and liabilities). Later, the "limited market production" concept of *M. Matolcsy* and *I. Varga* [1] which was of Anglo-Saxon character and close to the concept used by Colin Clark, extended the definition of national income to cover not only material production but the services as well (including the public utilities, personal services, domestic work and the use of flats, excluding, however, public education, as well as internal and external security). *Neubauer* again broadened the scope of the concept by defining the national income as the aggregate of personal and corporate incomes.

Marxist theory and planning as well as statistical practice in Hungary acknowledged national income exclusively as the net value created in the sphere of material production. But to draw a sharp line determining material production met with difficulties. Therefore, a slow broadening of the scope of material production, in both statistics and planning, occurred and later some services, as e.g. laundries, dry cleaners and, quite in harmony with the Marxist interpretation, passenger transport were included. The mid-fifties' theoretical debate on the national income was conducted between *R. Horváth, I. Hetényi* and *Gy. Hajpál. Horváth* accepted the result of material goods production, complemented by productive services as the national income. *Hajpál,* however, advocated an inclusion of the majority of services, mainly in order to thoroughly reveal the standard of living, and to study the connections in the system of national balances. The theoretical discussions renewed in the mid-sixties, when *Mrs. K. Burger* classified the services as creating value under certain conditions and advocated the inclusion of those services which may be con-

sidered to be commodities, i.e. which are bought by the population. She was supported by *L. Drechsler* who further elaborated the principle and proposed the inclusion of non-commodity services also, considering their relation with living standards and foreign trade. *A. Csernok* thought it necessary to introduce an indicator covering all fields of the social division of labour. Referring to the Marxist theory of value, *K. Földes* and *Gy. Göncöl* opposed the extension of the concept, arguing that services — including those having a commodity character — do not create value, and therefore cannot be considered as national income.

The problem aroused increasing interest and was put on the agenda of the Theoretical Working Group of the Hungarian Socialist Workers' Party. After an overall and high-level discussion the Group took the standpoint that although it was desirable to leave the concept of national income as it had been interpreted up to then, the extended concept of the national income should also be elaborated, and trial-calculations made, to cover the services directly affecting material production and those satisfying the needs of the population as well (e.g. scientific research and personal services). So, in a sense, the services have won the battle — but the struggle has not yet been finally decided. This was clearly stated in a resolution taken by the Presidium of the Hungarian Academy of Sciences regarding the situation and development of economics over the last ten years. It said that there is still no unified standpoint on the contents of the national income [2, 3, 4].

The opinion expressed by the Theoretical Working Group and the resolution taken by the Academy has not closed the debate. The problem was most recently discussed by the Economic Committee of the Association for the Dissemination of Knowledge and this has initiated a new phase. In his introduction to the debate, *A. Csernok* pointed out that the present concept of national income is no longer suited to meet the requirements of a synthetic indicator in either statistics, analysis or planning. An indicator which excludes the services does not truly reflect reality as a whole. It disorientates and in practice leads to the underestimation and neglect of the services. The problem could not be solved by applying two synthetic indicators, i.e. the earlier national income and an extended one. On the contrary, it would lead to confusion, and one of them would certainly die out. Referring to the socialist economic law which stipulates the fullest satisfaction of needs, he proposed the inclusion of activities such as administration, defence and similar ones among the services since, he argued, these also satisfy needs. He emphasized that in a socialist society, which is free from exploitation, this concept is not opposed to either the Marxist theory of value or to the whole of Marx's conception.

In general, the participants in the discussion supported the idea advanced and advocated, among others, computing an index relying on the new extended concept, fitting it properly into the system of national balances, an approach to national income from the income side and the elaboration of long time series.* The idea was adopted by the chairman *I. Huszár*, First Deputy President of the Central Statistical Office. The present indicator of national income is inconsistent, of unclear contents, and does not render sufficient help in planning and directing the development of the economy. Therefore, the concept

* Elaboration of long time series of national income data has already begun at the Central Statistical Office [5].

must be extended, and a suitable indicator together with long time series should be computed. However, some objections to the extended concept were raised in the debate. Examples included the evaluation of sports, and household work which is not organized on a social scale but has substantial dimension in its entirety. And if the twin criteria of material production and social organization were dropped, how could any limit to extension be drawn? (It would, e.g. lead too far if all domestic activities of a service nature were to be included.) It's obvious that the extension of the national income concept was motivated more for practical than theoretical reasons.

Through the debates and as results of them, it has become obvious that the earlier indicator is no longer adequate and must be developed. The discussions have proved that the services should be considered in statistics, economic analysis and planning of the national income. There are two ways in which this might be done. One would be to introduce an extended indicator of national income covering all services to replace the present one. The other would be a system of indicators which would include a) the *material national income* similar to the present index (called in UN terminology Net Material Product), b) one including purchased and free services, which would be called the *extended national income* and c) a third one which would include the activities assuring the general conditions for social existence, such as administration, defence, political sphere, etc. It could be termed *national performance*. Of course, formulation of the system of indicators is problematic and, e.g. the handling of domestic work, the use of flats and similar items requires closer examination. Undoubtedly, a disadvantage of such a system is the lack of a unified and solitary concept, but it would have the decided advantage of a deeper analysis of development through the confrontation of these indexes and the analysis of their relative proportions and dynamic development as well as the structure and progress of the national economy. The broadest concept, that of national performance, can be organically fitted into the system of national balances and can be linked to the development of aggregate individual (personal) monetary incomes. However, the advantages of developing the national income indicator in the above manner shouldn't dim the fact that there is little chance for arriving at theoretical conclusions from the discussions since arguments in favour of the extension are debatable and, indeed, are still being debated. At most, it may be stated that the theoretical debate can not yet be considered finished.

III. In addition to the questions connected with the definition of national income, several problems emerge in the field of *methodology, and calculation methods*. These to an extent are different in capitalist and social countries, particularly regarding prices. In the majority of socialist countries, including Hungary, until most recently, prices in the price system in use did not, and do not correspond to input relations. They deviated and still deviate from value proportions. The prices of agricultural products and, generally, of means of production were and in some countries, still are relatively lower than those of industrial, particularly consumer goods. In national income calculations this distorted the contribution of the individual branches. According to *A. Csernok*, in the 1963 national income industry's share was more than 60 per cent at current prices and agriculture's only 19. At input-proportionate prices on the other hand, industry's contribution would fall to 38 per cent while agriculture would rise to 35 per cent. These proportions give a more realistic

picture, but the application of input-proportionate prices can also distort in the opposite direction. Regarding the relation of agriculture to industry, the proportions are decisively determined by the ratio between individual incomes which are, however, controlled by considerations of income policy, and cannot be thus taken as objectively given. Should we express the live labour proportions not with incomes but with employment proportions — taking into account the differences in actual labour inputs as well — the agriculture's share would be reduced from the above 35 per cent to about 28—30%. The ratio obtained as a "physical" expression of income proportions fits between the percentage share calculated at the current prices of the year in question, and that calculated in an ideal price system of input-proportionate prices, though it is closer to the latter [6].

This raises the question of the importance that may be attributed to these substantially differing proportions. It seems irrefutable that the contributions of industry and agriculture to the creation of national income were distorted as calculated at current prices in favour of industry and did not reflect the real situation. But the debate also showed misgivings regarding the calculations at input-proportionate prices, particularly in connection with dynamic calculations where it was feared that they do not truly reflect reality and also that price supporting refunds, subsidies, etc., — which, indeed, amount to a re-distribution of national income — interfere with computing realistic proportions. Still, this method of calculations provides more reliable orientation regarding orders of magnitude, though a revision, correction and refining of the computations cannot be excluded. (Such a correction was the aim of the above-mentioned "physical" conversion.)

As is known, the calculation of national income can be done in two ways, by the objective method summarizing the net yields of the individual branches of the economy and by the subjective one, which adds up actual incomes. Statistical practice in socialist countries generally preferred the objective method. An extension of the national income concept or the introduction of a system of indicators including national performance would presumably give an increased role to the subjective method. In addition, the results arrived at with the objective method could be confronted with those of the subjective one, i.e. with the sum of personal and public incomes. In all likelihood, the application of the subjective method would raise a multitude of methodological problems (definition of particular income concepts, the consistent enforcement of the net income principle, disclosure and elimination of double accounting, etc.) but it may also be assumed that attempts at solution would contribute to the development of socialist national income calculation methodology.

Problems of international comparison of the national income must also be scrutinized. Comparability among the socialist countries was ensured by the unified concept and calculation method, as well as by the organized cooperation of the CMEA countries; but a comparison with capitalist countries is difficult, because of differences in concept and deviations in calculation methods. *A. Csernok* pointed out that the System of National Accounts applied in the capitalist countries, although including the services, accounts national income at factor costs, i.e. net of indirect taxes, while in socialist countries the majority of services are excluded but turnover tax is included. For proper comparison both deviations must be eliminated. Hungary's national income computed in the SNA system is not higher but about 7 per cent lower

than it would be by the usual method, if both deviations are eliminated. It should be mentioned that *É. Ehrlich and F. Jánossy* estimated national income in 1960, using their own method, to be around 400 dollars per capita. Another calculation, which applied an exchange rate formulated with the aid of the basket-method, arrived at 437 dollars for the same year. In view of the difficulties encountered in such computations, these deviations are not significant and the results may be considered as coinciding.*

The importance of calculations aimed at an international comparison of national income is not in data which are accurate to the cent nor is it in creating an internationally uniform methodology to be compulsorily applied. The results are in fact orders of magnitude. They are primarily for approximative information and should be interpreted as such. However important a synthetic indicator national income or per capita national income may be, it still does not tell everything about the economic situation of a country, much less about the social and political situation so important from the point of view of national welfare and living standards. Nevertheless, international comparisons and calculations aiming at them may play an important role in the approach between different national methods, in improving methodologies and in recognizing and analyzing new problems.

IV. While the concept and computation of national income has been challanging the economists and statisticians of most countries for several decades, the other synthetic indicator, that of *national wealth*, has received much less attention. In comparison to the always topical and even fashionable national income problem, national wealth seems to be, at least in the socialist countries, a neglected and almost obsolete issue. However, a similar number of problems exists in connection with the concept and calculation of national wealth, too.

It would certainly be timely to devote more attention to the problems of national wealth in socialist countries, and in international dimensions, as well, partly in connection with the proposed and justified extension and development of the national income concept. The size and composition of a country's national wealth, the size of the per capita national wealth and its dynamic development are sufficiently interesting in themselves. But national wealth confronted with national income deserves particular attention. National income derives from the utilization of national wealth and an increase in national wealth originates from national income. The relation between national wealth and national income — the national capital/output ratio — is of prime importance from the point of view of efficient utilization of national wealth. But the relation mentioned above should be given similar attention from the point of view of economic growth, especially from that of the direction, extent and rate of growth. Thus, an extensive disclosure both of the efficiency of socialist economy and of the growth process of the economy require that the problems of national wealth should be regularly examined in connection with national income.

In the latter series of questions rather interesting problems may emerge, precisely in connection with the extension of the concept of national income. If, namely, the concept of national income were extended to cover the services

* For the Hungarian works dealing with the problem of the international comparison of national income see [7—10].

offered by public bodies, research, education, etc. would also be included in the national income. If we accept the standpoint of research and education economics these services should not be considered as consumption but as investment ("accumulation of knowledge"). The result of these activities should also be taken into account regarding national wealth. This would, of course, carry us rather far from the material concept of national wealth. However, in the present stage of social development, according to experience gained, which can be materially evaluated (e.g. the effects of research in increasing the national income) the framework of this concept seems to have become as limited as the present concept of national income. At any rate the concept of national wealth would require investigation and, possibly, extension. Indeed, the introduction of a system of multiple indexes would be also conceivable. It may be assumed that scientific research into the problems mentioned, though still unsurveyable in their entirety, would involve not only difficulties and pitfalls, but provide considerable advantages from both the theoretical and practical points of view as well.

V. An up-to-date definition of the concept of national income, rendering more reliable the national income calculation and applying the most suitable price system for this purpose are tasks posing themselves before economists and statisticians of almost all socialist — and non-socialist — countries, and these can be successfully solved only by regular scientific research and international cooperation. The problems are important and topical, they are awaiting investigation and solution or, at least, an approach to solution. Examination conditions in both individual socialist countries and in international dimensions are suitable, so, it is not too risky to hope for further progress in research. However, it cannot be expected that all research workers either here or in other countries will simultaneously and fully agree on a uniform concept and a common national income methodology, much less on the numerical result of such calculations. Success in international dimensions is even less expected. But, perhaps, economists, statisticians and planners with different ideas will get to understand each other better, and understanding is the first step towards consensus.

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ZS. HAVAS

THE ROLE OF THE INSTITUTE FOR ECONOMIC AND MARKET RESEARCH UNDER THE NEW SYSTEM OF ECONOMIC MANAGEMENT

The Institute for Economic and Market Research was formed on 1st January 1964. Following its formation it took over and expanded the activities of its predecessor, the Department for Economic and Market Research of the Hungarian Chamber of Commerce. This department had been functioning since 1957, so we can say that the Institute is now eleven years old.

Originally, the Institute studied merely the situation of and fluctuations in Hungary's foreign markets, and supplied information and analyses in these respects. Later, analyses became more and more complex and tended to study the foreign market situation from the viewpoint of Hungary's economic conditions (export capacity and import demands). This research provided much valuable information indicating the necessity of a reform of Hungary's economic management. The Institute played an active role in working out the foreign trade aspects of the reform.

Prior to the reform the purpose of the Institute was primarily to meet the information and research requirements of the central directive bodies (Ministry of Foreign Trade, National Planning Office, the Ministry of Finances, etc.). It also provided regular information and, in special cases, methodological advice for specialized foreign trading companies. The number of domestic producers and trading companies requesting the Institute's publication was infinitesimal.

In the course of preparations for the economic reform it became clear that demands on the Institute's work would multiply and draw much greater interest than in the past.

It is assumed that the essence of the reform of economic management in Hungary is known to the reader, and for this reason only those elements which have caused a sudden increase in demand for information on foreign markets by economic units will be outlined.

The reform has decentralized the spheres of authority, lowering the levels on which decisions could be made. From the 1st of January 1968 the economic units are not obliged to fulfil a portion of the central economic plan assigned to them, but are guided by the profit motive. They themselves determine the

structure of their output, the volume of input needed, the relations of supply and realization, etc. The incentive to achieve maximum profits stimulates them to flexible adaptability to market requirements (domestic and foreign markets) regarding quality, style and technical characteristics, as well as to carefully select their sources of supply and the markets. This needs broad-scale and well-founded information.

For the enterprises involved in export and import, the reform has brought about a more significant change than in general.

Reference has been already made to the fact that in an economy based on planned directives an artificially ensured market was created for producers, in that their products were purchased at fixed prices by specialized foreign trading companies operating on a completely independent budget. Therefore, what actually happened was that the producer realized its export production before the product itself was actually sold abroad. So he was indifferent to whether or not the foreign trading company could actually sell the product abroad, and if so, at what price and under what conditions. Similarly, the producers were also indifferent to the market and conditions under which the foreign trade company was able to purchase the imports they deemed necessary, since they received these imports at centrally determined prices. As an obvious conclusion, the producer had no interest in learning about the requirements and possibilities of the foreign markets. This interest was limited exclusively to the foreign trade organizations themselves.

Now the situation has fundamentally changed. Though the majority of the specialized foreign trading companies still exist, apart from an infinitesimal minority they no longer work on their own account but as commissioned agencies for producers, or on contract. Under these conditions the results of selling and purchasing abroad have a direct effect on the producers, and influence the trend of their profits. (They have an even more direct effect in the case of those large-scale producers which were given the right to handle their own exports and imports.)

Naturally, this has resulted in an increased demand for information on selling and purchasing conditions abroad on the part of the multitude of home producers. (Foreign trade is a highly important aspect of the Hungarian economy. There is hardly any industrial producing company which is not interested in exports or imports.) It has become a general practice that the contracts between producers and foreign trading companies contain the stipulation that they receive regular information about foreign markets. It is up to them whether or not to set up their own market research departments. Experience so far has shown that they make use of the services offered by the Institute for Economic and Market Research, which specializes itself in this field.

As a result, the sphere of activities and functions of the Institute for Economic and Market Research have been greatly expanded. Scientific economic research for foreign trade will continue to be a basic activity. At the same time, the information network has been broadened and a marketing group set up to meet the enterprises' specialized requirements in market research. Below a brief review of the threefold activities mentioned above will be given.

Research field

The sphere of activities has many branches. Generally speaking, it could be characterized by saying that it aids in the preparation for the macro-economic decisions relating to foreign trade. The topics for research are chosen partially by high-level government bodies, though the majority are based on the Institute's decisions, which take the researchers' special interests into consideration as well. The elaboration of certain topics is done by the Institute in cooperation with other bodies.

Among the research projects carried out at the request of government bodies, it is worthwhile mentioning the Institute's participation in outlining Hungary's long range (15 to 20 year) economic development plan. In this work the Institute participates primarily in studying the tendencies of the international division of labour and forecasting the expected development of foreign markets, considering Hungary's real economic potential. Working out a model of desirable international economic cooperation and its main tendencies in certain aspects, is a similar task.

A certain portion of our research work is sectoral. This sectoral work aims to investigate the export development possibilities of individual industrial or agricultural branches. It also includes a critical review of development conceptions which are either actually valid or in a preparatory stage, from the aspect of foreign trade. Factors hindering export increase are also taken into consideration and conclusions regarding the measures which, in our opinion, should be taken, are subsequently drawn.

The other aim of our research is to analyze the expected development of our markets, the possibilities for extending existing relations, and the factors which can hinder them. From this point of view we have most recently been paying increasing attention to the socialist countries which account for the largest proportion of our foreign trade turnover. We also have the tasks of analyzing the efficiency and perspectives of Hungary's trade with the EEC countries and working out suitable trade policies with the developing countries.

Perhaps it will not be immodest to say that our research workers have carried out pioneering theoretical work regarding the application of modern mathematical methods to foreign trade. We have completed, and are working on studies defining the optimal structure by markets and commodities of total foreign trade, and also the optimal structure by markets and commodities of individual commodity groups.

The activities of the Institute have recently been enlarged by short-term foreign trade forecasting. Aside from working out the methods, we intend to regularly issue an annual prognosis of foreign trade as a whole, and by main commodity groups.

Information activity

The Institute publishes a series of periodicals at the service of those requiring them. As a result of the points mentioned above, interest in these periodicals has grown tremendously over the past year and a half, and the majority of subscribers are bodies involved in production. These periodicals are diverse. There is a daily news service in which topical items from foreign

news agencies and foreign correspondents are published. These include stock market quotations. Other publications appear monthly and inform the reader of general foreign market conditions, the fluctuations in the most important commodity markets, changes in foreign exchange conditions, development of East-West trade, observable price trends, etc., etc. At larger intervals those interested are informed about the standing of European integrations, and the effects produced by the restrictions they impose on Hungary. An annual report on business cycles is also published, in which the changes in the economic conditions of our partners, including the effects of these changes on Hungary's foreign trade position, are dealt with.

In certain cases, if the information department receives a commission, interested parties are supplied with brief comprehensive studies of individual countries or individual subjects. Moreover, in many cases free consultations with foreign trade and industrial experts are held.

Marketing studies

Despite the fact that the foreign trade companies are obliged to supply their domestic contracting partners with information, and the latter also have the possibility to set up their own market research apparatus, they frequently call upon the Institute with orders for studies on special subjects. These orders are extremely varied.

Many simply request wide-scale surveys concerning the range of their products, while others require regular information (weekly, fortnightly, monthly) on certain groups of their products, which also include a certain evaluation. Traditional methods are still adequate when orders are for market studies regarding the possibilities of placing the product in question on the market — including its technical, qualitative and usual trade conditions, as well as the most expedient sale channels.

More complex methods are needed, however, when the ordering party requires information on perspective market conditions for finished products to be turned out by an investment project still on the planning board. Backing the decision for an investment project from the market point of view, is in many cases rather complicated, and a great responsibility. Therefore, it requires a complex and circumspect examination, and the application of diversified methods.

Several producers and foreign companies have in certain cases jointly commissioned the Institute to define the optimal combination of their product range and their distribution according to various markets. We meet their needs by using the method of linear programming.

Our methods vary, depending on the subjects concerned. A small minority of them can be solved through desk research. However, the majority of these problems require the cooperation of a large group of experts, and an even larger number of personal consultations. The specifically questionnaire method has not yet been used, not because of a theoretical opposition, but for practical reasons. The majority of orders concern the assessment of market conditions for means of production, where, in our opinion, broad-scale questionnaires are not practical.

Experience gained so far has shown that a large part of the information can be obtained within the country, or by contacting representatives of foreign trade organs (commercial consultative offices) stationed abroad, and our correspondents in certain socialist countries. At the same time, regarding certain topics, it becomes absolutely necessary for the Institute's co-workers to gain personal experience in the market concerned. We also intend to make use, if necessary and costs are not exorbitant, of the services of specialized foreign institutes in specified cases. We, too, are ready to accept orders from abroad, provided they are of a nature in which we can supply our partners with meritable and reliable information.

These orders are handled with the same discretion as those received from domestic clients. They are considered strict trade secrets, and are available only to the person or organization ordering them.

At the moment, the marketing apparatus of the Institute is small, but the marketing activities are backed by a group of versatile economists and, last but not least, by a library-documentation-news service, supporting the activities of the Institute as a whole.

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At present the Institute for Economic and Market Research has a staff of 66. More than half are economists. It intends to expand activities, particularly regarding information services, both at home and abroad. Expansion is limited mainly by the relatively low number of well trained economists with a satisfactory knowledge of foreign languages, considering the great demand for them.

BOOK REVIEWS

BERÉNYI, J., *Foglalkoztatottság és életszínvonal.* (Employment and living standards.) Budapest, 1967. Kossuth Könyvkiadó. pp. 236.

The author begins his analysis with an examination of whether labour keeps its commodity character under socialism and if so, to what extent.

His viewpoint is that — in view of the ownership and distribution relations — labour in a socialist social system is no commodity. But "what happens to labour in the course of production affects the fields of distribution and turnover, that is, through means like money and commodities (services) it affects exchange, consumption and conversely . . . Therefore, the actions of society in all fields react on movements of labour completely irrespective of whether society wants it or not." (26. p.) And with these words Berényi creates the bridge to the factors influencing movements of labour, which he thoroughly examines in the third chapter of his book.

But before beginning his examination of factors influencing labour movements, in the second chapter he gives a detailed discussion of problems concerning *employment*, from the aspects of both the demand for and supply of labour. The method of his approach to the problem differs from what is usually found in Hungarian literature of this type in two aspects. One of them is the classification of the sources of labour in a way completely differing from statistical practice here. The other is the incorporation of the elements of labour-supply and demand into a clearly arranged system of equations.

The author pays particular attention to the factors determining the employment of women, and reviews the related demographic development problems. He deals with the phenomena of overemployment in a separate point. He states that a socially desirable level of employment can be ensured through the well co-ordinated development of vocational training, investments, and material incentives. This is a starting point for an examination of the motives of movements of labour (migration), and means of influencing it.

When discussing the motives of labour mobility Berényi places an accent on four factors. They include, 1. Differentiation in incomes according to work, 2. Differences in family earnings, 3. Regional differentiation, 4. Working conditions.

Dealing with the differentiation of income according to work done, he points out three separate phases. 1. When the level of the forces of production is comparatively low, minimum living standards must be ensured for the entire population and thus it becomes impossible to expand the wage scale. 2. With the development of the forces of production a parallel expansion of the wage scale can take place. 3. At the time when the forces of production are comparatively highly developed, the role of wage differentiation as a labour incentive again declines. The author believes that a high level of social consciousness

is a condition for and characteristic of this last stage.

After a concrete statistical analysis of wage relations that have existed in Hungary over the past few years he comes to the conclusion that, 1. It is definitely correct that work actually done and not school qualification be the determining factor in deciding wage levels, 2. However, it is not correct that many people work in fields below their qualification, while others have not acquired the qualification needed for their jobs.

In examining the effects of the size of the family on per capita income he points out that the seeking of employment by the mother is substantially influenced — apart from the size of the family — by the expected per capita increase in income, and in this connection, by her qualification. Reviewing the possible ways of counterbalancing the effects of the size of the family on income relations, the author takes a stand in favour of social contributions to the support of children, in proportion with the burdens, as determined by the number of children and their respective ages. It must also be taken into consideration that these contributions should not be detrimental to the willingness to seek employment.

Regarding territorial differences as reasons for labour mobility the author considers wage differences to be less important than the fact that employment possibilities in individual regions vary, and — particularly in the case of young people — that the cultural level also varies by different regions.

Examining the motives for labour mobility he considers, what he calls the "marginal working place" to be of significant importance. This means that there are work places, which — in comparison to their output — operate at relatively high costs. From the point of view of the national economy, there is a limit beyond which it becomes uneconomical to maintain the establishment. This is the marginal working place, and the expenses needed for maintaining it are called marginal costs. From the point of view of the employee, however, we may consider a marginal working place the one where working conditions are such that he is still willing to work in the given place. The wage for which the employee is still willing to work in this place is, from his point of view, a marginal wage.

It is in the public interest, the author stresses, that there should be no contradiction between living standards and working conditions. This is a problem which has been rather neglected in the past, despite the fact that the increase in marginal working places, through an unhealthy narrowing of wage differences, has decidedly detrimental economic effects.

The author stresses that the reactions of the different strata to the motives of labour mobility demand a differentiated examination. He believes that in a large portion of the cases the development of reactions to the various motives can be assessed by means known as reagency lines, and this facilitates choice between the different variants. The different means of influence produce effects of differing extent in the fields where applied, and their efficiency can be appraised on the basis of the size and speed of the effect produced.

In the last chapter the author deals with the efficiency of employment. He raises the following idea: the efficiency of a working place depends partially on its net output, and partially on maintenance costs. Wages and other wage-like costs account for a significant part of these maintenance costs. As a result, when productivity remains on the same level in a given working place, the increase of living standards in itself is detrimental to the efficiency of the working place. As a matter of fact, knowing the trend of wage costs and productivity, we can define in advance the point where a given working place will become uneconomical.

This makes it possible to assess the time when the working place becomes obso-

lete, already at the moment it is established, and in this way a firmer basis can be created for estimating the term of technical obsolescence. J. KOVÁCS

BIKICS, I., BOD, P. *et al.*, *Döntési modellek.* (Decision models.) Budapest, 1967. Közgazdasági és Jogi Könyvkiadó. pp. 210. Marx Károly Közgazdaságtudományi Egyetem Közleményei, 13. (Publications of the Karl Marx University of Economics No. 13.)

Optimal decisions — or at least decisions superior to those based on the traditional methods — will or may be required at all levels of the economic structure, from economy-wide optimization problems down to improving the decisions taken at plant level. The volume prepared by a research team in the Department of Mathematics of the Karl Marx University of Economics, though not covering the whole wide range, comprises a good many "lines", from industry-level programming to the optimal solution of inventory problems.

With the exception of the first study by B. Krekó — which proposes a method for reducing the computer requirements of large-scale linear programming problems, and is thus of a mathematical character in the stricter sense of the word — the studies describe individual economic cases, stating both diagnosis and therapy. It should perhaps be remarked that in addition to the description of the constraint systems, the models and the computation procedures, it would be extremely interesting to read about the methodology of problem setting, the analysis of the concrete initial economic situation and the fitting of the results obtained into the latter. For example, the selection of the constraints is not always as easy as in the case of the second study by J. Varga which deals with the problem of afforestation. In this problem the stock of individual sapling species as well as the funds available for afforestation are limited. In addition, the size of the individual strips of land and their agro-chemical relations, etc. must be considered. The choice may lie between the various tree species and the various methods of afforestation; the objective function may be the maximization of either the total timber yield or its foreign exchange content.

The third study (by S. Gáspár) solves a transportation problem. A certain amount of homogeneous material has to be transported from some place (in the general formulation of the problem: from several places) by definite routes, with a given park of trucks at minimum cost.

Studies IV (by G. Denkinger), VI and VII (by E. Megyeri, Gy. Meszéna and J. Szép) are dealing with inventory problems. An adequate treatment of the problem would probably be quite impossible on the basis of a purely deterministic approach which neglects the factors of uncertainty. E.g. it would often be irrealistic to build up stocks of some commodity that would meet the demand in a given territory with absolute certainty. The concrete conditions of problem VII enable the programers to estimate, among others, also the costs arising from a possible shortage of goods and to endeavour to minimize the expected value of total supply costs.

The models mentioned up to now have been dealing with problems where the variables may in principle assume any value within the limits set by the constraints. There are, however, problems where we know of the variables in advance that they can take only certain definite values. Such a problem is treated by F. Forgó and Gy. Komoróczy in study No. V. A decision must be made on the optimum allocation of a given investment quota among a certain number of possible investment projects. The planners' freedom of action is restricted here to either accepting or dismissing some investment proposal. It is well known that in the case of these so-called integer programming problems the possibilities of computation techniques lag behind the theoretically

elaborated possibilities. The method of arriving at an acceptable approximate solution by the simplest possible means is therefore highly instructive.

Study No. VIII (by I. Bikics, Gy. Meszéna and J. Szép) deals with the determination of an optimal location program for the distribution network of petroleum products.

All this goes to show to what extent programmers have to go into tiny details and how varying the conditions are under which they have to apply the apparatus of linear programming — indeed, how complicated the apparatus itself becomes in order to fit satisfactorily all conditions of application. This supports the conclusion of the author of the last paper, P. Bod — drawn mainly from his experiences gained in the course of programming for the food industry — that there does not seem to exist any realistic possibility of detailed economy-wide planning in physical terms even with the aid of the available mathematical methods. These methods do, accordingly, not substitute the mechanism of economic control and management but constitute a part of the latter which helps to render more objective the decisions to be taken at the various levels.

GY. TÉNYI

GÖNCZI I.—KÁDÁR B.—VADÁSZ L.: *Mezőgazdasági vállalatok és üzemek gazdaságtana.* (The economics of agricultural enterprises and plants.) Budapest 1967. Közgazdasági és Jogi Könyvkiadó. pp. 552.

With this book by university professor Iván Gönczi and his co-authors, agrarian economic literature has again become richer, particularly regarding questions of farm management. The questions raised and answered as well as the structural make-up of the book reflect the fact that it has been based on the results of ten years of systematic research. This can be seen in a number of aspects. As against the textbooks on socialist farm management published so far, it constitutes a new approach to, and interpretation of farm organization. The authors wish to raise and solve the problems of farm organization in accordance with the requirements of economic laws. More concretely, this appears in their attempt to expound a system of farm management following the process of reproduction and based on a logically uniform system, on the one hand and, on the other, they try to give an economic evaluation of the possible variations in production organization. As the authors express it, "In our book we wish more consistently to endorse the primate role of economic approach and the enlargement of enterpreneurial approaching the structure of the material, in the ratio of the individual themes to each other, and in approaching the problems of production organization from the economic point of view" (p. 11.). The intentions of the authors, as expressed here made it possible, and at the same time necessary that the questions raised by the new system of economic management concerning enterprises be included in the book in detail.

In general, the book successfully links the theoretical questions with the practical requirements of farm management. On almost all theoretical questions we may find illustrations taken from practice, by which they are derived and characterized. The wide-scale processing of literature found in the book is also noteworthy. The authors freely draw upon foreign works, including those published in capitalist countries as well as those in socialist ones. Within limits, they give room to the various schools of thought, briefly review differing views, commenting them from their own standpoint.

The book, as its title indicates, really deals with two large themes, (farm) management in general and the economics and organization of production within the farms. Questions regarding labour economics and work organization as well as those regarding management are touched upon by the authors to a minimum extent

only, within the two parts mentioned above. A reference by the authors indicates that they were forced into this compromise by the limited size of the book.

The part dealing with farm management in general is the more interesting one and we find in it most of the new thoughts and progress. In this respect the introduction and broad analysis of the enterprises, farm management, stimulation, material incentives, the development of production patterns, the utilization of categories like costs and income in management, the efficiency of input and investment, amortization policies, and the informational and methodological conditions needed for management decisions deserve particular attention. The chapters dealing with these problems also contain the latest developments in business management. By studying the first part one can become acquainted with the economic content of farm production, its incentives, and the application of the various means of economic policy under the concrete conditions of individual enterprises. The latter means the setting of enterprise production targets, revealing the means and possible ways of achieving them, and selecting the most favourable ones from among them.

The authors interpret profitability and the utilization in management of such indicators as production costs and income according to the requirements of material interests. Finally, they come to the conclusion, which I also deem as correct; namely, that the material interests of enterprises are in the case of state farms, related to the maximum possible net income, while in cooperative farms to the maximum possible per capita gross income. But it must be added that the authors do not interpret this in a vulgar way. They stress namely, the fact that aside from the sums necessary to maintain an acceptable wage level of cooperative members, the development of production demands a definite and not an arbitrary amount of net income. The cooperative management must deliberately strive to achieve this, for if they do not, they will be confronted with the justified personal and collective (enterprise) material interests of the cooperative members.

The authors believe that under the new system of economic management the increased independence of state-owned, and cooperative farms is mainly due to the fact that from now on they themselves can choose what, and how much they wish to produce. The book points out that they cannot act arbitrarily, and one of its main aims is to show how this can and must be based on the enterprises' material interests. The other main aim is to show how production procedures and methods, — that is the "hows" of production — can and must be evaluated from the economic point of view. In both respects the expounding of the essence of the problems is interesting and comprehensive, as is the review of the principles and methods for solving them in the course of production.

The second portion of the book, entitled "Economics and Organization of Farm Production" discusses similar problems to those published in business management books so far. Among other themes that are discussed in this part are the equipping of agricultural territory, the economy of hauling power, and the organization of the branches of horticulture and animal husbandry. The authors illustrate the theories of organization partly on the basis of their own research, and in a number of cases, they draw new conclusions which can be carried out in practice, and partly they process all literature that appeared up to the time their book was published. Regarding the themes involved and the depth of content, this is the most up-to-date farm management textbook published in Hungary so far. It has been a successful experiment in establishing a new type of farm management, farm economics in the true sense of the word. It is worth while looking through, and studying the book, since it provides a high-level interpretation of farm management both from the theoretical and the practical points of view. F. VÁGI

FAZEKAS B., *Mezőgazdaságunk a felszabadulás után*. (Hungarian agriculture since the liberation in 1945.) Budapest, 1967. Mezőgazdasági Kiadó. pp. 391.

In an analytical study of *farm economics*, aside from a characterization of agricultural production (1st part) and the main agricultural production forces (2nd part), the various forms of property, and diverse socio-production relations are also examined. The author attempts to clarify the role of agriculture in the Hungarian national economy, and its relation to connected industrial, commercial and service branches from new aspects. He frequently uses the method of international comparison and touches on major agrarian economic problems including the economic assessment of land, and the capital-intensity of agriculture. The effects of the agrarian policy, and economic policies in connection with agriculture on the transformation of the production pattern are examined in several fields.

A comprehensive interpretation of the theme chosen, and the definite agrarian economic viewpoint of the author can be seen in the very first chapter, entitled "*The Index Numbers of Agricultural Production and the Price System*". Characterization of agricultural prices in force between 1957 and 1965 is, despite its briefness, thorough and convincing. When illustrating the effects of the price system on the production index the author takes a critical attitude towards statistical figures.

The second chapter outlines the pre-1945 agricultural production level in Hungary, its property relations and also its war losses of about 3.5 billion (1938) pengős. The third chapter deals with the land reform and agricultural output during the period from 1946 to 1948. In that period, according to conclusions drawn by the author, the fact that agricultural development couldn't keep pace with other branches of the national economy, was due to a series of natural calamities, including a three-year drought. While agricultural production amounted to some 32 per cent of the national income in 1938, in 1947/48 its share was 27 per cent (at comparable prices of January 1947).

The chapter entitled *The General Development of Agricultural Production* deals with the most comprehensive indexes of agricultural production, comparing them to those of the national economy as a whole, and to those of industrial development. The effect of industrialization and the industrial activities carried on by large-scale farms are also reviewed from this point of view. The gross output of Hungarian agriculture grew by 24 per cent between 1938 and 1966, "non-cumulated" production by 33 per cent and commodity production (net commodity turnover) by 55 per cent, at constant prices of 1959. (Development of the index numbers is somewhat more favourable if instead of 1938, they are based on an average of 1934—38.) Net agricultural production contribution to the national income in 1966 was 11 per cent less than in 1959 but 6 per cent more than in 1938, if calculated at "value-proportionate" prices. The fourth chapter is completed by a short discussion of the production level and productivity.

In the fifth chapter the author comprehensively explains the *economic role of Hungarian agriculture*, based on well founded methodology. After having outlined the proportions of the gross social product and of national income, he shows that in 1964 half of the people working in the fields of production — roughly two million breadwinners — were employed in agricultural production (forestry included), in the turnover and processing of agricultural products, and in branches of industry manufacturing agricultural means of production. Approximately 40 per cent of the national income was produced by the group of workers in this sphere of production (calculated at current prices). Other figures regarding the consumption and industrial processing of agricultural products, food consumption by the popu-

lation, and foreign trade in agricultural products provide an authentic and expert introduction to the economic aspects of agriculture, from other viewpoints.

The sixth chapter surveys the development of *plant cultivation* and *animal husbandry*, with a comprehensive analysis of the changes in yields and in the structure of production.

The seventh chapter, which completes the first volume sketches the development of agricultural co-operative farming and that of production in the different types of farms, including agricultural co-operatives, household plots, state-owned farms, and other types of farms such as the farms of industrial enterprises, institutes, councils, some simpler forms of co-operative farming, as well as auxiliary and privately owned farms.

The second part, which is somewhat less than half of the entire book, discusses land utilization, mechanization, agricultural buildings, investments, fixed and circulating assets, and employment, under the comprehensive title *Main Production Forces in Agriculture*. The study is completed by an outline of the agricultural population's personal income, and agricultural production costs.

A thorough analysis of the changes in *size of arable land and the productivity of the soil* is of great value from the viewpoints of both agrarian theory and practice. The author points out that in the years between 1938 and 1966 the size of agricultural land decreased by 8 per cent, and that of arable land by 10 per cent. Over an average of the last five years, land no longer used for agriculture can be estimated at approximately 2 million acres, and crop losses because of this drop are about 4 to 5 thousand million forints annually.

A steady improvement in soil productivity is illustrated in the fields of soil conservation and amelioration, economy of water supply, irrigation, and the planting of vineyards and orchards. A number of methods are used numerically to categorize the productive capacity of the land, this basic and special agricultural means of production, and he estimates the unutilized production capacity at 6 to 8 per cent.

In the part dealing with *mechanization*, an examination of the substitution of manpower, in the analysis of fixed assets, the definition of the means of production necessary for a unit output, and in the part dealing with *circulating assets* the use of artificial fertilizers, and fodder are particularly outstanding.

*

The high scientific level of the analysis of *the superiority and possibilities of socialist large-scale agricultural production* must be separately stressed. The author points out that about 60 per cent of the development in agriculture since 1945 took place in the five year period following the emergence of the socialist system in agriculture in 1961. He also proves that the increase in production parallel to the transformation to the socialist system was due to deliberate efforts, and not to benevolent natural factors. (A graph illustrates, e.g. the development of gross output and the precipitation during the growth season in the years between 1949 and 1964. p. 62.)

Just to mention a few of the many figures proving the superiority of large-scale production, the 35 per cent increase of the average wheat yield since 1945 is completely a result of the last 5—6 years. Taking the average of several years of fruit growing in Hungary, it has increased to three times the pre-1945 amount, and since the socialist transformation it has approached the million ton mark annually. The orchards farming on a large-scale basis, comprising 10 per cent of the total number of fruit trees — known as market orchards — accounted for some 30 per cent of total output. As regards animal husbandry, a comparison between 1966 and 1959, the last year before the socialist transformation, showed an increase of 11 per cent in total output. After 5—6 years of considerable deterioration, the land's produc-

tive capacity has greatly increased since the transformation. About 80 per cent of all artificial fertilizer used in the entire period after 1945 was consumed between 1959 and 1966. As the author's summarizing statement says, "About one quarter of the increase in total agricultural output since the Second World War took place during the period between 1945 and 1957/58, while three quarters of the results attained are the result of agrarian policy followed over the past 8—10 years." (p. 381.)

*

In conclusion, we can say that the study of 34 printed sheets and 15 chapters, containing 53 illustrations, provides a very rich source of information and statistics. Economists may frequently and successfully refer to "Hungarian Agriculture Since the Liberation in 1945", as an extremely valuable agrarian economic handbook.

F. FEKETE

KÁDÁR, B., *Gazdaságfejlesztés és nemzetközi munkamegosztás a fejlődő országokban.* (Economic development and international division of labour in the developing countries.). Budapest 1967. Közgazdasági és Jogi Könyvkiadó pp. 231.

One of the most burning questions of our age, and therefore one drawing the highest interest, is the social and economic development of the developing countries (third world). Literature on this subject is diverse and extensive. However, the studies of the different economic experts and international organizations do not agree in their evaluation of the industrialization in developing countries nor in the proportions and perspectives of industrial and agricultural development. It is particularly the Western economists, who in their literature of as recently as the last decade were rather cautious in estimating the industrialization capacities of the developing countries.

"Only a few of the smaller underdeveloped countries have realistic chances for becoming industrial nations, since the majority would have a larger comparative advantage producing non-industrial goods, based on their agricultural and other natural resources."*

Another author considers the attempts of the developing countries to industrialize and prove their abilities by producing goods previously imported from Europe or the United States to be rather irrational ambition.**

We might also mention those arguments which saw the possibilities of the developing countries in industrial development based on agriculture.***

Hungarian literature on the developing countries has to date only moderately dealt with questions of the economic policies to be carried out by them. Tamás *Szentes* discussed the content and characteristics of the category of underdevelopment.**** János *Pataki****** provided an analysis of the relations between economic and political processes, and economic underdevelopment.

However, in most recent times two works have appeared which place these

* BRYCE, M. D.:Industrial development. McGraw-Hill Book Co. 1960. p. 14.

** ADLER, J. A.: The underdeveloped areas and their industrialization. New Haven, 1949. Yale Institute of International Studies.

*** Processes and problems of industrialization in underdeveloped countries. p. 3 (U.N.O.). BUCHNAN-ELLIS, H. S: Approaches to economic development. New York. 1955.

**** SZENTES, T.: Gazdasági elmaradottság (Economic underdevelopment). Bp. 1965. 323 p.

***** PATAKI, J.: A tőkés világgazdaság és a fejlődő országok (The capitalist world economy and developing countries). Kossuth Kiadó, Bp. 1965. 212 p.

problems into the centre of investigation. One is József *Bognár*'s "The Guidance of Economic Growth in the Developing Countries",* while the other, by Béla *Kádár* is the subject of the present review.

The author provides a critical analysis of the direction of economic policies followed by the majority of the developing countries, which may be characterized as introvert and import-substituting ones. He defines it in the following way: "We speak of economic introversion in the case when reciprocally linked and interdependent import-substitutions take place simultaneously, or shortly after one another and if a conscious intention to reduce the participation in the international division of labour is inherent in these tendencies." (p. 40.)

As an introduction to the analysis, in the *first chapter* the author discusses general relations existing in developing countries between economic development and the international division of labour. This part calls attention to the special tasks and characteristics of economic development in the developing countries, to their very limited ability to accumulate, and to circumstances which derive from the conserving force of their production relations. These are the points on which he bases the importance of the international division of labour for economic development in the developing countries.

The author begins to discuss his main problem in the *second chapter*. He interprets introvert economic policies as a great experiment. In an examination of the historical circumstances behind this policy his starting point is the world economic crisis of 1929. This crisis forced the developing countries to change the basis of their development from expansion of their exports to a direction involving economic development through import-substitution. Later, this practice — directed by an emergency situation — found its theoretical backing.

As a result of the activity of Friedrich *List* — the theories established by *Rosenstein — Rodan*, and *Nurkse* rejected the advantages of international economic cooperation, and evaluated protectionism, a reliance on resources to be found within individual national economies, not as a temporary emergency solution, but as a long-range development strategy.

This chapter also deals with the major methods of the economic import-substitution policy, which include:

— customs policies (protective customs duties),

— foreign exchange policies,

— differentiated exchange-rate policies,

— counterbalancing the insufficiency of internal accumulation through financing by budget deficits,

— centralization of the system of economic management.

The chapter summarizes the results of this economic development and marks the stage when this direction of development begins to exhaust itself.

The *third chapter* reviews the major drawbacks of this introvert economic policy. The author considers the inevitable neglect of agricultural development to be the main obstacle to successful economic development.

Among the mistakes in industrial development the book mentions the development of those industrial activities which, because of the limited domestic market, cannot be developed economically. Another grave deficiency is the neglect of the human factor in economic development, that is, of the educational and scientific capacities. Furthermore, an introvert economic development hinders the absorption of the labour surplus and increases sectoral and regional inequalities.

The dominance of government and private monopolies is also a characteristic of introvert economic policies, and this further increases the negative consequences

* To be reviewed in the next issue of the Acta Oeconomica. Ed. note.

of general economic policies producing the following effects:

— neglect of the role of the time factor,

— decreased efficiency of economic management,

— an economy of shortages,

— overcentralization of decisions, development of monopolistic positions in politics and in the economy, and subjectivism,

— a general shortage of cadres, unsatisfactory qualification of leading cadres.

The negative effects of economic foreign policies determined by an introvert economic policy include:

— disproportions in sectoral development,

— increasing import requirements,

— decreasing export capacity, a further increase of foreign exchange problems, political tensions and tensions in economic growth.

The *fourth chapter* deals with the experience of an introvert economic development policy, including its theoretical and practical limitations.

The *fifth chapter* analyzes the major problems of an extrovert development strategy, as an alternative to the introvert one. The first point discussed is participation in the international division of labour as a condition for rapid economic growth. An important requirement of development conceptions is that they should prepare a maximal absorption of the large supply of unskilled labour.

In allocating investments, the tendencies of world economy and world market fluctuations must be considered as starting points, and the overwhelming majority of investments must serve export development purposes. Progress in agriculture must be considered a key question to economic development. When outlining the direction of industrialization, the problem arising from underdeveloped economic conditions must be taken into account. The development of those industrial branches which do not require much intersectoral cooperation, are not capital intensive, and are based on domestic raw material resources etc., must be favoured.

The importance of developing the service sectors, and the possibilities stemming from these are also treated in this chapter.

Finally, the *sixth chapter*, which completes the book, deals with the possibilities and limitations influencing economic growth in developing countries from the aspect of world economy.

Within this it mentions:

— the necessity of ensuring external resources,

— the possibilities and limitations of sales in foreign markets,

— the commitments of highly developed countries toward the developing ones.

The ideas raised in the book are substantially backed by statistical figures.

M. MANDEL

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I. VAJDA

THE PROBLEMS OF EAST-WEST TRADE

This study was presented by author at the 3rd World Conference of the International Economic Association (Montreal, September, 1968). It is intended to outline the development of East-West trade and to analyse the most important conditions for ensuring its rapid development. He stresses the need for eliminating political and institutional obstacles, the importance of international industrial cooperation and of the emergence of intraregional convertibility.

One or two decades ago discussions on East-West trade were almost exclusively dominated by political motives, although often concealed behind technical formulae. But there was, beyond the shadow of a doubt, the political determination of the strategic embargo practised by the "West" and, similarly, there were defensive political factors prevalent with the principle adopted by the "East", aiming at an absolute independence in respect of the basic materials and fuels considered as strategically important. Embargo and, in its turn, autarky are but twins, offsprings of the same spirit, tendencies which reinforce and apparently justify each other. "Les extrèmes se touchent." It is, moreover, a fact that the institutions created in accordance with the prevailing political motives partly deliberately hampered the development of the trade between East and West, and continue by their mere existence to hamper it, in spite of the changed political situation. It may be allowed in our circles to start from the assumption that the political atmosphere in 1968 is different from what it was in 1953; although fundamental differences exist between the politico-social systems of the states representing "East" and "West" and the possibility of conflicts cannot be excluded, their probability — contrasted with the fifties' — is being looked upon both by the West and the East as extremely limited and conflicts are not sought for. A further starting point for evaluating the situation may be the generalization of the failure of the embargo policy in achieving its repeatedly stated strategic goal, namely, to restrict the war potential of the socialist countries by prohibiting delivery of a large section of foreign commercial supplies. Indeed, the embargo policy was strictly attached

to this concept; with the era of the Sputniks' setting in, its collapse could not be concealed any more.*

In the same way, the nebulous concept of the "two parallel world markets" proclaimed in the East failed historically to materialize. Nevertheless it continued to exist, aiming at an autonomous, independent development of the economy, shunning all kinds of interdependence, considering it only as dependence. But we should not forget: all new socio-economic systems are disposed toward a clean break with the established set of values of the past; this being their historical mission.

The concept of two parallel world markets is a thing of the past and it was bound to be buried and forgotten not only because it neglected the Third World, where the two supposedly parallel motions inevitably met, but also because the principle of defence in isolation was replaced by a policy of open, peaceful contact.

The development of East-West trade suffered other setbacks from time to time. Western sources liked to dwell on the market disrupting effects of some Eastern imports, for instance in connection with supplies of crude oil, aluminium and tin. I am inclined to think that only the strained political atmosphere offered a chance to business people affected by these deals to mobilize in the defence of their claims the "Free World" — the methods of PR outbidding in effectiveness the customary bargaining with cumbersome competitors.

Now I cannot avoid joining issue with those repeatedly publicized Western notions which, still politically motivated, have been promoting the intensification of East-West trade, but on the assumption that this could lead to conflicting interests between the different socialist countries and the weakening of their coherence. Of course, this is not synonymous with advocating the embargo policy but, because it is aiming at the same goal, it will share the fate of the former in spite of its different wording.

Certain attempts at calling to account the trade policy of some Western countries by virtue of the inviolability of the unity of the anticommunist front are of a similar character. The most conspicuous recent cases were the actual prevention of the West German tube-deal with the Soviet Union and the unsuccessful but noisy steps against the sale of English buses to Cuba. Here, too, competitive business interests were prevailing; nevertheless, their protestation appeared on the scene in a political disguise.

All these repeatedly mentioned, well-known factors have to be taken

* A Swedish economist, Gunner *Adler-Karlsson* made a remarkable attempt to assess the impact of the embargo policy of the fifties on the Soviet Union and the other socialist countries. The combined results of the immediate effects and of the counteractions are expressed in this sentence: "This would give a maximum retardation of the GNP by six months and of the military and investment sectors by two months." [1]

into account before a thorougher investigation of the problems of East-West trade can be started, as the existing institutions, both on international and national scales still bear the imprint of the era of their creation. We managed only incidentally to establish new intitutions to serve East-West trade but their functioning bears witness to the restricting effects of the inherited and still unsolved problems. Institutional resistance is being enhanced by the ambiguity of the political approach; in this context the so-called Miller-report may be mentioned. It runs as follows: "Trade with European Communist Countries should be brought into the policy arena. It should be offered or withheld, purposefully and systematically, as opportunities and circumstances warrant." [2]

Obviously, it would be very easy to recite a number of institutional obstacles from the GATT rules concerning state trading, the Western discriminating quota system, the handling of the MFN-clause, the much discussed problem of long term credits, up to the protectionism of the trading blocs, only to be confronted by the price system of the socialist countries, bilateralism, the lack of convertibility and the protectionism inherent in the planning of foreign trade. After having heaped innumerable reproaches, mostly justified, on each other, we would be at the end of this Congress exactly at the same point, as at the end of the yearly meetings of the Economic Commission for Europe of the UN — stepping out, as in Geneva, exhausted and depressed, to the stone flags of the "Salle des pas perdus".

A few years ago in an article published in a Western periodical, I myself raised a claim on placing East-West trade into a policy-free sphere, first of all in order to beat off the kind of liberalization argument, which aimed at breaking up the cooperation of the socialist countries, with "polycentrism" in mind. Now I have to recognize the erroneous character of my former stand. The insistence on a sphere free from political evaluation was but an attempt to evade taking sides, to escape the real decision. One has to stand on a positive political basis and to demand the predominance of economic rationality and of non-discrimination in the sphere of East-West trade; — without such an unequivocal declaration of intent there seems to be no chance to overcome the ossification of these twenty years. Personal experiences gained in the process of preparing our economic reform showed me that there is no way to get the better of the recalcitrance of existing institutions and attitudes, this "circular causation", but by firm conviction and determination. The more convenient position of "It would be better, if . . ." offers a broad margin of tolerance to conservativism always disposed to make the best of it.

The existing, controversial institutions had and are still having an actual trade-deverting effect. An illustration of this fact is given in the small share of East-West trade in world trade, amounting to 3.5 per cent only. A further proof has been offered by a note of the Secretariat of the GATT published 1967,

which, after having analysed the imports of the EEC and EFTA countries between 1960 and 1965, pointed out that if the supplies of third countries — the socialist countries included — would have increased to the same tune as the total imports of the two regions, they should have attained the sum of 42 billions of dollars, i. e. 5 billions more than their actual value. [3] Similarly, the European socialist countries increased their interregional trade in those years more than their imports from third countries, incidentally raising their purchases from the developed areas above the average growth of their imports. Nevertheless, it is beyond any doubt — and I think there is full agreement on this point between experts — that their propensity to import largely surpassed the actual growth.

The policy motives dominating East-West trade still seem to be in many respects unclear and contradictory; being aware of it I do not propose to deal in detail with institutions surrounding East-West trade like an impenetrable labyrinth. Unfortunately, no Ariadne would help me out of this labyrinth. Neither do I hope that a rational improvement of some of the technical elements may lead to a decisive change, although I do not refuse admitting the utility of intermediate steps leading towards rationality. I am emphasizing the word *change;* this should comprise, according to my value judgment, a radical growth of intensity in economic contacts linking East and West, acceptance of their lasting, permanent character, abandonment of the inhibiting political attitudes. The exogenous conditions are in a state of transformation; the all-European cooperation, the technological and scientific gap, the growing political unrest of the developing countries: all demand a novel approach to the organization of international economic activity. The "policy arena" mentioned in the Miller-report is given, nothing more superfluous then to talk of the devil. What I am looking for is a change inside the policy arena; after having attained it and starting from the newly won basis we may put the rearrangement of the institutions on the agenda. Institutions are secondary, derivative phenomena; it would be wrong to adjust our judgment to them; on the contrary: we are first of all obliged to clarify our position and then to proceed to project the institutions we deem best suited to our agreed purpose.

The commodity pattern of East-West trade

I think it necessary to survey the commodity pattern of East-West trade, the demand elasticity of the different groups being unequal and because policy preferences embodied in tariffs, import quotas and other restricting practices are also sharply differentiated. Table 1 shows the commodity composition of East-West trade and Table 2 the pattern of total exports and imports

Table 1

Commodity composition of East-West trade

(percentages)

	1961	1962	1963	1964	1965
A) Western exports — Eastern imports *f. o. b.*					
Food, beverages and tobacco	12.0	11.3	18.9	29.0	20.8
Crude materials and fuels	15.9	13.8	14.0	13.6	13.6
Manufactured and semi-manufactured goods, including chemicals and metals	40.4	38.6	34.7	29.6	36.1
Machinery and transport equipment ...	31.7	36.3	32.4	27.8	29.5
	100.0	100.0	100.0	100.0	100.0
B) Eastern exports — Western imports *c. i. f.*					
Food, beverages and tobacco	26.2	23.0	24.1	18.0	19.7
Crude materials and fuels	39.8	40.4	40.6	41.6	38.2
Manufactured and semi-manufactured goods, including chemicals and metals	26.4	28.6	27.7	31.1	33.8
Machinery and transport equipment ...	7.6	8.0	7.6	9.3	8.3
	100.0	100.0	100.0	100.0	100.0

Source: United Nations, Monthly Bulletin of Statistics, March 1967

Table 2

Commodity composition of the trade of developed regions 1965

(percentages)

	Exports *f. o. b.*	Imports *c. i. f.*
Food, beverages and tobacco	13.7	16.9
Crude materials and fuels	14.0	25.1
Manufactured and semimanufactured goods, including chemicals and metals	41.7	36.1
Machinery and transport equipment	30.6	21.9
	100.0	100.0

Source: United Nations, Monthly Bulletin of Statistics, March 1967

of those countries which in United Nations statistics are termed as developed areas (USA, Canada, Western Europe, South-Africa, Japan, Australia and New Zealand). The contrasting traits are conspicuous, especially between the pattern of socialist — "Eastern"-countries' exports to the West and the composition of total Western imports. Basic materials and fuels have a share of 25 per cent in the total imports of the industrial capitalist countries, whereas this group of commodities takes up not less than 38—40 per cent in the socialist countries' exports to the West. On the other hand, machinery and transport equipment ever growing in importance, participated in the total Western imports of 1965 with 22%, but in socialist exports to these countries with 8—9% only.

Similar trends are discernible in both directions of East-West trade. The once considerable surplus in agricultural products and food has disappeared in recent years and the shares of this group are progressing towards an equilibrium; similarly, there is no remarkable imbalance between the groups of miscellaneous finished and intermediary manufactured goods. A considerable surplus in socialist exports presents itself only in the group of basic materials and fuels; whilst in Western exports machinery and transport equipment (SITC group 7) represent a volume 3 ½—4 times bigger than in Western imports. The stagnating tendency of the relative share of Eastern sales of machinery is put in a sharp relief because the growth rate of this group was second to none in the imports of the developed areas. From 1961 to 1965 it increased by 65 per cent only. Sub-average growth rates were shown first of all by the groups of basic materials and food, fuels only managing to come near to average.

The picture presents a paramount elasticity of Western markets for machinery; unfortunately, exporters of the socialist countries failed to make full use of this elasticity.

The tendencies prevailing in the commodity composition of world trade are shown in Table 3. At the moment of finishing this report only the data for 1965 are available from UN sources, but it is generally recognized that there were no relevant changes in 1966 and 1967 against the preceding period. The most dinamically growing sectors of world trade were obviously those of machinery, transport equipment and chemicals. Growth of these sectors considerably surpassed the average (between 1961 and 1965 the index of machinery exports rose to 151.0, the total index being 139.2).

A commodity-centred analysis of East-West trade reveals features differing from the general trend of world trade or of the trade both of the developed areas and CMEA-intratrade. These may be summed as follows:

1. In the exports of the socialist countries basic materials and food continue to preponderate, whereas their specific weight in world trade has been diminishing.

Table 3

Commodity composition of world trade

Million US $

Exports		1961	1962	1963	1964	1965	Index 1965/60
SITC Section							
0—9	Total	133 700	141 310	153 780	172 030	186 110	139 2
0—1	Food, beverages and tobacco	23 360	24 490	27 300	29 950	30 980	132.6
2, 4	Crude materials and animal, vegetable oil, fat	21 160	20 570	21 960	23 890	24 740	117.0
3	Mineral fuels	13 450	14 610	15 700	17 000	17 900	133.0
5	Chemicals	7 960	8 500	9 360	10 900	12 210	153.0
7	Machinery and transport equipment	30 250	33 260	36 360	40 860	45 670	151.0
6, 8	Manufactured and semi-manufactured goods (basic and miscellaneous manufactured goods) ...	35 850	37 950	41 060	46 970	51 740	144.3

Source: United Nations, Monthly Bulletin of Statistics, March 1967

2. In Eastern exports the international dynamism of the trade in machinery does not assert itself.

3. The share of manufactures in West-East direction lags behind the average of world trade, too.

4. Among the problems of East-West trade, in addition to institutional obstacles, a considerable role is to be allotted to the commodity composition of socialist exports sharply differing from the general trends of world trade. The existing pattern is not sufficiently capable of development, not even if no institutional obstacles obstructed its path. The structural limitation of the export bears witness to the actual separation of the markets; the industrial production of the socialist countries reflects the demand of the internal markets and, in addition, rather their past than their present or future. Between yesterday and to-morrow the dichotomy of the extensive and the intensive growth model is discernible. The abundance of labor, its migration from agriculture to industry, the relative lack of capital — which form together the objective basis of extensivity — as well as the value relations emerging in their wake, influenced by way of the external markets the structure of production and its technological level in those countries, too, where the internal conditions of extensivity would not have prevailed or their role would have been more limited than in other countries. In this way the preponderance of intratrade has transformed itself into an *imported extensivity which*, though pushing along

the quantitative growth of production through a long period, proved in the end to disturb normal development no less than imported inflation, a phenomenon more generously treated in economic literature.

5. The restraining factors inherent in the commodity composition of exports constitute a formidable dam to the capacity to import, they restrict the activity of the socialist countries in increasing their imports. A removal of these brakes is a common interest of all trading countries.

The problem of comparative advantages

It might be said that the picture presented above truly shows the working of the comparative advantages; that the composition of trade evolved under their impact. I do not deny — and personal experiences gained in my country helped to form this assumption — when all conditions are taken into consideration, the comparative advantages to be realized by selling basic materials and qualitatively easily determinable mass goods which do not require a big marketing organization may compensate for or surpass the disadvantages of their higher capital intensity — in contrast to the less capital intensive but, for the time being, less advantageously saleable, more sophisticated manufactures. That is to say: the well-known Leontieff paradox is also discernible in the context of East-West trade, but alas ! with an opposite sign, as a paradox of the paradox.

However, comparative advantages reflect a historically given situation and the latter is not unchangeable. A different structure of production, a different technology, a different marketing organization and sale possibilities may transform the ranking of comparative advantages, as they did and constantly do in world economy. Merely the changes occurring in recent decades in the techniques of goods transportation resulted in a greater upheaval of comparative advantages, for instance in the fields of metallurgy and mineral fuels, than the best advocates of this theory have foreseen — and it is a more remarkable than surprising fact how fervously the parties concerned, fierce partisans of the free market economy, are fighting against the consequences of a vanishing of their earlier comparative advantages — mostly in Western Europe.

Comparative advantages may thus justify a given pattern of trade; changing comparative advantages — which can be created, — may lead to a change in the pattern of trade.

Allow me, please, to add a further point to the concept of comparative advantages. The presentation of our theme, the problems of East-West trade, indicates that, transgressing the limits of the microeconomic sphere, we have to investigate these problems on a macroeconomic level, too. Macroeconomics is constantly modifying the microeconomic comparative advantages, the effects of the measures taken get incorporated in the framework of the latter. Tariffs, open

or hidden export subsidies, taxation, exchange rates, fixed rates of transportation and of electricity or gas, regional development schemes, etc. are all factors affecting comparative costs, bringing about their correction. A policy element influencing comparative costs is also the *volume* of international trade, not only because it may have a considerable impact on employment, but also because volume itself, in interaction with the applicable technology, organization and productivity may became an important, in some cases even decisive factor of the comparative advantages to be realized. If we consider the phenomenon on a non-macroeconomic level, the comparative advantages are neutral against the overall volume of external trade; an "optimum" could even be imagined on a low level of volume and in a modern economy the tendencies which push total trade towards a macroeconomically suboptimal level seem to be very strong indeed, else we should not witness nearly everywhere stimulants intended to increase (export) trade. The limited scope of this paper does not allow a more detailed elaboration of this concept; I think, it could be presented in a mathematical model, too. I consider the growth of the volume of East-West trade to be of paramount importance for the development of world economy, and one of our most urgent tasks. Consequently, my further investigations will be concentrated on the best possible ways to harmonize comparative advantages with a vigorous increase in the volume of total trade.

Ways of enriching the composition of trade

It has to be admitted that the range of goods entering East-West trade was broader from the Western side of offer than on the opposite side; the difference is visible by the level of trade in manufactures, in particular technologically advanced products. Speaking of offer, we may neglect most of the institutional obstacles, their effect coming into play in a later phase, when demand is considered. The commodity composition of supply is not unlimited either and does not exclusively reflect the requirements of production and market. Strategic embargo still affects some groups of goods. But there is no great risk in excluding from our considerations the goods belonging strictly to the military-strategic sphere.

Furthermore, I do not recoil from admitting that a broadening of the range of goods to be offered to Western markets is mainly the concern of the enterprises in the socialist countries and I am confident that the economic reforms now under way will turn the tide. The increasing and immediate material interestedness of the socialist enterprises — including exports —; the extension of their scope of decision, a far-reaching autonomy in decisions on their investments, modernization and product-mix; their enterpreneurial role, their taking risks and enjoying the gains of the "first comer" — besides a

growing harmonization of external and internal markets, an infusion of tendencies emerging on the world market into the inner circle, with all their price and structural effects as guiding principles of state policy — presumably all these will induce an enrichment of the range of offer, with some signs already visible in recent years.

However, this process could be accelerated and I propose to turn our attention to two elements which I consider to have a paramount role in it; one is international cooperation between enterprises, while the other is intra-regional convertibility.

Cooperation between enterprises in the framework of East-West economic contacts is no absolute novelty any more, but not so firmly established as to allow to take it for granted. Joint ventures happen to exist between Western and socialist enterprises (states); some of these transactions have been abundantly publicised. It is a less appreciated fact that international mergers are so far, even between enterprises of different socialist countries, peripheric phenomena. We may conclude from this fact that the belated and very scanty appearance of joint ventures should not be taken as system-bound, in the sense, as if resistance against introducing this form of enterprise were based mostly on ideological scruples, rather that it is or was a direct consequence of the prevailing system of planning and management. Ideological anxieties could not have been voiced against mergers of two or more socialist firms, even if they belonged to different member states of CMEA, — at the very most a rigid concept of national sovereignty could obstruct their way. Practice has, however, built much more formidable barriers as long as the socialist state accorded to his enterprises but the role of an executive organ, deprived of the right of independent decision-making. Actual shackles resulting from a hierarchical construction inside the state excluded transnational cooperation of enterprises in the socialist sphere. This state of things is, however, vanishing and actually, in the process of readjusting the international mechanism of CMEA to present requirements, a new concept favourable to changes is gaining ground, on the basis of experiences offered by the world market, first of all by the integration tendencies within industry itself. Undoubtedly, in a decisive part of industrial production earlier accidental contacts, taken on their face value as "market contacts", were replaced by links between enterprises of a lasting character, resulting partly in the concentration and international expansion of big corporations, partly in other forms of vertical cooperation of a permanent kind. The optimal size and capital requirements of the successive vertical stages of production are different; a total complexity inside a single factory offers in many cases no tangible advantages in comparison to specialized plants. At the same time, technological progress cannot be restricted to the construction of the final product. No principle of hierarchy is reigning in the realm of vertically arranged production. On the contrary: all vertical stages of the production

process have to be harmonized on a homogeneous technological level. This is the law of the absolute vertical interdependence of production. The scope of its effectiveness is the organizational integration and the specialization of production profiles.

Although at present we do not possess statistical data to prove this thesis, it seems to be beyond doubt that a considerable part of the trade between industrial nations consist of mutual supplies *inside of industry*, between producing and processing firms, on a permanent basis, in a great variety of organizational forms. My impression is that this fact has not yet been sufficiently considered by the theory of international trade.

I deem it desirable and necessary to utilize the experiences gained in the working and management of modern big industry also in the transnational sphere of East-West trade. I am convinced that East-West trade may develop most dinamically on this terrain, offering great chances for readjusting the commodity composition, a reconciliation of mutual requirements, a strengthening of mutual confidence. It may lead to an effective unfolding of the international division of labour in its modern form, in the framework of industry itself. On a purely *commercial* basis the mutual penetration of the markets and of production cannot sufficiently progress. In the rapidly increasing post-war world trade cooperation had a bigger share than the exchange of consumer goods. This process manifested itself in the phenomenal changes of the commodity pattern, with industrial products taking the lead.

Based on this consideration and with its pragmatical application East-West trade may successfully approach the level which would conform to the relative size and productive capacity of the two big industrial blocs and from which, owing to historical, institutional and structural obstacles, it is now so far away.

I do not want to deal with the different possible transnational forms of cooperation between enterprises. Practical solutions and the overcoming of obstacles may be realized by immediate contacts of the prospective partners. The scientific task seems to me to consist in the conceptual elaboration and presentation of the perspectives, of a concept which is rooted in the trends of modern development and in identified requirements.

Interfirm-cooperation as one of the main forms of future industrial contacts cannot dispense with a monetary basis which would enable a rigorous assessment of investments and other inputs, of the opportunity costs of production, a mutual settling of accounts between the partners, the complete transparence of the whole enterpreneurial sphere and, last but not least, a free movement of capital. As long as the business calculations of one of the partners are not easy to survey by the other, contacts may be established only on an extremely primitive level, or on very cautiously formulated terms leaving hardly any room for manoeuvre. In practical business life shadow prices cannot

be operative; in this sphere real prices and real costs prevail. For assessing real cost factors it is indispensable for the cooperating partners to be able to reckon with a common monetary basis. The Hungarian partner has to know exactly how to calculate his partner's costs in terms of francs, sterling or dollar and, reciprocally, so has his partner in forints. Experiences, know-how are not gained in a vacuum; the "ceteris paribus" assumption used in scientific analysis is unpracticable in the micro-sphere. There you have to reckon with the actual socio-economic milieu and infrastructure. Besides, we should consider that cost factors of production and marketing vary from country to country under the impact of actual conditions. There is no international tendency discernible which would equalize wages; neither convertibility nor policy measures adopted in the different countries had so far a harmonizing influence. Labor costs, the rationality of substituting labour by machinery, productivity, optimal location of plants and an indefinite number of other decisions can but be assessed and valued in the light of actual conditions in a state; but without their being rationally assessed final decisions or consultations about them, a precondition for partnership, are hardly imaginable. Here the monetary form is indispensable, a money which has the *same value* for the cooperating companies.

Let me emphasize: from the point of view of enterprise decisions. On this point microeconomics is inevitably getting separated from macroeconomics, they may even get into conflict, although the frontiers between big micro-units and the state representing macroeconomy often become indistinguishable, both in capitalism and socialism. Central authorities evidently do distinguish between the different currencies, — circumstances prevailing on the world money markets at the time of writing these lines bear witness to this fact, — with more confidence in some and less in others. At present it seems, however, as if distrust would be based on the very intentions and possibilites of the distrustful themselves. *Clémenceau* in his time could say that war is too serious a thing to be left to the generals. To extend the analogy in this monetery war to the bankers would be unfair only because neither generals of finance nor politicians have proved so far their strategic skill in this field. At the end Clémenceau won "his" war — "il a bien servi la France". So far nobody has won this war. And nobody should see a scapegoat in the other. By the way, this could be a rather comfortable philosophy for East-West trade, too — but I confess to feel that it is only wishful thinking.

After this short détour for which I duly apologize I hasten to get back to the world of realities where tangibility is a criterion of fact. To the unfolding of enterprise contacts, cooperation and joint ventures, transferability of payments and convertibility of currencies seem to be absolutely necessary even if only slow progress may be realistically presumed. Transferability and convertibility are essential preconditions for real business calculations and for serious contracts between partners. At the same time, I have to repeat: progress in the

commodity composition and in the international division of labour in industry has the brightest prospects in the field of cooperation between enterprises. This thesis links together the two factors of my concept.

The programm of our Congress promised to discuss international liquidity as one of the main topics; I hope that there will be ample chance there to review regional convertibility or, following the proposal made recently by Professor *Triffin* in a lecture given in Budapest,* to discuss a plan for an intra-regional clearing, linking Western and Eastern Europe. I warmly appreciate this proposal and should be glad to see it worked out in detail. Convertibility is evidently an institutional element of East-West trade, but it is even more than that. It may be considered as the most strikingly marked expression of world economic interdependence. Its creation is not a unilateral mission. In the framework of East-West contacts it is as well a Western as an Eastern task. As one of the preliminary steps the general introduction of transferability among the socialist states seems to be necessary. This constitutes one element of the efforts aiming at the reform of CMEA's international mechanism in preparation, occupying a large number of experts in my country at present.

I am afraid the actual moment — at least so it seems by finishing this report — will not be deemed best for reviewing and determining the conditions of a general and regional convertibility. Nonetheless I must not miss the opportunity to emphasize: after all the wasted post-war chances, since Bretton Wood's failure to establish a general consensus in this matter, history did not present a situation so forcefully requiring the extension of the concept of convertibility to our sphere as now, when the need for its rearrangement seems to be imperative and generally recognized.

The general political importance of East-West trade and the role it is playing in the development of world economy is much bigger than its present dimension would suggest. Its given volume may be taken as marginal, its importance not. This should be clearly understood on whatever side we may stand. East-West trade has to expand and prosper; this is one of the decisive tasks of our time, one of the pillars of the new world order we may not only dream of, but have to create.

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ПРОБЛЕМЫ ВОСТОЧНО-ЗАПАДНОЙ ТОРГОВЛИ

И. ВАЙДА

Доклад был прочитан на 3-ей всемирной конференции Международного Экономического Общества (в Монреале, в сентябре 1968 года). Его цель: показать, как складывалась восточно-западная торговля и дать анализ важнейших условий ее быстрого развития.

Восточно-западная торговля в рамках исторически сложившихся институтов с самого начала носила на себе отпечаток противоречий мировой политики, а также развязанной империализмом холодной войны и политики эмбарго. Но одновременно действовало и вредное ограничивающее влияние теории «двух параллельных рынков», направленной на их практическое обособление. В настоящий момент представляется, что в политической атмосфере мирного сосуществования настало время рассмотреть проблемы восточно-западной торговли с новых позиций и создать ее новые формы, если даже пока еще преждевременно говорить о последовательном прекращении холодной войны, ведь американское эмбарго — хотя и в меньшей мере — все еще находится в силе.

Не представляется целесообразным акцентировать внимание на критике и частичном изменении институтов, так как они носят второстепенный характер и отражают политические взгляды, действовавшие в период их возникновения; в соответствии с этим в настоящей структуре их задача заключается скорее в ограничении взаимного обращения, чем в его развитии. Это противодействие среды необходимо преодолеть общими силами посредством положительных политических выступлений.

Автор показывает, какое отклоняющее влияние оказывают в действительности институты на торговлю, а затем детально анализирует товарную структуру восточно-западной торговли. Он констатирует, что наряду с препятствиями, связанными с деятельностью институтов и политической обстановкой, значительную тормозящую силу представляет собой структура социалистического экспорта, не способного развиваться в достаточной мере, не отвечающего действующим в мировой торговле тенденциям, лишенного проявляющейся в ней динамической движущей силы и ограничивающего также и импортную способность.

В отдельном разделе автор анализирует проблему сравнительных преимуществ и как в микро-, так и в макроэкономической плоскости выявляет, что сравнительные преимущества имеют нейтральное влияние по отношению к объему обращения; «оптимум» может осуществляться и при низком уровне объемов, и в современном хозяйстве явную значительную силу имеют тенденции, поддерживающие объем на субоптимальной ступени. Этим мотивируется в частности требующаяся везде система государственного субвенционирования экспорта. В то же время в сфере восточно-западной торговли решающее значение принадлежит увеличению объема товарооборота, ведь в настоящее время — в остром противоречии с производительной способностью двух крупных блоков — он составляет всего лишь три с половиной процента мировой торговли.

Исследуя возможности развития товарной структуры, автор указывает на проводимую в социалистических странах экономическую реформу, с осуществлением которой увеличивается непосредственная материальная заинтересованность предприятий, круг их компетенции. Вероятно, это подействует в направлении расширения ассортимента предложения товаров. Этот процесс, однако, может быть ускорен: этому могут способствовать, по мнению автора, международная кооперация предприятий и межрегиональная обратимость валют. Преградой осуществления кооперации предприятий служила до сих пор, в первую очередь, система директивного планирования, а не противоречия между капиталистическими и социалистическими странами, ведь примера такой кооперации не найти даже в сфере СЭВ. Однако закон абсолютной вертикальной взаимозависимости производства в международных рамках на практике не может действовать без этого. В быстром развитии международного товарооборота после войны выдающаяся роль принадлежит кооперации.

Другим фактором является необходимая денежная основа; сопоставимость, создание денег, представляющих одинаковую ценность для предприятий, вступающих в постоянную взаимосвязь. Со времени потерянной после войны возможности еще не представлялось такой исторической обстановки, которая настолько властно требовала бы распространения международной ликвидности на восточно-западную торговлю, как сегодня, в период неотложных преобразований.

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THE OPTIMAL INTERNATIONAL DIVISION OF LABOUR

§ 1. The problem

The need for quicker socio-economic development is widely felt, in the poorer countries in particular. Many of them now have their national development plans in which a sketch is made of what their governments consider the best development. Important components of the latter are to be found both in agriculture or mining (primary sectors) and in manufacturing (secondary sectors), with corresponding effects on services (tertiary sectors), including energy, transportation and trade. The choice of the sectors to be pushed is an important part of the decisions at the basis of any such development plan. This choice is based on the *endowments* of the country, on the one hand, and the prospects of *international markets*, on the other hand. Generally speaking, a country should engage in sectors in which it is able to compete as well as possible and planners do study this problem in several ways. For many reasons the problem is far from easy, however. One of the reasons why it is difficult to solve is that one country is not well informed about what other countries are planning for; that is, one of the difficulties is a problem of *information* about the outside world. In their endeavours to cope with this insufficiency of information, planners of all countries, taken as a group, are often *duplicating* each other's work. It may be of some help, therefore, also to approach the problem of the choice of the appropriate sectors for the world at large, or anyway for as large a part of the world as seems feasible. The central problem then is, can we devise a *specification of the commodities, or the production processes*, each of the countries of the world should concentrate upon, in order to reach a state of *maximum welfare* for the world at large, under all the constraints set by the laws of production.

This formulation of the problem immediately reminds us of the many difficulties around the concept of *welfare*. This essay is based on a simple concept of world welfare, which shows two advantages, namely, on the one hand that it will be adhered to by a large section of world opinion and on the other hand that it will be fairly easy to handle. The assumption is that the world's welfare will be increased by increasing the *total value of net production* or total income and by making its *distribution more equal*. In view of the low

incomes of a large section of world population and of the extreme inequality of income distribution, especially between countries, this assumption will probably coincide with the preferences of an overwhelming part of the world's population.

Even the crudest check will show that the present state of the world economy deviates from any optimum because of three phenomena. First, a considerable portion of production factors, especially of unskilled labour in the poor countries, is *idle*. Secondly, as already stated, the international income *distribution* is very *unequal*. Thirdly, there are many *unjustified impediments to trade;* more specifically, the prosperous countries are protecting themselves, or rather their producers, in a way which cannot be justified from a world point of view.

The problem of the *optimal division of labour*, defined as the optimal choice of industries for all countries, belongs to the chapter of the theory of international trade and more precisely to the *normative* version of that theory. A vast literature on the subject exists, of which some able summaries have been given in recent years [2], [3].

It has been characteristic for a considerable portion of that chapter to *neglect transportation and communication costs*, both financial and psychological. This seems to be too crude an approach. Since, however, the full and precise treatment of these costs will make the problem unmanageable, a heavily simplified picture of their impact will be used, described elsewhere in more detail [12]. In the present version of the report we will distinguish between *national products* and *international products*. The former cannot be traded between nations due to either high transportation costs or other impediments, for instance of a cultural nature. For the latter these costs or impediments are not prohibiting international trade. Clear *examples* of national products in this sense are buildings and many types of services. Services often have to be available on a certain spot or, as in the case of transportation, over a certain geographically determined route. Or else, and here we have an example of a cultural impediment, they have to be given in a certain language (primary education) or by national officers (justice, police, army).

There is scope, too, to classify production *processes* in a similar way. We will call a production process a *national process* if either one of the inputs or one of the outputs cannot be transported. With this definition processes producing a national product are national processes, for instance construction or retail trade. But also processes using as an input a natural resource will be national, because of the immobility of the resource used. Some of our analyses will refer to products, others to processes. As far as this report deals with products, only international products are under discussion. The factors used to produce them are the factors left over after the demand for national goods has been satisfied and by definition this demand must be satisfied by factors available to the nation.

Where this article deals with production processes, again only international production processes or activities are discussed. This implies the elimination from our model of the production of primary products.

If we want to deal with our central problem, that is, the choice of industries to be developed by each country, in a realistic way, we must be able to deal with *large numbers of products, of countries* and even perhaps *of factors*. From trade statistics we know that the number of products traded internationally is large indeed; it runs into the thousands. From the experience of Benelux and the European Common Market we know that the division of labour created by it was *intra-industrial* and not inter-industrial [13], [1]. The number of nations in the political meaning of that term is well over one hundred. For purposes of analysing the world division of labour it may be better even to use geographical areas often much smaller than one country. Inside large countries such as India, but also middle-sized countries such as France, the same problems exist. Ohlin [10] was correct in treating simultaneously international and interregional trade. Taking parts of countries instead of countries will increase the number of geographical units, however. Finally, also the number of factors of production is not necessarily small. It depends on the way the central problem is formulated. In some of the possible formulations we may want to consider separately the very many forms in which "*nature*" or "land" plays a role in the production process. Studies such as the "*Leontief paradox*" [7] have reminded us of the large number of distinct types of "natural resources" available for production and the role their availability plays in the international division of labour. Many types of mineral deposits and of soil, in conjunction with climate, must be distinguished in order to obtain a realistic picture of the diversity of natural endowments of different countries. Even if we do not need to consider these — a possibility to be discussed below — we may want to make a distinction between the large number of types of labour available in any country and as a consequence again will have a large number of factors of production. Only for some long-term approaches to the problem can we say that each type of labour may be seen as a mix of unskilled labour and of varying quantities of "*educational capital*" and can we possibly deal with a small number of factors, namely labour and capital.

In this first report *three approaches* to the central problem will be presented. In the *first* we will consider a large number of production factors and among them many specific *natural* resources; possible also many types of labour. The natural resources will be represented by the primary commodity that can be produced with their aid. For brevity's sake the names of the primary products — wheat, copper ore, crude petroleum, etc. — will be used to indicate the combination of natural resources needed for their production. In this approach primary products are considered to be production factors.

In the *second* and *third* approach to the central problem we take production *processes* as the object of analysis. As a consequence the production processes of primary products, being national processes, will then fall outside our analysis. Accordingly there is no necessity to consider natural resources as production factors. There remain capital and the many types of labour as production factors. Primary products, whose production is assumed given by the availability of the natural resources needed, enter into the analysis only as possible inputs into the international processes considered. The quantities of primary products needed for national processes do not enter into the analysis, however.

§ 2. The contribution of theoretical literature

In essence any optimum problem is a problem of welfare economics. In such a problem a utility or *welfare function*, now often also called "*objective function*", is given; it has to be maximized under a number of *constraints*. The constraints are primarily those of a technological character, often loosely called the "*laws of production*", including the equality of demand and supply and including also the simplified assumptions about transportability of products. For simplicity's sake part of the welfare function may be replaced by *demand functions for final products*. Depending on the way the results of the analysis are to be applied other constraints may be added, such as institutional constraints, if we assume that some institutions cannot be changed at short notice. Our point of view will be a *long-term* point of view, implying that the number of institutional constraints can be reduced to a minimum. The specification of our models will contain precise information about what this means.

By the introduction of demand equations we do assume implicitly a considerable degree of *freedom of consumption* and of investment. The remainder of the preferences will be expressed as a search for a *maximum income* (in real terms) for either the world at large or some group of countries, for instance the low-income countries.

Some general features of a socio-economic optimum as described by welfare economics also apply to an optimum choice of activities in an international community. One type of feature is that *prices be based on marginal costs*. In the international community this implies the *absence of impediments to trade*, since such impediments tend to raise prices above true marginal costs. Another type of feature is that factor prices should be equal to marginal productivities of the factors considered. Some types of export *subvention*, by developing countries particularly, can be seen as a correction on factor prices in the direction of marginal productivity pricing of factors. Marginal productivity of labour often is lower than actual wages paid, however modest the latter may be. In such a case a subvention given to the industry may mean an ap-

proach to the optimal pricing system. Subventions or protection applied by prosperous countries cannot, as a rule, be so interpreted and are not justifiable from a world welfare point of view therefore.

Still another feature of a socio-economic optimum is the existence of some forms of *income redistribution*. To put it inversely, equality between income from productive activity and expenditure (or the fulfilment of a budget equation) for any single individual or any single country is not a feature of the optimum. To impose such budget equations therefore means imposing institutional constraints of an a-priori type and we will not impose them, contrary to what several authors have done. Put in different terms again, income transfers between persons and between nations may be a normal feature of the optimum.

One characterization of the optimum division of labour derived under a set of assumptions has gained great fame; we mean the so-called *Heckscher — Ohlin principle* [6], [10]. Put in simple words, which do not indicate all the necessary qualifications, it says that each country should concentrate its production on products requiring a factor mix corresponding to the country's endowment. The well-known specification is that the country with the smallest amount of capital per head of the population should specialize on labour-intensive products and the country with highest amount of capital per head on capital-intensive products. The principle can be derived if, among other things, transportation costs are neglected and hence disregards the necessity for each country to have some national production processes, among which there are exactly some highly capital-intensive and some highly labour-intensive processes. But one may restrict the principle to the international production processes.

Although our central problem is a problem of welfare economics, the concrete formulation must heavily draw on another chapter of economic theory, namely, the *theory of international trade*. This theory has been developed in two main forms; on the one hand, as a problem of welfare economics, hence a normative form, and, on the other hand, as an analytical problem, or explanation of the realities of international trade. Since in both versions a major role must be played by the technological data they have much common ground and this is why we have to use a large part of what is known as *models of international trade*. There is an extensive literature on such models. The question arises what use they have for our problem. Unfortunately this use is restricted.

This is due mainly to the fact that many models deal with cases in which a *small number* of products or activities and of countries is assumed to exist. A large part of the available texts on international trade models is of this type and indulges in refinement on the shape of some functions of which very little is known or can be hoped to be known in the forseeable future. For our purpose we need models admitting the introduction of a large number of products or

processes and of countries. The number of factors need not be so large, especially if we are interested in processes and long-term developments, since then labour and capital are the main factors and, as we already observed, the various types of labour can be considered mixtures of unskilled labour and educational capital, whereas the various types of capital can be substituted among themselves.

Nevertheless there are some models available which permit the introduction of a large number of products or processes and of countries. These models suffer from some *biases* due to a disproportionate interest of theorists for one problem that hardly plays a role in reality. We mean the so-called problem of *factor price equalization*. Briefly formulated this problem is, under what conditions the prices of labour and of capital will be the same everywhere. Reality is far apart from such a situation and the conditions one finds are also far from the actual situation. The main bias in the models developed around this topic is that production functions for the same commodity in different countries are identical. This bias can be removed without difficulty, however.

In order to illustrate the methods used and the results obtainable with them it is helpful if in a few applications the solution of the problem can be given *explicitly*, implying that the influence exerted by some of the main data can be easily shown. Of course such an explicit solution is not a necessity; to-day numerical results to be obtained with the aid of computers can also play this role. Even so explicit solutions have some didactical and communicational advantages. They can be obtained if some simple types of production functions are used. We will specify them below.

In our first approach we will use a model related to models used by F. D. Graham [5] and L. W. McKenzie [8]. The predominant characteristic is that for each product the inputs of factors needed are proportional to output and that there is one way only of producing the output. In other words, no possibility of substitution between inputs exists. Each commodity can now be characterized by the *fixed coefficients* representing the inputs per unit of labour used. Together these coefficients constitute a vector and every commodity can be described by its vector of factor proportions. In principle there is a possibility to introduce an *infinity of goods*. Similarly each *country* can be characterized by the vector of its *endowments* per unit of labour and an *infinity of countries* can be introduced. For further details we refer to Model 1, set out in § 3.

In our second and third approach we will use a model related to models used by P. A. Samuelson [11] and J. E. Meade [9]. Here a simple — and probably exaggerated — form of *substitution* between factors is supposed to exist, namely the one represented by the *Cobb—Douglas production function*. The function is applied to a unit of labour, that is, it indicates production per worker. This is assumed to depend on capital per worker, corresponding to the

so-called homogeneous brand of Cobb—Douglas functions. In Model 2 (cf. § 4) the exponent is supposed to be the same for all products, but a factor is added representing the influence of the type of product on productivity per man. In Model 3 (cf. § 5) the exponent itself is assumed to characterize the nature of the product. In both cases another factor is added standing for the *productivity level of the country*.

One *general result* of the analyses made may be mentioned already at this stage. The models all suggest a high degree of *specialization* in the production of international goods to be optimal, that is a situation in which each country specializes in a narrowly related set of goods with almost the same relevant characteristics. This stands at variance with the actual situation as well as with the frequently given advice to diversify production. At a later stage of the project a common-sense discussion of the relative merits of specialization and *diversification* will be useful therefore. A provisional attempt at such a discussion will be made in § 6.

§ 3. Model 1, with many factors, but rigid factor proportions

As already announced, in this model we assume that there are a large number H of factors, each of them indicated by an index h ($h = 1 \ldots H$). Among these factors we do not include unskilled labour, but we do include a large number of natural resources. As products we only consider finished products and we assume that all countries have an "*integrated production structure*", meaning that whatever production occurs is vertically integrated. In still other words this means that if somewhere some final product is made, then all processes leading from the main raw material to the finished product are carried out in the same country. This implies a somewhat arbitrary subdivision of all production in "*production columns*" of such integrated processes. Each country will only have some of these columns. International trade in semi-finished products whose destination is the same column is therefore excluded; but there remain possible *three types of international trade*, namely, in (i) finished consumer goods; (ii) finished investment goods and (iii) semi-finished products destinated for another column. We may also widen the definition of investment goods by including among them this category (iii), which is not customary, however, and which we will not do therefore. As an *example* let us take the industries producing automobiles. They may be considered as one column, starting with pig iron and showing many intra-column semi-finished steel products. But there are also inputs such as leather, coming from the column of (some types of) leather goods. Leather used in cars is an example of a semi-finished product of one column entering into another, namely, the motor car column. In the present model, only *finished products* will be considered. Each of them can be characterized by an input of several

factors needed per man of unskilled labour employed in the column. These inputs are assumed to be fixed or invariable and will be indicated by l_h ($h = 1 \ldots H$). To the extent that also skilled labour is used, this is considered as a combination — as already said — of unskilled labour and a given quantity of educational capital, and the latter is among the factors h.

Similarly, each *geographical unit* or homogeneous part of a country is characterized by the *endowment* k_h ($h = 1 \ldots H$) per unit of unskilled labour. All skilled labour is again considered as a combination of unskilled labour and some quantity of educational capital.

Thus there are *two universes*, one of all finished goods and one of all geographical units, called countries for convenience. Both show a *frequency distribution*. For the goods the frequency is determined by total *demand* (at an income corresponding with the *full utilization* of all factors of production) and can be expressed in the number of workers needed for its production. For the countries their "frequency" is determined by the number of workers. In both cases we restrict ourselves to the international goods and the workers needed or available for them. Both frequency distributions will be expressed in *cumulative form;* they will be notated as A $(k_1 \ldots k_H)$ and B $(l_1 \ldots l_H)$. For any given set of values $k_1 \ldots k_H$, A $(k_1 \ldots k_H)$ means the number of workers of all countries showing values k_h up to the values chosen. The *central problem* we have to solve is to establish a set of relations — to be called "*correspondence relations*" — indicating the country k where a given type of good l has to be produced, in order to have the optimal division of labour. These correspondence relationships may be written first in the general form:

$$k_h = k_h(l_1 \ldots l_H), \quad h = 1 \ldots H \tag{3.1}$$

representing one equation for each k_h. Mathematically they may also be called *transformation* equations. They have to fulfil the conditions that in each "commodity compartment" there is *equilibrium between supply and demand*. With our method of describing the two universes, these conditions will be fulfilled if and only if, for all values of $l_1 \ldots l_H$, there is equality between the two sides of the following equation:

$$A\{k_1(l_1 \ldots l_H),\ k_2(l_1 \ldots l_H, \ldots,\ k_H(l_1 \ldots l_H)\} \equiv B(l_1 \ldots l_H). \tag{3.2}$$

Since this equality must be satisfied for any set of values of the variables l_h, we have written the equation in the form of an identity. A simple example will illustrate the meaning of (3.1) and (3.2). Before giving this example we will introduce the concepts of *prices* of products and of factors. In order, namely, that the optimum international division of labour described by (3.1) will materialize under a system without trade impediments — as the simplest

form of organization of foreign trade — each country must be the cheapest potential supplier of exactly the commodity it should produce. Indicating by $p_h\,(k_1 \ldots k_H)$ the price of factor h in country $(k_1 \ldots k_H)$, we find the price of its product to be

$$\sum_{h'=1}^{H} l_{h'}\, p_{h'}(k_1 \ldots k_H) + p_0(k_1 \ldots k_H)\,,$$

where p_0 stands for the price of unskilled labour in the country considered. This will be a minimum for country k_h $(h = 1, \ldots H)$, if

$$\sum_{h'=1}^{H} l_{h'} \frac{\partial p_{h'}}{\partial k_h} + \frac{\partial p_0}{\partial k_h} = 0\,, \quad h = 1 \ldots H. \tag{3.3}$$

Finally, the frequency distributions A and B must satisfy another set of conditions, namely that, for each factor, *equilibrium* shall prevail between *world supply and world demand.* These conditions constitute a set of *restrictions on the parameters* of the two frequency distributions. It can be shown that the specification we are going to choose as our example satisfies also this condition.

At the present stage of our research, being the preparatory theoretical stage only, the purpose of our choosing an explicit example is mainly to illustrate the nature of the method and the possibility to derive conclusions. The empirical material available is very crude and shows large lacunae, enabling us only to introduce some very general features. Accordingly the conclusions are of very limited validity and only contain some general suggestions. These will be discussed, together with the preliminary conclusions to be drawn from the other models, in § 4.

The specification of A and B we are choosing are the following:

$$A(k_1 \ldots k_H) = A_0' \frac{\alpha_0 \Sigma k_h - 1}{\alpha_0 \Sigma k_h + \alpha} \tag{3.4}$$

$$B(l_1 \ldots l_H) = A_0' \frac{\beta_0 \Sigma l_h - 1}{\beta_0 \Sigma l_h + \beta}\,. \tag{3.5}$$

Here A_0' represents a constant of the same order as, but somewhat larger than, A_0, the total number of workers available for the production of international goods; in addition, A contains two parameters, α_0 and α and B two other parameters, β_0 and β. Indicating by k and l, respectively, the sums Σk_h and Σl_h appearing in (3.4) and (3.5), by $\bar{k}$ and $\bar{l}$, respectively, the upper values occurring in reality and by $\underline{k}$ and $\underline{l}$ the lower values, the meaning of the parameters can be expressed in terms of these upper and lower values. Evidently the lower value of k must satisfy the condition $A = 0$ or

$$k = \frac{1}{\alpha_0} \tag{3.6}$$

and similarly:

$$l = \frac{1}{\beta_0} . \tag{3.7}$$

The upper values must satisfy:

$$\frac{\alpha_0 \bar{k} - 1}{\alpha_0 \bar{k} + \alpha} = \frac{A_0}{A_0'} = \frac{\beta_0 \bar{l} - 1}{\beta_0 \bar{l} + \beta} . \tag{3.8}$$

From the crude knowledge we have we may conclude that

$$\bar{l} < \bar{k} \text{ and } \underline{l} > \underline{k} \tag{3.9}$$

meaning that the *divergence in endowments between poor and rich countries is larger than the dispersion in factor requirements for different products.* This implies as a consequence of (3.6) and (3.7), that

$$\alpha_0 > \beta_0 . \tag{3.10}$$

Writing

$$A_0' = (1 + \eta) A_0 , \tag{3.11}$$

where η is small in comparison with 1, we may derive from (3.8)

$$\frac{\alpha + 1 - \eta}{\beta + 1 - \eta} > \frac{\alpha_0}{\beta_0} > 1$$

implying that

$$\alpha > \beta . \tag{3.12}$$

It can be shown that the shape of A and B implies that the world supply of each factor individually equals the world demand for it.

The shape of the frequency distributions is illustrated by Diagram 1, for the case where $H = 2$ only. Along the horizontal axes k_1 and k_2 are plotted, whereas A is plotted along the vertical axis. As can be easily seen, $A = 0$ for the combinations (k_1, k_2) on the line PR. These combinations show $k = \bar{k}$. Combinations (k_1, k_2) represented by the line BC or B′C′ show a cumulated frequency of OA′. The countries with the highest k, that is $\bar{k}$, are included only if $A = A_0$ and occur on the line QS. Since the frequencies are cumulated, the frequency density for any particular value of $k = k_1 + k_2$ is indicated by the slope of the frequency surface. This slope is decreasing for rising values of k and it is implicitly assumed therefore that there are more workers in countries with low values of k than there are with high values.

We are now going to illustrate the *solution* of the central problem, that is, the derivation of the optimal division of labour, or choice of products by each country. To this end we have to find the correspondence relations (3.1),

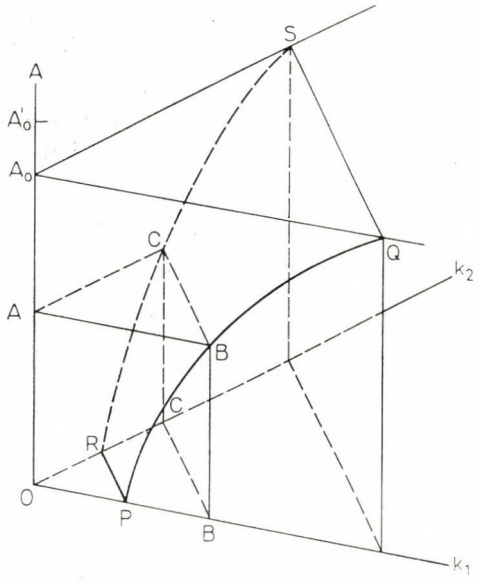

Diagram 1

satisfying (i) the conditions (3.2) and, if degrees of freedom are left, optimizing the welfare function not yet specified. With our specification of A and B identity (3.2) becomes:

$$\frac{\alpha_0 k - 1}{\alpha_0 k + \alpha} \equiv \frac{\beta_0 l - 1}{\beta_0 l + \beta}$$

or

$$\alpha_0(\beta + 1)\,\Sigma k_h \equiv \beta_0(\alpha + 1)\,\Sigma l_h + \beta - \alpha. \tag{3.13}$$

Since the right-hand side is linear in all l_h, no other than linear expressions in the l_h ($h = 1 \ldots H$) can be admitted in the left-hand side either. Hence we pose

$$k_h = \sum_{h'} K_{hh'} l_{h'} + K_h \qquad (h = 1 \ldots H) \tag{3.14}$$

where the K with two suffixes or one are *parameters*. Substituting (3.14) into (3.13) we will find $H + 1$ conditions which these $H^2 + H$ parameters will have to satisfy. These conditions follow from the necessity that for each l_h the coefficient must be zero and the same for the constant term without any l_h. The results are:

$$\sum_{h} H_{hh'} = K = \frac{\beta_0}{\alpha_0}\frac{\alpha + 1}{\beta + 1} > 1 \tag{3.15}$$

$$\sum_{h} K_h \frac{\beta - \alpha}{\alpha_0(\beta + 1)} < 0. \tag{3.16}$$

Since the number of parameters surpasses the number of conditions, there remain *degrees of freedom*. We will return to the use of this freedom for the purpose of optimization in a while.

We are also able to suggest a *factor price system* satisfying conditions (3.3) by assuming that the latter equations are identical with our transformation equations (3.14). This will be so if

$$\frac{\partial p_{h'}}{\partial k_h} = -K_{h'} \tag{3.17}$$

$$\frac{\partial p_0}{\partial k_h} = k_h - K_h \tag{3.18}$$

from which we derive:

$$p_h = -\sum_{h'} K_{h'h} k_{h'} + p_{h0} \tag{3.19}$$

$$p_0 = \frac{1}{2}\sum_h k_h^2 - \sum K_h k_h + p_{00}. \tag{3.20}$$

We are now turning to the last question to be answered, namely which among the many "feasible solutions" found so far can be considered *optimal*. Of course the answer depends on the criterion we choose. In this particular model the criterion cannot be total production or income, since the fixed production coefficients and demand composition assumed already determine total production. The criterion can only be a *distributive* one.

We may illustrate the situation by assuming that only one factor, capital, is mobile between countries. This is not necessarily correct, but is approximately correct if we assume that trade in intermediate products from one column to another is relatively unimportant, implying that no large quantities of natural resources are moved (in the form of these intermediate products) from one country to another. For this case, all $k_h = l_h$, except for $h = 1$, assumed to represent capital. We can then calculate all parameters $K_{hh'}$ and K_h and we have made a choice which influences the relative wage rates p_0 for different countries. Inversely we could have imposed some relative values for wage rates and would accordingly have found sets of values for the parameters.

§ 4. Models 2 and 3, with two factors only, but substitution; Model 2

In this chapter we will describe the general features of two other models and the specific features of one of them (Model 2), which are based on a different approach. Whereas in Model 1 the production complex of the international goods was subdivided into columns and each country was supposed to have

some columns, in models 2 and 3 another subdivision of the production complex is made. Here the elements are single processes or activities and not products; and we assume that the location of each process can be chosen freely. As a simplex example we may quote that spinning and weaving need not be done in the same country. In this model much more trade in semi-finished products is possible and no preference for an "integrated production structure" is assumed to exist. In accordance with what was said in Chapter I, our use of processes will now require a definition of national processes (as distinct from national products) and among the former are the processes by which natural resources are converted into primary products. These processes are now excluded from the analysis. As a consequence no inputs of natural resources occur in the processes considered and the number of factors reduces to labour and capital.

A *production function* is assumed expressing the product $AF(k, a)$ per unit of labour (for instance, one million workers), where

A represents a general efficiency factor,

k the quantity of capital per unit of labour,

a an index characterizing the type of product made.

This implies that *substitution* between labour and capital is possible, since the quantity k of capital per unit of labour is assumed to be a variable.

"*Countries*" are characterized by the value of A and a frequency distribution $n(A)\,dA$ is assumed to exist indicating the number of labour units present between the values A and $A + dA$.

Products are supposed to have a price $p(a)$, constituting a "price scale". The *main problem* to be solved is to find the "*correspondence relation*" $a(A)$ indicating which range of products should be produced by a country within the range A, $A + dA$. This choice is assumed to be made, by each country's producers, through maximizing their income $y(a)$. This income equals

$$y(a) = Ap(a)\,F(k, a)\,n(A)\,dA\,.$$

The *price scale* $p(a)$ must be such that demand and supply for each product range da are in equilibrium. *Demand* is assumed to depend on world income Y and the price of the product considered in the simplest way consistent with the condition that all income is being spent and no more.

World income Y can be expressed by:

$$Y = \int_{\underline{A}}^{\bar{A}} p\,\{a(A)\}\,F\,\{k(A), a(A)\}\quad n(A)\,A\,dA \tag{4.1}$$

where $k(A)$ is another scale indicating the *distribution of capital* over countries and $\underline{A}$ and $\bar{A}$ are the lower and upper values of A observed in the world.

The amount spent on a product range a, $a + da$ is supposed to be a portion $\gamma(a)\,da$ of Y, independent of its price, where:

$$\int_{\underline{a}}^{\bar{a}} \gamma(a)\,da = 1 \tag{4.2}$$

and $\underline{a}$ and $\bar{a}$ are the lower and upper values of the values of a, representing the products, produced in the equilibrium position. For simplicity's sake we assume that $\gamma(a)$ is independent of a, implying that

$$\gamma = \frac{1}{\bar{a} - \underline{a}}\,. \tag{4.3}$$

The value of the product range a, $a + da$ will be:

$$p(a)\,F(k, a)\,N(a)\,A\,da \tag{4.4}$$

where $N(a)$ is the frequency density of product a. This density is linked with the density $n(A)$ by the relation

$$N(a)\,da = n(A)\,dA\,. \tag{4.5}$$

The condition of equilibrium between demand and supply of the commodity range considered, to be satisfied by the price scale, therefore runs:

$$p\left\{a(A)\right\}\,F\left\{k(A), a(A)\right\}\,n(A)\,A\,dA = \frac{da}{\bar{a} - \underline{a}}\,Y \tag{4.6}$$

which may be written:

$$p\left\{a(A)\right\}\,F\left\{k(A), a(A)\right\}\,n(A)\,A = \frac{1}{\bar{a} - \underline{a}}\,\frac{da}{dA}\int_{\underline{A}}^{\bar{A}} p\left\{a(A)\right\}\,F\left\{k(A), a(A)\right\}\,n(A)\,A\,dA. \tag{4.7}$$

In essence this represents a series of conditions which the parameters of the unknown functions $p(a)$, $a(A)$ and $k(A)$ must fulfil, as will become clear later.

Generally speaking the capital distribution function $k(A)$ may finally be used to attain some *world optimum*. One of the possible criteria for such an optimum may be that Y be a maximum; another criterion may be that the ratio between the per capita income of the poorest and of the richest country be a maximum or

$$\frac{\underline{y}}{\bar{y}} = \frac{p(\underline{a})\,F(\underline{k}, \underline{a})\,\underline{A}}{p(\bar{a})\,F(\bar{k}, \bar{a})\,\bar{A}}\,\max. \tag{4.8}$$

Finally, the capital distribution function must fulfil the condition that total capital K is given:

$$\int_{\underline{A}}^{\bar{A}} k(A)\,n(A)\,dA = K\,. \tag{4.9}$$

Whereas in this form the model is of a general nature in many respects, it is specific and hence open to further generalization in several other respects. Its specificity can be characterized by the following assumptions made:

(1) the form of the production function $AF(k, a)$;

(2) the existence of a price scale $p(a)$ fulfilling the condition of equilibrium between supply of and demand for each range of goods;

(3) the existence of the "correspondence" or "division of labour" relation $a(A)$;

(4) the existence of a "capital distribution scale" $k(A)$;

(5) the assumption that the portion of income spent on each commodity is independent of its price (i.e. the price elasticity of demand equals -1);

(6) the further assumption that this portion does not depend either on the nature of the commodity range.

Especially the last two assumptions are open to *generalization*. In order to illustrate the classes of models implied in the general structure just set out, the method to arrive at the optimum division of labour, the features such an optimum may show and the measures needed to let it materialize, we will describe *two very simple special* cases where an explicit method of solution exists. They will be called models 2 and 3. They have in common the special choice of $n(A) = A^{-2}$ with $\underline{A} = 1$ and $\bar{A} = 3$, meaning that the country with the highest efficiency is three times as efficient as the one with the lowest efficiency and that the number of workers per unit interval of A varies inversely with the square of efficiency. This implies that over a small interval of say, $dA = 0.05$, there are 9 times as many people in the lowest efficiency class than in the highest. In concrete but of course approximate terms this means that there are 0.9 billion workers at the lowest level in Africa and Asia versus the 0.1 billion workers at the level of, say, the United States.

We are now going to specify *Model 2*.

Apart from the general structure described and the specific choice of the frequency distribution for A just mentioned Model 2 is characterized by the further specific assumptions:

(1) the *production function* F shows the form

$$F(k, a) = k^{\varphi_1} a^{\varphi_2}$$

where φ_1 and φ_2 are given constants;

(2) the shape of the *capital distribution function* is:

$$k(A) = k_0 A^{\varkappa}$$

where k_0 and $\varkappa$ are unknown parameters;

(3) the *correspondence relation* between a and A is:

$$a = a_0 A^{\alpha}$$

where a_0 and α are unknown parameters and

(4) the *price scale* consists of

$$p = a^{\pi} A^{\varrho}$$

where π and ϱ are unknown parameters.

The problem to be solved is whether the unknown parameters can be chosen so as to satisfy the various conditions discussed under the heading "general structure of models 2 and 3". We will reformulate these conditions in the specific form they take in this model; they appear to be, at first sight, five in all, to be numbered I through V.

Choice of product by each country through maximization in respect with a, of y. Since in the expression for $y(a)$, given in equation (4.1), $An(A)$ are given factors, we have to maximize pF and with the specifications chosen pF equals:

$$a^{\varphi_2+\pi} k^{\varphi_1} A^{\varrho}.$$

Here again A and k are given to the "country"; pF will be a maximum if a is at its upper limit $\bar{a}$, unless it is indifferent to the producers which product they produce. Since the former choice would certainly not meet the conditions of equilibrium between supply and demand, we must conclude that it has to be indifferent from the supply side to each country what to produce and that the choice will be based on demand. In order that the supply side be indifferent we must have

$$\varphi_2 + \pi = 0 \quad \text{or} \quad \pi = -\varphi_2. \tag{I}$$

The conditions to be fulfilled by the parameters in order that there be *equilibrium between supply and demand* will appear to be two. They must be derived from (4.7) which must hold identically in the variable A since it must be true for any value of A. In this model we will assume that the range of goods $(\underline{a}, \bar{a})$ is given beforehand. An alternative assumption is that it follows from demand and supply. Since we assumed $\underline{A} = 1$ and $\bar{A} = 3$, assumption (3) implies

$$\underline{a} = a \qquad \bar{a} = a_0 3^{\alpha}$$

and hence $\dfrac{1}{\bar{a} - \underline{a}} = \dfrac{1}{a_0(3^{\alpha} - 1)}$, where, however a_0 and α are already determined, in this alternative of our model, by the values $\underline{a}$ and $\bar{a}$. It also follows from (3) that $\dfrac{da}{dA} = \alpha\, a_0\, A^{\alpha-1}$.

Substituting our four assumptions (1) through (4) into equation (4.7) we obtain:

$$a_0^{\pi+\varphi_2} k_0^{\varphi_1} A^{\alpha\pi+\varrho+\varkappa\varphi_1+\alpha\varphi_2-1} \equiv \frac{a_0 \alpha A^{\alpha-1}}{a_0(3^\alpha - 1)} a_0^{\pi+\varphi_2} k_0^{\varphi_1} \int_1^3 A^{\alpha\pi+\varrho+\varkappa\varphi_1+\alpha\varphi_2-1} dA .$$

Because of (I) this reduces to

$$A^{\varrho+\varkappa\varphi_1-\alpha} \equiv \frac{\alpha}{3^\alpha - 1} \int_1^3 A^{\varrho+\varkappa\varphi_1-1} dA \frac{\alpha}{3^\alpha - 1} \frac{3^{\varrho+\varkappa\varphi_1} - 1}{\varrho + \varkappa\varphi_1} .$$

This gives rise to the two conditions:

$$\varrho + \varkappa\varphi_1 - \alpha = 0 \tag{II}$$

$$\frac{3^\alpha - 1}{\alpha} \frac{3^{\varrho+\varkappa\varphi_1} - 1}{\varrho + \varkappa\varphi_1} . \tag{III}$$

It appears, however, that if II is satisfied by the still unknown parameters ϱ and $\varkappa$, condition (III) is also fulfilled. Hence by coincidence the two conditions boil down to one only, for which we take (II).

Total capital K being given we deduce from equation (4.9) that

$$\int_1^3 k_0 A^{\varkappa-2} dA = K$$

or

$$k_0 \frac{3^{\varkappa-1} - 1}{\varkappa - 1} = K . \tag{IV}$$

Finally, if we choose as the optimization criterion a *maximum of* $\underline{Y}$ the parameters will have to satisfy

$$k_0^{\varphi_1} \frac{3^{\varrho+\varkappa\varphi_1} - 1}{\varrho + \varkappa\varphi_1} \max .$$

Substituting the value of k_0 from (IV) and that of $\varrho + \varkappa\varphi_1$ from (II) this condition becomes:

$$\frac{K^{\varphi_1}(\varkappa - 1)^{\varphi_1}}{(3^{\varkappa-1} - 1)^{\varphi_1}} \frac{3^\alpha - 1}{\alpha} \max . \tag{V}$$

In this expression only $\varkappa$ is unknown at this stage. Since $\frac{\lambda}{3^\lambda - 1}$ (if we write λ

for $\varkappa - 1$) is a monotonously falling expression in λ, its maximum will be attained for the lowest value of λ or again the lowest value of $\varkappa$ admissible. Since the extreme conceivable for the capital distribution function (2) is an equal distribution of capital, meaning that $\varkappa = 0$ we may conclude that maximum world income Y will be reached for $\varkappa = 0$.

Summarizing our findings so far we found that, if we consider the range of goods to be produced as predetermined, a_0 and α are determined by $\underline{a}$ and $\bar{a}$. A workable choice of product is only possible if $\pi = -\varphi_2$; the choice will be determined by the demand side rather than the supply conditions. In order to maximize world income capital distribution should be as equal as possible. But the more equal it is (the lower $\varkappa$ is) the higher, according to condition (II) ϱ should be, meaning a sort of price differentiation for the same type of product and making them higher for countries with a high A, that is, the developed countries, than for less developed countries. Here another alternative is showing up: reducing this price differentiation means increasing the differentiation in capital endowment, that is, larger values of $\varkappa$, with a corresponding fall in world income.

An *alternative optimization criterion*, for instance the *ratio between the income per head of the poorest to the same income of the richest country*, appears to depend on α only: if by $\underline{y}$ we indicate the lowest income and by $\bar{y}$ the highest we have:

$$\frac{\underline{y}}{\bar{y}} = \frac{\underline{A}\, p(\underline{a})\, k_0^{\varphi_1}\, \underline{A}^{\varkappa\varphi_1}\, \underline{a}^{\varphi_2}}{\bar{A}\, p(\bar{a})\, k_0^{\varphi_1}\, \bar{A}^{\varkappa\varphi_1}\, \bar{a}^{\varphi_2}} = 3^{\alpha+1}.$$

As long as we stick to the idea that the range of goods to be produced is predetermined, nothing can be changed in the income distribution among countries. If we prefer to change that distribution into the direction of more equality we have to accept, in the context of this model, that the range of products is reduced correspondingly.

Our findings may finally be *illustrated* by a numerical example for which the following parameter values have been chosen: $\underline{a} = a_0 = 0.2$; $\bar{a} = a_0 3^{\alpha} = 0.6$, implying that $\alpha = 1$, $K = 0.63$, $\varphi_1 = 0.3$, $\varphi_2 = 1$. This determines $\pi = -1$. We have taken 2 alternative values for $\varkappa$, namely $\varkappa = 2$ and $\varkappa = 1$. For these case we find:

	Y	$\bar{y}$	$\underline{y}$	$\bar{k}$	$\underline{k}$	ϱ	$\bar{p}$	$\underline{p}$	p_{av}	$\frac{Y}{p_{av}}$
$\varkappa = 2$	0.71	3.20	0.355	0.273	0.0315	0.4	2.58	5	3.79	0.188
$\varkappa = 1$	0.85	3.82	0.425	0.17	0.0570	0.7	3.60	5	4.30	0.198.

For the smaller value of $\varkappa$ we find that all incomes are higher, but the prices are also higher. A crude correction for prices in order to approach real

incomes has been added therefore. The second line is more favourable than the first.

§ 5. Model 3

Model 3 again has in common with model 2 the general structure described and the specific choice of the frequency distribution for A. The additional assumptions are different:

(1) the *production function* is now chosen

$$F(k, a) = k^a$$

meaning that the commodity characteristic is now simply the exponent attached to capital per unit of labour, as customary in the simplest type of Cobb—Douglas production function;

(2) the *capital distribution function* is now given the shape

$$k(A)\, e^{-\varkappa A^\lambda}$$

where $\varkappa$ and λ are unknown parameters;

(3) since it appears from the further analysis that the two assumptions already set out implicitly determine the *correspondence relation* between a and A no explicit assumption on this relation's shape can be added;

(4) the *price scale* is taken to be the same as in model 2, namely

$$p = a^\pi A^\varrho$$

with π and ϱ as unknown parameters.

In a way similar to the one followed in model 2 we will try and formulate the conditions which the free parameters have to satisfy.

The *choice of product* by suppliers is again assumed to follow from the maximization, with regard to a, of income per unit of labour; now this means maximizing

$$a^\pi A^{\varrho+1} k^a$$

where A and k are given. This leads to

$$\frac{\partial}{\partial a} a^\pi k^a = 0$$

or

$$a^{\pi-1} k^a (a \ln k + \pi) = 0$$

or, using (2):

$$a = -\frac{\pi}{\ln k} = \frac{\pi}{\varkappa A^\lambda} \qquad \text{(I)}$$

implying also that

$$k^a = e^{-\pi} \tag{I'}$$

Again, at first sight, the conditions which the parameters have to satisfy in order to establish *equilibrium in all commodity markets*, are two, to be derived from equation (4.7). Substituting the expressions found for k^a and for a in (I') and (I) equation (4.7) reduces to

$$A^{-\lambda\pi+\varrho+\lambda} \frac{3^{-\lambda}-1}{-\lambda} \equiv \frac{3^{-\lambda\pi+\varrho}-1}{-\lambda\pi+\varrho}$$

from which two conditions can be derived:

$$-\lambda\pi + \varrho + \lambda = 0 \tag{II}$$

and

$$\frac{3^{-\lambda}-1}{-\lambda} = \frac{3^{-\lambda\pi+\varrho}-1}{-\lambda\pi+\varrho} . \tag{III}$$

Again it appears that satisfaction of (II) implies (III) to be fulfilled and that (III) does not, therefore, constitute an independent condition.

The condition that *total capital* must be given now runs:

$$\int_1^3 e^{-\varkappa A^\lambda} A^{-2}\, dA = K \tag{IV}$$

which defines a link between the parameters $\varkappa$ and λ.

Closer examination of this relationship shows that explicit calculation of the integral in terms of $\varkappa$ is only possible for integer values of $\frac{1}{\lambda}$. Some examples will be given below.

Maximization of Y requires a maximum of

$$Y = \pi^\pi \frac{3^\mu - 1}{\mu \varkappa^\pi} \tag{V}$$

where $\mu = -\lambda$. From (IV) we know that $\varkappa$ depends on λ (or μ) only and not on π.

Then, it seems useful to calculate the alternative criterion $\frac{\underline{y}}{\bar{y}}$; this turns out to be $\left(\frac{\underline{A}}{\bar{A}}\right)^{-\lambda}$, and hence depends on λ (or μ) only. (V')

Finally, it follows from (I) that the lower and upper values of a are now:

$$\underline{a} = \frac{\pi}{\varkappa} \underline{A}^{-\lambda} = \frac{\pi}{\varkappa} \underline{A}^{\mu} = \frac{\pi}{\varkappa} \tag{VI}$$

and

$$\bar{a} = \frac{\pi}{\varkappa} \bar{A}^{-\lambda} = \frac{\pi}{\varkappa} \bar{A}^{\mu}. \qquad \text{(VII)}$$

From our analysis it appears that the *logical structure* of this model is different from that of Model 2. Condition (I) does not actually represent a condition upon the free parameters, only four in number now as against six in Model 2. The number of conditions amounts to five if we include V, VI and VII, meaning that they cannot all be fulfilled. If we stick to (VI) and (VII), a predetermined range of goods, we cannot maximize income or an alternative criterion, but simply find one position. Assuming $\underline{a} = 0.2$ and $\bar{a} = 0.6$, for instance, we will find $\mu = -\lambda = 1$, which yields $\varkappa = 4$* if we take $K = 0.063$. We find $Y = 0.55$ and $\varrho = 0.2$.

We may follow another course, however, by *not* considering the range of goods predetermined. Since that means two conditions less, we now have two degrees of freedom. It is attractive to choose $\varrho = 0$, meaning that there is no price differentiation, and $\pi = 1$. This leaves us still with one parameter that may be varied and can be considered as a policy instrument. For the same value of total capital $K = 0.63$ we find approximately the following sets of results for two values of λ:

Two solutions of Model 3 with $\varrho = 0$ *(*$\underline{a}$ *and* $\bar{a}$ *considered unknowns)*

λ	$\bar{k}$	Y	$\bar{y}$	$\underline{y}$	$\bar{a}$	$\underline{a}$	$\bar{k}$	$\underline{k}$	$\bar{p}$	$\underline{p}$	p_{av}
$-\frac{1}{2}$	3	0.49	0.64	0.122	0.58	0.33	0.173	0.050	0.58	0.33	0.45
-1	4	0.50	0.83	0.092	0.75	0.25	0.264	0.018	0.75	0.25	0.50

From this table we see that a more even distribution of capital causes a *less unequal distribution of income*, without affecting much total income, but at the same time narrows down the range of commodities produced. The average price level (crudely approached by the arithmetic average of $\bar{p}$ and $\underline{p}$) is lower in the first case than in the last, making total real income higher in the first case.

§ 6. Some impressions gained

The objective of this study is to emphasize the *need for a vast statistical material* if ever a concrete contribution to the problem of the optimal division of labour is to be made. Since the collection of statistical material requires a vision on the problem, which is equivalent to a provisional theory, this report

* This calculation is not given here.

concentrates on some theoretical models needed to give sense to the problem to be tackled. The objective of the report may therefore also be said to be to arouse interest for the problem and for the collection of statistical material. Such interest may be stimulated by an attempt to summarize the very *provisional impressions* gained during the construction of the models. Such an attempt will now be made. In plain language some of the aspects discovered in the course of the exercise will be set out and it is hoped that these impressions will help to visualize more clearly some of the essential features of the problem.

To begin with, two essentially different ways of *representing the production complex* have been followed. In Model 1 the idea of "*integrated production structure*" was used; an idea often showing up in practical discussions of the development problem. In simple words, and hence somewhat inaccurate, this means that many governments want to be independent from deliveries of semi-finished products for the production of the finished products they choose to produce. If they prefer to produce automobiles, they want to produce the parts also, down to the steel needed. Although in Chapter III we have shown that this principle cannot be fully applied, we have tried to give it some real content. But there remains a problem to be discussed: what are the justifications for such an integrated production structure and what disadvantages are connected with it? There seem to be two main justifications. One is that an integrated structure will *save on transportation costs* for the intermediate products. The other is that often, because of *double pricing* applied by the suppliers of intermediate products, processing countries are at a disadvantage in competitive power vis-à-vis the countries producing the intermediate products as well as the final products.

Some disadvantages of an integrated structure should also be mentioned. First, the transportation costs of the intermediate products may not be important enough to outweigh the *high costs* of production for some of these products. Secondly, these high costs may be due to either the *capital-intensity* of some of the intermediate processes or the *small market* for them in the processing country. Thus it is not always necessarily an advantage to have an integrated structure. Finally, as we have seen in § 3, the principle of an integrated structure *cannot be carried through to the full*, because of the inputs one column has to obtain from other columns (the case of leather for automobiles). The principle would then require that every country have all industries, which is clearly an absurd idea.

The next "impression" we want to present is not a logical consequence of our analysis, but one of analyses made elsewhere by various authors. Although not universally true, it is true in many circumstances that the *full use of all production factors* leads to a larger total product than any alternative choice of activities, leaving part of the factors idle.

A third point to be remembered is that the existence of *trade impediments applied by the prosperous countries* is incompatible with the optimum conditions of welfare economics. These conditions require that prices be equal to marginal costs of production and in this situation no artificial elements such as import duties are admissible. The same conclusion does not necessarily apply to export subsidies applied by developing countries, since their wage rates may not reflect the marginal productivity of their labour and some correction may be seen in export subventions. Also they may need import duties to permit their

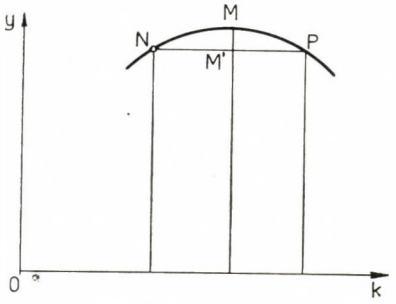

Diagram 2

infant industries to survive from the learning process, during which their productivity is sub-normal. It should be added that several developing countries would be better able to compete in the field of their optimal industries if they adjusted downward the exchange rates of their currencies.

Next we come to the main element in the picture about an optimal division of labour among countries which we have arrived at: the element of *specialization*. As a matter of fact the two models in existing literature permitting the introduction of a large number of countries and of products have in common that each country, in the optimum, should specialize on one product or, if we assume an infinity of products, a "neighbouring range" of products. The essence of this conclusion may be illustrated by Diagram 2, where the income obtained for a unit of unskilled labour is plotted against the quantity of capital applied per unit of labour or the capital intensity of production. The maximum income is obtained at point M. The same quantity of capital could also be used in two distinct industries represented by points N and P, but then the income obtained will be M' only, which is less than M. As a consequence, specialization will be optimal, as long as the income curve (or surface, or hypersurface, if we have more factors of production) is convex. This suggestion of specialization as an optimum stands at variance with the well-known arguments in favour of *diversification*. It seems useful to analyse these arguments. Diversification is seen as a protection against some risks of unexpected changes in demand, due either to fluctuations in income or to shifts in taste or

technology, or finally of communication (as in the case of war). Some of these risks are less to-day than they once were. Thus, we are getting under control fluctuations due to business cycles and, to some extent, due to the instability of individual markets. Shifts in taste or in technology are still among the real possibilities. The danger of war has changed in character to the extent that economic protection against that danger has become difficult for small areas and in a way become irrelevant.

Taken together the arguments in favour of some diversification still stand, although to a lesser degree than previously. It seems possible to *reconcile* our findings of specialization as the main feature of an optimum with *some* diversification, however. On the one hand, in the neighbourhood of a flat maximum such as suggested by Diagram 2, some deviation from it does not change the value of income much.

On the other hand, it should not be overlooked that our plea for specialization refers to international industries only and to small areas. In other words, national industries are needed everywhere and in a way represent some diversification; moreover, large countries are composed of many regions, each perhaps with their own specialization. A final argument for specialization, falling outside the models used so far, but of some relevance in the real world, is introduced as soon as economies of scale are recognized as a feature of real production processes.

The concrete relevance of our result may be illustrated by an argument sometimes presented by planners for a country somewhere in the middle range of income per capita. It has been suggested that such a country may have to produce essentially two types of goods; relatively labour-intensive goods in order to export to the richest countries and relatively capital-intensive goods for export to poor countries. This suggestion may produce misunderstanding if it is understood to mean that two rather different clusters of goods should be produced. It can be reconciled with our main suggestion if it is interpreted to mean that some cluster in the "middle range of goods" be chosen. In fact such goods are labour-intensive in comparison with the capital-to-labour endowment of the richest countries and are capital-intensive in comparison with the capital-to-labour endowment of the poorest countries.

These impressions illustrate the importance of collecting statistical material which will enable us to arrange both the products or production processes and the geographical areas of the world according to rising capital–labour ratios, including in the concept of capital also educational capital, so as to indicate the optimal correspondence between these two series.

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ОПТИМАЛЬНОЕ МЕЖДУНАРОДНОЕ РАЗДЕЛЕНИЕ ТРУДА

Я. ТИНБЕРГЕН

Автор ставит следующий вопрос: можно ли разработать для всех стран мира предложения относительно того, на производство какой продукции им следует специализироваться, чтобы при этом обеспечивался максимум благосостояния в мировых масштабах?

В своей статье автор исходит из относительно простой концепции благосостояния в мировом масштабе: благосостояние народов мира растет тогда, если чистая продукция, то есть совокупное потребление увеличивается, и распределение благ становится более равномерным.

Даже самый поверхностный анализ показывает, что мировое хозяйство еще далеко не достигло такого оптнмума:

1. Плохо используются факторы производства — в особенности неквалифицированная рабочая сила слаборазвитых стран.

2. Распределение благ неравномерно.

3. Международной торговле мешает ряд необоснованных препятствий, точнее: развитые страны ведут политику протекционизма, не соответствующую интересам мирового развития.

При решении проблемы автор исходит из нормативной теории международной торговли. К этому вопросу он пытается подойти тремя совершенно новыми путями.

Согласно первому из них автор строит модель, содержащую многие производственные факторы. Природные ресурсы представлены в модели продуктами производящих сырье отраслей, как, например, пшеницей, медной рудой, нефтью и т. д.

Второй и третий тип моделей анализируют производственные процессы. Анализируемые ресурсы: труд и капитал. Природные ресурсы учитываются лишь как использование сырья для продуктов, попадающих в международный оборот.

На основе анализов, произведенных при помощи нормативных — теоретических — моделей автор приходит к выводу, что на поставленные вопросы достоверный ответ можно дать лишь после сбора огромного статистического материала и анализа этих данных. Проведенная же до сих пор работа пригодна лишь для обобщения временных впечатлений.

Первый вывод касается создания «интегрированной» производственной структуры. Такие предложения мотивируются двумя аргументами: экономией затрат на перевозку и избежание потерь, связанных с часто высокими ценами полуфабрикатов (**double pricing**). Против интегрированного производственного процесса можно привести то обстоятельство, что сокращение издержек транспортирования часто не компенсирует рост издержек производства. Высокие издержки, по мнению автора, мотивируются капиталоемкостью производства некоторых полуфабрикатов и неудовлетворительным спросом на внутренних рынках. К тому же полная интеграция вообще не может быть осуществлена в совершенном виде.

В качестве второго вывода у автора сложилось впечатление, что полное использование производительных сил приносит большую пользу, чем любая специализация, не обеспечивающая их полного использования.

Третий вывод заключается в том, что ограничение торговли развитыми странами ничем не мотивируется. Развивающиеся страны же часто лишь при помощи субвенций могут обеспечить соответствия заработной платы предельной производительности их рабочей силы. Кроме того, для защиты своей развивающейся промышленности им приходится прибегать и к охранительным пошлинам.

Далее автор обращает внимание на то, что теоретические модели всегда рекомендуют усиленную специазацию. Противоположные им практические советы считают желательным для развивающихся стран укрепление стабильности экономики путем диверсификации производства. Автор отмечает, что требование диверсификации остается и в дальнейшем справедливым, однако в настоящий момент изменения в мировой политике ослабляют силу этих доводов.

В действительности следует развивать промышленные отрасли с должной производительностью, а не только наиболее эффективные из них. Кроме того, следует учитывать, что специализация касается только товаров, попадающих в международный оборот, в то же время для удовлетворения внутреннего спроса всегда необходима национальная промышленность, а это уже само по себе является диверсификацией.

I. HETÉNYI

PROBLEMS OF LONG-TERM PLANNING AND THE INTERNATIONAL COORDINATION OF NATIONAL PLANS UNDER CMEA*

A brief survey of the experiences in plan coordination between CMEA countries. The author analyzes: why is the harmonization of national plans not so efficient as would be justified by possibilities. He states: no essential changes will take place until 1970 in the form of cooperation. He suggests some approaches by which plan coordination can be developed even under the present forms of cooperation.

Economy-wide planning enables the socialist countries to set the economic objectives on the basis of weighing up the socio-political aims against the resources available and to apply in a coordinated manner the economic regulators necessary to solve the tasks involved. The efficiency of planning will be greatly increased if the planning process — both the analysis and the setting of objectives — can rely on sound bases in respect of the development of international economic relations. Cooperation in planning and the harmonization of national plans is, accordingly, an essential element in the economic cooperation of the CMEA (Council of Mutual Economic Assistance) countries. This harmonization is particularly important in the case of countries which are — owing to their relatively high level of development and their small size — highly dependent on the international division of labour. Hungary is one of these countries, with nearly one fifth of those productively engaged producing for export in a direct or indirect way. In several key industries dependence on the international division of labour — as regards both marketing and material inputs — is even greater.

In the following I propose to deal specifically with the *planning* aspects of the harmonization of long-term national plans of the CMEA countries. The political aspects of plan coordination shall not be dealt with nor the details of the connections with other methods of cooperation.

The international coordination of national plans contributes to a better foundation of the plans in several ways. It increases the reliability of economic prognosis and provides a greater security for the realization of the development tasks contained in the plan. For a small country like Hungary, it yields inval-

* On the basis of a lecture held at the scientific session of the Karl Marx University of Economics, Budapest, 31st Oct., 1967.

uable information about a considerable part of international conditions so necessary for planning. As a matter of fact, in the course of the plan coordination process, we obtain — often detailed — information concerning long-term ideas of the partner countries which would otherwise not even reach us. (It should be taken into account that more than 60 per cent of our foreign trade is transacted with CMEA countries.) Moreover, the coordination of plans affords the possibility to elaborate plan variants of high efficiency which cannot be worked out in isolation, merely on the basis of national conditions. (E.g. an increased concentration of research and investment, international specialization of production, etc.)

In the final analysis, both circumstances lead to drawing up plan variants which will ensure an *additional advantage* in the development of the economy through a better utilization of the international division of labour, while the *uncertainty* of expanding international relations may be substantially *reduced* by the coordination of the plans.

These elements of international plan coordination do, of course, not represent all aspects of political or even economic cooperation between the socialist countries. They are emphasized here only from the planning point of view.

Experiences gained in the course of coordinating the national plans

In the coordination of national plans we can look back on some 12 to 13 years of experience. The first steps to harmonize the national plans took place in 1955—1956. Since then, the experiences of three five-year periods are at our disposal.* From 1955—56 the work aimed at giving a planned character to economic relations was no longer restricted to trade deliveries but came to embrace in the major branches also production targets, the drawing up of summary balances, etc.

Coordination of the five-year plans covering 1961—1965 represented a further step forward. While earlier the coordination took place essentially on the basis of plans that had already been approved, the coordination of the plans for 1961—65 was carried out by collating preliminary plan conceptions. In this way a broad exchange of information took place between the countries concerned not only in respect of mutual relations but also about the general features and indicators of economic development.

The harmonization of the five-year plans for 1966—1971 was carried out in 1964—1965. The work could already rely on the novel methods introduced in national planning by the end of the fifties, and the wider apparatus of CMEA, established according to the resolutions passed in 1962, could also be utilized. The clearly discernible phases of plan coordination: exchange of

* Prior to 1955, the long-term trade agreements were not directly founded on the plan targets.

information, identification of problems and the establishment of the direction of solution, were beginning to assert themselves.

The principal elements in the coordination of the plans for 1966—70 were the following:

— informative discussion between the Planning Offices (first half of 1964),

— aggregation of the informative material balances within the organs of CMEA and disclosure of the problems emerging from these balances (mid-1964),

— bilateral coordination of the pattern of reciprocal trade and of the major export and import items, between the Planning Offices,

— the activities of the CMEA standing commissions, aimed at solving the problems presenting themselves (up to the beginning of 1966, in 14 reports covering 1200 pages),

— the signing of bilateral long-term trade agreements (up to the end of 1965).

A direct result of the work performed was the harmonization of mutual deliveries, through which the production ideas of the countries involved gained a support. (In the CMEA organs 233 balances of industrial and agricultural products were drawn up with an informative purpose.) In addition, there was an organized exchange of information concerning the major investment projects affecting international cooperation. For the period between 1964 and 1970, information was submitted on 510 major investment projects. Out of these, nearly 400 were the subject of consultation. Also other coordination measures such as transit shipments or the development of border stations, or the coordination of scientific research were taken; let us mention here only some projects of outstanding importance, e.g. the linking of oil and gas pipelines and electric grids, and some important transactions of production development and specialization, as e.g. in Hungarian relation the agreements which provide a foundation for the development of the aluminium industry, and the production of buses, pharmaceutics, fruits, vegetables, etc.

The coordination of the national plans found its embodiment mainly in the long-term trade agreements. The CMEA countries entered into agreements covering at least 80 per cent of the expected exchange of commodities between 1966 and 1970.

On the basis of the coordinated third Hungarian five-year plan, more than 50 per cent of our *total exports* to CMEA countries consist of engineering products, 13 to 14 per cent of light-industrial articles, about 16 per cent of industrial materials and about 19 per cent of agricultural and food products.

Total imports from the same countries in the same period will consist in 57 to 58 per cent of raw materials and electric energy and in 33 to 34 per cent of machinery. In the earlier period the percentage of machinery was only 27, the rise being a result of economic development and specialization.

Plan coordination secures for Hungary the decisive majority of materials and equipment necessary for economic development from the CMEA countries and offers a secure market for the sale of her industrial and agricultural products.

The general features of the coordination of national plans are summarized in the Basic Principles of International Socialist Division of Labour* which generalized the experiences gained up to 1962. According to the Principles, the task of plan coordination is to take into account the objectively necessary development proportions of the individual countries and of the socialist world system as a whole which promotes the attainment of economic equilibrium in the individual countries; to secure a high efficiency of the socialist international division of labour; to promote international specialization and cooperation in production as well as a diversified development of the individual economies; to help to eliminate the historically determined differences in economic development level between the individual countries.

In the Principles also some methodological experiences find their expression, e.g. the statements that "plan coordination is part of the planning process" and that "in the course of this work definite connections, both bilateral and multilateral must be established".

Since the Principles had been adopted, the *plan coordination for 1966—1970 provided further relevant experience.* Among these, positive experiences and negative ones not coming up to expectations can equally be found. Both must be dealt with, examining in respect of the latter the question whether the actual practice or the justification of the expectations should mainly be criticized.

The positive role of the bilateral consultations and the coordination under CMEA can best be visualized by comparing the present situation with the earlier one when there were no regular contacts between the planning bodies. It is difficult to overestimate the importance of the regular information obtained in the course of consultations, particularly if we consider the fact that in the preliminary stages of planning it is hardly possible to obtain information in any other way because the preliminary calculations are rarely published. The fact — often criticized — that coordination is manifesting itself mainly in export–import deliveries can, in itself, not be negatively valued since in the majority of CMEA countries the export-import plan forms a decisive part of the national plan and is, in the final analysis, an indicator of cooperation. If the coordination of plans determines the export-import relations in conformity with the planning characteristics of the various product groups

— at the proper time and for the proper period,
— in reasonable detail,

* Published by the CMEA Secretariat, Moscow, 1962.

— together with bringing about the conditions which help the attainment of the targets; the this may provide an important basis for the individual countries to plan their economic development (investments and even research).

Undoubtedly, these three conditions are not satisfactorily fulfilled in the course of the practical plan coordination. *The procedure of plan coordination prevalent up to now, with its rigid adherence to the stages of elaborating the five year plans, has not been sufficiently efficient* either from the point of view of the time when coordination took place or from that of the length of period which coordination covered. Apart from some exceptions, it has not provided an adequate or sound basis for important investment decisions since the effects of the latter usually exceeded the plan period.

Nor was the nomenclature of plan coordination satisfactory in every respect. It is frequently the case, particularly in bilateral coordination, that the central commodity lists employed are so highly detailed that their centrally founded planning cannot be always secured. It also happens that the nomenclature specifies the coordinated calculations only in commodity group breakdown which can, in lack of closer specification, not serve as a satisfactory starting point for a solid foundation of investment plans.

In addition, coordination is in several cases not connected with the economic conditions of cooperation in a complex manner. A single example will suffice to illustrate the point. The prices valid for 1966—1970 were fixed after coordination of the plans, but no institutional measures were taken to ensure the reaction of coordination on the coordinated items. In reality, a certain reaction will take place but not infrequently to the detriment of planned development. The results of plan coordination do not come up to expectations particularly in respect of producing optimal variants in CMEA dimensions which would account for the interests of the individual countries. The work aimed at multilateral harmonization did not come up to expectations. The idea of common (more exactly: central) planning with this objective in view proved to be irrealistic, not only because of technical-methodological difficulties (such as the conversion of national currencies or the controversial character of the optimality criterion) but also because in its economic conception it disregarded the fact that the further development of multilateral coordination — from the exchange of information, disclosure of problems and the pointing out of possible ways, to the multilateral solution of planning problems — is not simply a problem of improving the methods but mainly one of politics, economic policy and interests which cannot be mechanically projected from the national to the international level.

It should also be mentioned that the optimization of interindustry flows cannot be considered as solved, particularly not with the methods which had been intended for use in common planning.

Because of the — not declared but often assumed — close connection between manysided coordination and the attainment of the optimum, a further comment is necessary on the role of the bilateral and multilateral forms of coordination. There exists a conception starting from the idea of central planning, according to which the multilateral coordination of plans is necessarily a higher form of coordination, directly leading to the formulation of optimal variants. According to this approach, it is not the system of bilateral and multilateral forms of plan coordination and cooperation which is unequivocally desirable, but a "development" from the bilateral to the multilateral forms. From this aspect, the practical results of multilateral coordination may appear but meagre.

No doubt, we do not sufficiently utilize the possibilities of multilateral coordination. Its results are indirect and rather difficult to concretize. But the deficiency lies not in the to a great extent "still" bilateral character of coordination. The bilateral and multilateral forms of coordination do not develop at the expense of each other but complement each other. Multilateral coordination may in certain cases undoubtedly secure more efficient solutions, but in others, bilateral coordination may prove to be expedient. In fact, the roles of the two forms can be distinguished not only by subject; according to our experiences, in various working stages of solving certain tasks the multilateral, in others the bilateral coordination may seem effective. From this viewpoint, too, the work stages of information exchange, problem identification, as well as those outlining the ways of solution and the conclusion of concrete agreements must be judged differently; here bilateral and multilateral forms may be alternately employed.

In the following, I propose to deal with the future tasks of plan coordination. In the present stage of development the experiences gained can only partly provide a starting point. The validity of the experiences will depend on changes in factors which serve as a framework of plan coordination, such as

— the entire mechanism of economic cooperation between CMEA countries, and

— the main features of national long-term planning in the member countries.

The mechanism of economic cooperation and the coordination of plans

The fact that there is a close connection between planning and the system of economic control and management is one that hardly needs any proving. The literature on the subject that has been published in this country in the course of the preparation of the economic reform is significant. What is, however, less widely known, is the international bearings of the problem, or,

to be more exact, the conditions created for planning and plan coordination by the various forms of international cooperation.

The actually existing forms of plan coordination, that is, the compilation at regular intervals of aggregate balances covering a wide field (embracing 200—250 commodities) as well as the fixing of export-import relations in long-term trade agreements assumes in the mechanism of international cooperation

— bilateral relations,
— centralized methods of price formation,
— strongly centralized management in the individual countries, etc.

Critical investigations into the forms of cooperation have been going on for some years now. However, the majority of economists engaged in the analysis of the forms and methods of cooperation as realized under CMEA concentrated, mainly not on the methods of plan coordination but on other forms of cooperation, above all on the specialization of production, the system of foreign trade contracts, prices and payment problems. From the Hungarian contributions to the subject mainly those by *S. Ausch*, *Á. Balassa* and *B. Csikós-Nagy* should be mentioned. The most extensive research work is connected with the price system. Similarly to the domestic debate on Hungarian prices, it is increasingly realized also here that the solution of the price problem cannot be confined to establishing the principles of price formation but must include the conceptions about the forms of prices and the conditions of their becoming effective. This again will lead to the question: what conditions and forms of operation i.e. what type of mechanism of the CMEA world market will correspond to the long-term requirements of cooperation.

The analytical works on the above subjects contain — if only in a superficial manner — some critical remarks on the methods of plan coordination which may be summarized as follows.

a) Coordination of the national plans has embraced up to now a much too wide sphere of commodities. Central coordination was frequently more detailed than the national plans of the countries.

b) The wide — essentially physical — coordination between the CMEA countries is built upon a considerable limitation of the market mechanism. In this system, the market categories — demand and supply, prices, money, credit, etc. — are rather neglected and, as a consequence, the quality aspect, too, is disregarded.

c) The disregarding of market categories hinders a clear judgment of the efficiency of the international division of labour both in bilateral and multilateral connections.

d) In connection with the unsatisfactory operation of market factors, the rigid confrontation of commodity trade patterns has become the ruling method of enforcing reciprocal interests. This structural policy appears also

in indirect forms (e.g. confrontation of capital intensities or import intensities, etc.).

e) The international coordination of investments was less successful also because we have not yet succeeded in establishing the methods of mutual compensation between countries with a suitable division of gains and losses.

f) In lack of efficient financial regulators, the requirement of mutually balanced payments is ensured — on the basis of multilateral methods which have been introduced only formally — in a bilateral and all too rigid manner, a fact that hinders the development of trade.

In spite of their similar approach, the ideas emerging in various fields do not constitute a uniform system. The first step, therefore, would be to start coordinated research work on the various forms of cooperation, the entire cooperation mechanism of CMEA.

The present state of the criticism of the CMEA mechanism roughly resembles the efforts at reforming the Hungarian system of economic management in the years 1960/62 — and from these to the formulation of a complex conception there was a long way to go. As regards the next steps in the evolution of plan coordination, the present situation may offer some starting points in so far as it shows what earlier efforts it would be presumably useless to continue, and also what methods should be maintained and further developed, and whether this will be possible under the conditions that can be expected.

In my opinion, the forms and methods of cooperation will not change essentially in the next 2 or 3 years, that is, during the next stage of plan coordination. Gradual changes must, however, be reckoned with after 1970, and the proposed methods of the further development of plan coordination should possibly agree with these tendencies. The expectable tendencies of the changes are the following:

— the application of a more flexible price mechanism in respect of commodities outside the scope of central plan coordination;

— in respect of foreign-trade quotas, an interpretation of the latter which allows — depending on the character of the economic processes — in some cases a rigid, in others a flexible application;

— an increasing role of financial policy, a gradual elimination of the causes hindering cooperation and arising from the efforts at constant equilibrium of payments and exclusive bilaterialism;

— a strengthening of direct international relations between leading industrial agencies and enterprises and a greater role of enterprise incentives with a view to cooperation.

Trends of development in long-term planning

The expectable changes in some features of long-term planning are rooted in the same conditions as those which have led to the reform of the entire system of control and management in the CMEA countries, namely, mainly in a higher development level of the productive forces and in the consequent changed tasks of economic policy. In several countries this changed situation may be characterized briefly by saying that the future rate of development will depend mainly on a more efficient utilization of the existing forces of production — i.e. the means of production and labour — and on a more intensive technological development to serve as a basis of the former. The concrete tasks of economic policy may, of course, vary from country to country and it can hardly be expected that the reforms will lead in future to such uniform planning and control systems in the individual countries as have existed in the past decade. It may, however, be expected that the efforts and the employed methods will be related in many respects. Common trends in planning may, therefore, be envisaged, which will provide a satisfactory basis for outlining the next steps in the development of plan coordination. This is partly explained by the fact that long-term planning is still to solve several problems which would be timely both under a directive system and in a mechanism based on the combination of plan and market. On the other hand, the plan coordination is a long-term task which is less affected by the differences between the directive and non-directive system of planning.

The criticisms raised against long-term planning in Hungary — as well as in several other socialist countries — stress mainly the fact that it does not disclose in due time — nor for the period objectively needed to solve the problems — the regular interrelated processes of development and the possible variants of economic policy, that it does not sufficiently or systematically concentrate on the major processes whose long-term development determines the major partial processes of the economy. To eliminate these deficiencies, intensive work can be expected to be launched in all CMEA countries, with the aim

— to organize research work and planning for periods exceeding five years;

— to clarify the contentual characteristics of the *plans covering periods of different length* in a way that they complement each other; the long-term plans should be relieved of the task to regulate processes which can be known only in the short run;

— to perform — within the framework of planning — investigations and analyses which help not merely to render some conception of economic policy concrete, but promote the formation of such conceptions by revealing *suitable variants;*

— to make forecasts, realizing the fact that prognostical elements are not contradictory to the nature of the planned economy.

As regards physical processes, central planning will be restricted to infrastructural development and other development programs seriously affecting the structure of the economy, or pointing to revolutionary changes in technology, while in manufacturing industry and particularly in developing the existing plants, the conceptions of the enterprises concerned and the effects of the central economic regulators (among them the structural framework provided by international trade agreements) will assert themselves.

The methods of solving these problems may conceivably vary from country to country and the exchange of experiences may play an important role here.

Of the problems pertaining to the subject, I have not dealt with the technical-methodological development of planning methods, nor with the application of the so-called mathematical methods. This is not because I would not consider these problems important or timely. But, from the point of view of the present subject, the above conditions are more important, since planning techniques can be successfully improved only after due clarification of the conditions of planning.

Conclusions

The next task in plan coordination is to harmonize the plans covering the period after 1970, first of all the five-year plans for 1971—75. This will take place mainly in the next two or three years. Therefore, in order to mark out in a realistic manner the roads to be followed, the existing mechanism of planning and economic cooperation and the short-term changes to be expected must be reckoned with. From what has been said above, it follows that in the near future plan coordination should aim at a rational improvement of the already tested methods and the gradual elimination of those which have proved to be only formal. In this connection, the following proposals seem to be realistic:

1. The informative role of plan coordination must be given more solid foundations. While maintaining the earlier practice that in the course of plan coordination the participating countries inform each other about the preparations for the next five years and the major targets, it seems expedient to *widen the scope of mutual information* to embrace

— common preparation of scientifically founded studies surveying for some longer period ahead the *problems of CMEA countries* which are important from the point of view of cooperation;

— considerations of *economic policy* which serve as a basis for drawing up the national plans, inclusive of the concepts of the mechanism connected with cooperation.

Of the information material belonging to the first group, the long-term technical-economic forecasts now under elaboration in the bodies of CMEA should be mentioned first. Valuable analyses have already been prepared of the fuel and energy basis and the development of non-ferrous metallurgy. These forecasts cover, however, mainly the technical trends. For a successful coordination of the plans the studies in preparation should be complemented by informative studies of the predictable economic conditions and the perspectives of socio-economic factors affecting cooperation.

It is a precondition of an effective utilization of the studies dealing with socio-economic factors that these studies should be thoroughly discussed on politically competent forums, above all in the Executive Committee of CMEA

As regards the exchange of information on *economic policies and management problems* relating to the trends of cooperation to be followed, after coordination of these subjects within CMEA, the individual countries could make available to each other, prior to the concrete plan computations, the relevant informative material.

2. The coordination in the various fields of production *should take place* in future not exclusively according to uniformly prescribed time limits but *according to the time and duration necessary for actual economico-political decision making.*

In this manner, the de-facto coordination of long-term plan conceptions may become possible and the process will not be confined to the formal coordination of balances. This principle should be ensured particularly in the multilateral coordination carried out within the CMEA agencies, so that coordination should take place — to use the habitual terminology — in the stage of elaborating the technical-economic conceptions, that is, in the preparatory stage of planning, and for a period conforming to the nature of the problem. Formalization of the plans, the comparison of balances, must aim at rendering the conceptions *more exact* — on the basis of a uniform schedule of coordination and plan period. In this way also the coordination of investments can be more efficient, since it will become possible to coordinate the investment aspects of an overall conception instead of the individual projects. This method may lead also to a complex handling of investment and research policies as well as planning.

These activities of the CMEA bodies would also mean the rejection of the conception — not verified in actual practice — that the multilateral coordination work of CMEA consists in collating balances, with the erroneous assumption that the deficits not covered by the bilateral discussions can be eliminated by multilateral decisions in the final stage of planning.

3. The efficiency of plan coordination would be further increased if, *in contrast with actual practice, it would rather aim at the coordination of concrete and complex economic cooperation tasks.* The individual countries would set not

only certain aspects of the economic processes (mainly the deliveries of goods) but coordination would embrace also the related conditions. An efficient concentration of resources would be particularly promoted — especially in small countries — by the harmonization of the economic conditions of the centrally coordinated production and delivery targets (e.g. prices), of investments involved in the cooperation, and of technical research.

4. Diversity of the economic management systems in the CMEA countries necessitates the bilateral fixing by the countries concerned of the schedule of *plan co-ordination, and the tasks and scope of authority of the various agencies in accordance with the characteristics of their system of economic management.* Earlier, an item by item coordination of the plans could be widely applied directly by the planning offices since a detailed setting of investment and foreign trade targets was within their scope of authority. Today, however, the scope of central decisions covered by the plan may widely differ in the various countries. It would, however, not be correct if plan coordination were formally restricted to the fields which directly belong to the scope of central decisions in each country. As a matter of fact, the scope of central management is, even in the countries where a reform of the economic mechanism is being introduced, considerably wider than the scope of direct central decisions, since it will embrace also in the future the active influencing of enterprise decisions by means of economic regulators. It is also desirable that planned cooperation should exist between these agencies even in respect of problems within the scope of enterprise decision and that these should be reflected in the long-term foreign trade agreements.

5. The above proposals, particularly those under 2, raise also the necessity of plan coordination beyond a five-year period. Still, they mainly aim at further improving the coordination of five-year plans. It seems necessary to investigate separately the possible ways for coordinating the long-term plans. In this respect, there is little experience either in the individual countries or in the various organs of CMEA. As a first step it may be proposed — and a proposal to this effect has been submitted by Hungary to CMEA — that multilateral discussions should be held within CMEA on the conceptual and methodological problems of long-term planning.

Let me emphasize my conviction that the proposals listed above are realistic, that they do not leave the ground of actual conditions and seem, in fact, rather modest. But even so, they set a considerable task of improving the coordination of plans, particularly to the CMEA bodies. The proposals have been built upon the idea that — although the reform of economic management in the CMEA member countries and the connected reforms aiming at an improvement of international economic cooperation mean the beginning of a new phase — the process itself will be gradual and prolonged.

МЕЖДУНАРОДНОЕ СОГЛАСОВАНИЕ НАРОДНОХОЗЯЙСТВЕННЫХ ПЛАНОВ И ПЕРСПЕКТИВНОЕ ПЛАНИРОВАНИЕ

И. ХЕТЕНИ

Автор сначала дает короткую оценку двенадцатилетнему опыту координации планов между странами-членами СЭВ. Он отмечает, что согласование планов, с одной стороны, повышает их стабильность, а с другой стороны, предоставляет возможность для организации совместных мероприятий, повышающих эффективность общественного воспроизводства. Координация народнохозяйственных планов, однако, не является настолько эффективной, как это следовало бы из возможностей. Некоторые причины этого кроются в общих формах сотрудничества, другие же суть специфические недостатки координации планов.

Из-за унифицированного регламентирования координации народнохозяйственных планов по времени некоторые концентрации развития согласуются раньше или позже действительного срока принятия по ним решения. Единый срок координации — 5 лет — также не везде отвечает требующемуся предвидению. Централизованное согласование взаимных товаропоставок является более детальным, чем это можно планировать, и оно во многих случаях производится без установления сопряженных экономических условий (цен, качественных параметров).

По мнению автора, в отношении будущей координации планов за основу целесообразно принять гипотезу о том, что в ближайшие 2—3 года в формах сотрудничества не появится существенно новых элементов, зато после 1970 года можно ожидать изменений в направлении применения более гибкого механизма цен, более гибкой трактовки внешнеторговых контингентов, увеличения роли финансовой политики.

Координация планов на период после 1970 года является задачей последующих 2—3 лет. Автор предлагает усовершенствовать методы координации уже в течение этого периода.

Он считает желательным разработку совместных технических прогнозов, проведение общественно-экономических исследований в органах СЭВ.

До координации международных планов следует разработать в важнейших областях сотрудничества технико-экономические концепции на относительно длительный срок с соответствующим выяснением экономических условий.

Страны-члены СЭВ должны на двусторонней основе установить регламент, обеспечивающий должную координацию соображений по развитию, принятие решений по которым относится к компетенции министерств и предприятий.

По мнению автора, механизм сотрудничества стран-членов СЭВ претерпевает постоянные изменения, однако, этот процесс в течение нескольких лет не будет слишком быстрым.

Gy. Szakolczai—P. Vásárhelyi

EXTRAPOLATED MATRICES OF INPUT-OUTPUT TECHNICAL COEFFICIENTS

This paper presents a new method for the extrapolation of input-output technical coefficients. The first part describes the method, and the second is devoted to the first empirical results. These results are already used in actual planning practice, and the model is being extended to input-output tables of a more detailed sectoral breakdown.

The matrix of the input-output technical coefficients has recently become a more and more generally accepted tool of planning the development of the economy. There is, however, a basic problem inherent in this line of development: the tables are constructed from data of some past time period, while the analysis refers to the present or the future, or even to the distant future. Thus unavoidably leads to biased results because, owing to technological changes, the technical coefficients themselves are bound to change in the course of time. It seems therefore necessary to develop methods for the extrapolation of these coefficients, so that the extrapolated, expected values of the coefficients might be used in economic development planning.

The extrapolation of the technical coefficients becomes especially important with the development of a new mathematical method of perspective planning, carried out at present [2], [3].* This method may be applied both

* This paper presents the first results of the research work carried out at Információfeldolgozási Laboratórium (Laboratory for Information Processing), Budapest, on behalf of Országos Anyag- és Árhivatal (National Price and Materials Office), Budapest. The extension of the methods to technical coefficients of input-output tables of 28 and 83 sectors, respectively, is now under way. The aim of the calculations was to provide data for the models used to plan or to extrapolate the medium- and long-range trend of prices. Considering that these results may be used in any other medium- or long-range planning model, the publication of these preliminary results preceded that of the results obtained by these price planning models. As also mentioned in the paper, the numerical results published here have been obtained by the simplest methods of passive extrapolation, and there are wide possibilities of their further refinement. In case of medium- or perhaps long-range extrapolations even these preliminary estimates seem to lead, however, to better results than the use of parameters obtained directly from input-output tables relating to a past period. — We are indebted to Gy. Zsellér (NIM Ipargazdasági és Üzemszervezési Intézet, Elektronikus Számolóközpont — Electronic Computer Centre of the Institute for Industrial Economics and Business Organization of the Ministry of Heavy Industries) for his help in connection with computational problems relating to Variant C below.

to long-range quantitative planning and to the extrapolation of the long-range trend of prices. In the former case two different uses of the method may be distinguished. First, starting from the independent and partly even inconsistent development plans set up by the individual industries or enterprises, on the one hand, and from plans relating to the most important macroeconomic variables of the national economy set up by the Central Planning Agencies, on the other, an integrated and *consistent long-range development plan* may be constructed by this method. Second, if such long-range development plans are not yet available, a *preliminary plan of informative character* may be constructed by this method from independent statistical estimations relating to the sectoral and economy-wide variables. This preliminary plan of informative character may be used as a first, provisional draft of the plan giving some basic information in the first stage of the more systematic and detailed planning. To ensure the consistency of the individual plans or independent extrapolations this method uses *input-output technical coefficients*, capital and labour coefficients extrapolated by *industrial production functions*, and some other parameters. Unaltered past values of these coefficients may lead to particularly biased results in this case, what makes the *extrapolation of these coefficients* necessary.

This problem can now be solved. Although the available number and the comparability of input-output matrices of a more detailed sectoral breakdown in itself makes the extrapolation hardly possible, we have at our disposal the input-output tables of 13 sectors for the years 1959—1964 [8]. These six matrices have been constructed using identical structure and definitions, and even the same 1964 prices, which means that they are fully comparable. These data make an extrapolation based on mathematical-statistical methods possible even if this time series, too, is very short, and thus the results may not be sufficiently reliable in many cases. Moreover, these data and the extrapolated values may be used to support the extrapolation of the input-output matrices of a more detailed industrial breakdown, where even less data are available for the estimation of the development of the individual coefficients.

The trends of the technical coefficients and the possibilities of the extrapolation have already been analyzed by Rácz [6]. His results show that many coefficients have a very definite trend. He also presents the linear trends of some coefficients along with a more detailed analysis of some especially characteristic cases; his analysis shows that there are but few very abrupt changes in these coefficients, and that the trend of the greater, more important coefficients is especially steady. These results give some empirical evidence to the contention that the extrapolation of the matrices may be successfully attempted.

This is perhaps even more definitely shown by the results of Németh [4], [5]. Instead of using the input-output tables constructed and published by the Central Statistical Office, he attempted to estimate the 1966 table

using the aggregated input-output tables of the Planning Office for the years 1959—1965. His estimates were compared with the actual 1966 values, on the one hand, and with the values obtained by the Planning Office on the basis of traditional methods, on the other. The individual elements of his extrapolated matrix were determined from linear trends, and no mathematical method was used to ensure the consistency of the estimates. All his results remained within the margin of error accepted in so-called traditional planning, and his extrapolated values were in many cases closer to the actual values than those obtained by the traditional methods. This shows from another side that the problem may be solved.

This paper presents an empirical description of our method used to extrapolate the matrices of input-output technical coefficients, and of our results obtained thus far. No summary of the theoretical questions of dynamic input-output analysis, of other methods used to extrapolate these matrices, and of the results obtained by these other methods will be attempted. (The problem has such an extensive literature that its comprehensive assessment would require a separate paper.) The first part presents the method and the second the calculations and their results. Within both parts special sections will be devoted to the extrapolation of the technical coefficients and of the other parameters used, as well as to the method used to ensure the consistency of the individual extrapolations. Finally a Summary of conclusions regarding further work and the utilization of the results will be presented.

The method

The *basic idea* of the method is the following. If the technical coefficients have a definite trend, this trend may be *extrapolated*. This extrapolation has, however, in most cases a wide margin of error, and thus a collation and *mutual control* of the individual results seems necessary. For this purpose the column sums and the weighted row sums of the individual parameters may be used. These latter parameters have an economic meaning of their own, and may therefore be estimated independently. The results may also be checked by the independent extrapolation and collation of coefficients expressing total, domestic and import material needs of production.

As already mentioned, these independent extrapolations are *not necessarily consistent*. The column sums of the independently extrapolated technical coefficients may be different from the independently extrapolated column sums, and the sums of the independently extrapolated domestic and import technical coefficients may be different from the independently extrapolated technical coefficients expressing total (i.e. domestic plus import) technical coefficients. It is by these differences that the mutual control of the results is made possible. As a matter of fact, a method can be elaborated where the con-

straints express the conditions of consistency that must necessarily be met by any consistent system, and where the objective function expresses the requirement that the difference between the value system consisting of the original extrapolations, on the one hand, and the system of consistent values, on the other, should be minimal. This latter requirement is expressed in the form of minimizing the squared differences between the two value systems.

The method consists therefore of the extrapolation of the technical coefficients and of the other coefficients employed, as well as of the method used to ensure the consistency of the system. We deal first with the problems connected with the extrapolation of the technical coefficients.

Extrapolation of the technical coefficients

The forecast of the parameters is based on the estimation and extrapolation of their analytical trends. Because our short time series make it impossible to determine the acceleration or deceleration of the change, and because the parameters expressing this acceleration or deceleration are in most cases not significantly different from zero, only the

$$\alpha_{ij} = c_{ij} + d_{ij}\,t \qquad i, j = 1, \ldots, n \tag{1}$$

linear extrapolations may be used in a first approximation.

It may be assumed, however, that future changes may be overestimated even when using these linear trends. For one thing, some extremely high or low values may present themselves quite exceptionally, and the value of the parameter may later return to its original magnitude. In case of such short time series the extrapolation of such an apparent change may lead to serious distortions. On the other hand, even if the observed changes represent areal trend, the technological modifications underlying this trend may not be sustained for an indefinite time. Such technological changes are based in most cases on technological innovations that modify the parameters throughout their diffusion in the industries studied. The effect of these changes is, however, bound to spend itself, and that means that the modification of the parameters must become less pronounced or must even stop. It is certainly recognizable that technological changes are spreading in such consecutive waves, and it is therefore advisable to use a curve expressing also this possibility.

This can be ensured using a *curve of exponential character* that may be written down in case of the increase of the parameters in the form of

$$\alpha_{ij} = f_{ij} - g_i\, e^{-h_{ij}t} \qquad i, j = 1, \ldots, n \tag{2a}$$

and in case of the decrease of the parameters in the form of

$$\alpha_{ij} = f_{ij} + g_{ij}\, e^{-h_{ij}t} \qquad i, j = 1, \ldots, n\,, \tag{2b}$$

where f_{ij} is the asymptote of the curve. Owing to the fact that — by virtue of the above — the extrapolation of the coefficients will only be based on linear trends, also the estimation of these asymptotes may only be based on the same linear trends. We have therefore considered the estimated values pertaining to a definite year and obtained from the linear trends as the asymptotes of our curves of exponential character. This method is, of course, arbitrary, but there was no other possibility. By this method, however, we could reduce the error caused by extrapolating accidental or transitory changes. It is true that in some other cases this method may even increase the error by underestimating the effect of accelerating technical changes which are already underestimated by the linear extrapolation. However, even in these latter cases the method is certainly *conservatively biased*, i.e. it rather underestimates than overestimates the changes, which in most cases seems to be preferable and more reliable. It may be expedient, of course, to carry out the two extrapolations simultaneously.

The forecasts based on such passive methods may be improved by the *adaptive or active methods of extrapolation*. For one thing, by using the latest data available, perhaps by giving greater weight to the later data, forecasted values may be continuously corrected (adaptive extrapolation). On the other hand, by using additional information as to present and future technological changes, these extrapolated values may be modified by further estimates or guesses. This means that while our short time series make it impossible to determine by statistical criteria alone that the rates of technological changes are increasing or decreasing, and therefore in most cases *it is impossible to determine by statistical criteria which of the various analytical curves should be chosen*, this question may be solved on the basis of *additional information*, and the various technical coefficients may be extrapolated by various methods or in some cases the extrapolations may be modified by the estimates of the planners.

These wide margins of error, and the evident uncertainties of the method show that the collation and checking of the results is an absolute necessity.

Estimation of the other parameters

For the control of the extrapolated values of the parameters the

$$a_j = \sum_i \alpha_{ij} \qquad i, j = 1, \ldots, n \tag{3a}$$

column sums may be used. These have a definite economic meaning of their own, and also their extrapolated values have therefore a definite meaning. These column sums express the *proportion of the value of materials used within*

the value of the gross product of the industries. These proportions — as preliminary investigations show — are highly stable or change slowly along a very definite trend. These parameters express the changes in the level of cooperation between industries, the balance of the effects of labour saving and wage increases, changes in capital requirements and in the profitability of the industry, etc.

The row sums have no economic meaning, the

$$a'_j = \sum_j \chi_j \alpha_j , \qquad i, j = 1, \ldots, n \tag{3b}$$

weighted row sums, however, where χ_j-*s* express the weight of gross production of industry j within total gross production are nothing else than the *technical coefficients of total production*. These parameters express the level of the productive use of the products of sector j within all industries taken together. It may again be assumed that these global technical coefficients are very *stable or developing along a definite trend* where random effects mostly cancel out. This means that also these parameters may be used to the control of extrapolations. The same seems to hold for the parameters χ_j, that is, for the relative share of the individual industries within total production of the national economy. Although these parameters change in time, their change seems to be slow and more or less regular.

It may, of course, be written down that

$$A = \sum_j \chi_j a_j = \sum_i a'_j \qquad i, j = 1, \ldots, n \tag{4}$$

where A is the proportion of materials used in total gross production of all industries.

In controlling the extrapolations the column sums and the weighted row sums, apart from their stability and/or the definiteness of their trends, have two further important advantages. For one thing, these data may better be extrapolated by analytical trends, and therefore even their passive extrapolation may lead to relatively better results, because more numerous and, above all, more reliable data are available for these parameters than for the technical coefficients themselves. In such a way, using longer and more reliable time series for the extrapolation of the relative weights and of the productive uses of the products of the individual industries, the quantity of information available for the extrapolation of the technical coefficients themselves may be greatly enlarged. On the other hand, the *methods of active extrapolation* may be used to a much greater extent in this case. The great number of individual technical coefficients makes their determination by technological estimates of the planners almost impossible. Much more definite plans or extrapolations exist, however, for the future development of the relative weight of the indi-

vidual industries and of some other basic economic indices: this additional information may well be used for the checking of the extrapolation.

Another possibility of the mutual control of the forecasts is afforded by the independent extrapolations of the *domestic, import and total technical coefficients*. For a consistent value system the

$$\alpha_{ij} = \beta_{ij} + \mu_{ij} \qquad i, j = 1, \ldots, n \quad (5)$$

equality must hold which means that the sum of the α_{ij} domestic and μ_{ij} import technical coefficients must equal the total ones. Of course, one can define also in this case the

$$b_j = \sum_i \beta_{ij} \qquad i, j = 1, \ldots, n \quad (6a)$$

column sums of home technical coefficients, the

$$b'_i = \sum_j \chi_j \beta_{ij} \qquad i, j = 1, \ldots, n \quad (6b)$$

weighted row sums, as well as the

$$B = \sum_j \chi_j b_j = \sum_i b'_i \qquad i, j = 1, \ldots, n \quad (7)$$

parameter expressing the total domestic material requirements of the total home production. In a similar way we may define the

$$m_j = \sum_i \mu_{ij} \qquad i, j = 1, \ldots, n \quad (8a)$$

column sums and the

$$m'_i = \sum_j \chi_j \mu_{ij} \qquad i, j = 1, \ldots, n \quad (8b)$$

weighted row sums of the import technical coefficients, as well as the

$$M = \sum_j \chi_j m_j = \sum_i m'_i \qquad i, j = 1, \ldots, n \quad (9)$$

parameter expressing the total import needs of total home production. It follows from the above that

$$a_j = b_j + m_j. \quad (10)$$

The extension of the independent extrapolations to the above coefficients or to a part of them affords some further possibility of control. It may easily be seen that this mutual control may be written down in many more or less different forms. In the following we are outlining some such possibilities.

Consistency of the estimates

The mathematical method used to ensure the consistency of the estimates was written down in several variants. Also the program was elaborated in several variants and so were the calculations carried out. All variants are based on the same method: the *method of quadratic preferences and linear constraints* developed by Theil [7] and Boot [1]. The linear constraints describe here the conditions of consistency of the computed parameter values (i.e. the requirement that the sums of the elements by columns must equal the column sums, that the sums of the domestic and import coefficients must equal the total coefficients etc.), while the quadratic objective function expresses the requirement that the weighted sum of differences between the original value system consisting of the independent extrapolations and the value system consisting of the computed, consistent values should be minimal. In such a way the system of computed, consistent values approaches the system of original extrapolations as closely as possible while satisfying the conditions of consistency.

Reliability of the estimates can greatly be increased by using this method. It is highly probable that the values of the parameters themselves will come closer to their future actual values. It is even more probable that the reliability of the global calculations based on these parameters will be even more increased, because in this consistent case the *biases of the different parameters will tend to cancel out.*

The *weights* allotted to the different parameters have a very special and important role in this method. If weights are equal, for instance if all weights equal unity, the importance of the individual parameters within the objective function is proportional to their absolute values. But if it may be assumed that the estimates of some parameters are more reliable than those of the others, these reliable parameter values may be given greater weight, and the reliability of the consistent extrapolations may thus be increased. Similarly, if the economic analysis of the results shows that some parameter values have been distorted to an inadmissible degree (these distortions may be analyzed using statistical criteria, such as the confidence limits of the extrapolations, or economic criteria, i.e. the analysis of the values obtained), by increasing the weight allotted to these parameters and repeating the calculations we may obtain values satisfying these statistical or economic criteria.

Such a modification of the weights may have a greater role only in case of active extrapolations. It is conceivable, however, also in case of passive extrapolations based only on statistical data to give greater weight to parameters having narrower confidence limits, that is to parameters for which more reliable extrapolated values are available.

Departing from the above basic considerations, the method was written down in the following variants.

Variant A: Column sums as conditions of consistency. In this case constraints are expressed by equations (3a), and the objective function may be written down in the form

$$\sum_j \sum_i S_{\alpha_{ij}}(\alpha_{ij} - \hat{\alpha}_{ij})^2 + \sum_j S_{a_j}(a_j - \hat{a}_j)^2 \to \min. \qquad i, j = 1, \ldots, n \qquad (11)$$

where the values $S_{\alpha_{ij}}$ and S_{a_j} represent the system of weights.

Variant B: Weighted row sums as conditions of consistency. In this case the constraints are represented by the equations (3b), and the objective function may be written down in the form

$$\sum_j \sum_i S_{\alpha_{ij}}(\alpha_{ij} - \hat{\alpha}_{ij})^2 + \sum_i S_{a'_i}(a'_i - \hat{\alpha})^2 \to \min. \qquad i, j = 1, \ldots, n \qquad (12)$$

where the $S_{\alpha_{ij}}$ and $S_{a'_i}$ values represent the system of weights.

Variant C: Column sums and weighted row sums as conditions of consistency. In this case the constraints are represented by equations (3a) and (3b), while the objective function may be written down as

$$\sum_j \sum_i S_{\alpha_{ij}}(\alpha_{ij} - \hat{\alpha}_{ij})^2 + \sum_j S_{a_j}(a_j - \hat{a}_j)^2 + \sum_i S_{a'}(a'_i - \hat{a}'_i)^2 \to \min. \quad i, j = 1, \ldots, n \qquad (13)$$

where the different S values represent the system of weights.

Variant D: Domestic, import and total technical coefficients as conditions of consistency, using only the sums of columns. In this case the constraints may be written down using equations (3a), (6a) and (8a), while the objective function may be represented by the expression

$$\sum_j \sum_i S_{\alpha_{ij}}(\alpha_{ij} - \hat{\alpha}_{ij})^2 + \sum_j \sum_i S_{\beta_{ij}}(\beta_{ij} - \hat{\beta}_{ij})^2 + \sum_j \sum_i S_{\mu_{ij}}(\mu_{ij} - \hat{\mu}_{ij})^2 +$$

$$+ \sum_j S_{a_j}(a_j - \hat{a}_j)^2 + \sum_j S_{b_j}(b_j - \hat{b}_j)^2 + \sum_j S_{m_j}(m_j - \hat{m}_j)^2 \to \min. \quad i, j = 1, \ldots, n. \qquad (14)$$

Of course, many other variants are possible, and their use depends on the availability of the data, on computing possibilities, and on various economic considerations.

These economic considerations deserve some further attention. If the technical coefficients extrapolated by this method are used to forecast gross production from estimates of final consumption (open input-output model),

the use of weighted row sums as conditions of consistency cannot be advocated, because, as a matter of fact, this would mean presupposing and using as weights the results we are looking for. If the results are, however, used to extrapolate the trend of prices, the accuracy of the individual elements is most important. In this case it is expedient to utilize also the weighted row sums as conditions of consistency. In the general case when the greatest possible accuracy of all the elements is aimed at, it is advisable to write down as many constraints as possible.

In our empirical calculations the above four variants were used, and computer programs were prepared for each. We shall now survey these calculations and their results.

The results

A comprehensive summary of the results cannot be attempted within the bounds of such a short paper. We shall therefore present only our experiences. From among the results, the variant that may be considered as the most probable, and, for the sake of comparison, one other variant will be reported.

Extrapolation of the technical coefficients

In spite of some theoretical considerations mentioned above, and favouring linear trends as well trends of exponential character we have also attempted to determine *parabolic and exponential trends*. These attempts, quite understandably, were not successful. Parabolas of the second degree estimated from such short time series gave extreme results, and in most cases an extremal value within the period considered, which means a turn of the trend within the period considered. As to the exponential trend, we have assumed that in the case of definitely accelerating technological changes such trends may be employed. This assumption proved to be unjustified. The exponential forecasts, particularly for longer periods, led to so extremely high or low values that their utilization could not even be considered. This was the case even with decreasing technical coefficients, because the asymptote is in this case zero.

The problems connected with extrapolation may be illustrated by Fig. 1 and 2. Fig. 1 represents the development of technical coefficients representing the basic material and energy needs of machine building, and Fig.2 that of the chemicals consumed by the same industry. Both changes and their extrapolations are represented on the basis of the total technical coefficients, representing the sum of domestic and import coefficients. (In the Hungarian literature it is called Variant A of input-output tables.) The two cases represent increasing and decreasing technical coefficients, respectively.

The *correlation coefficients* of the linear trends are .9676 and .8815 in the above two cases, while the same parameters for the trend of exponential character are .9804 and .8397. This means that we have a close correlation in both cases. These results also give some statistical evidence to the considerations of economic character that in the case of basic material needs of machine building the trend of exponential character, while in the case of chemicals consumed the linear trend represents the more favourable approach. This

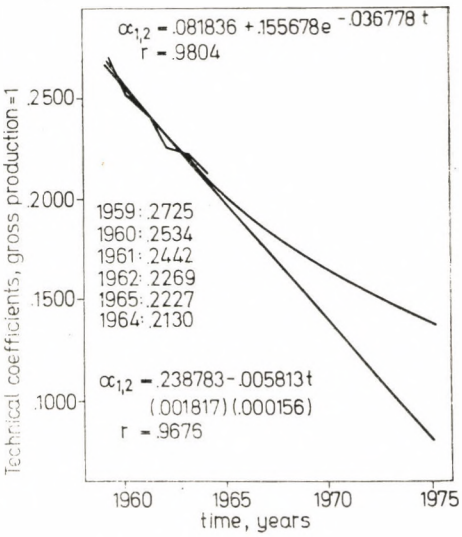

Fig. 1. The development of input-output technical coefficients expressing the productive consumption of basic materials and electric energy in machine building (Total coefficients)

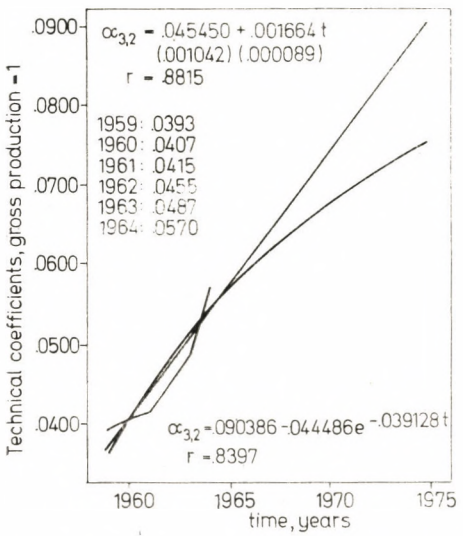

Fig. 2. The development of technical coefficients expressing the productive consumption of chemicals in machine building (Total coefficients)

may be assumed because the decrease of basic material needs must approach a certain more or less clearly defined limit, while the increase in the use of chemicals will probably be sustained through a longer period, or temporarily will even gather momentum.

Not only the correlation coefficients but also the *standard deviations of the regression coefficients* point to the reliability of the estimates. The values of these parameters are in both cases less than the tenth of the corresponding parameter values what means that — in spite of our short time series — not only the direction but also the magnitude of the change of the parameters can be estimated very reliably. As to the numerical magnitude of the parameters, it must be mentioned that the unit of time is half a year, and the zero point of time is at midyear, 1962.

The two cases represented here are, however, not characteristic. Although there are some cases of even closer correlation, these cases are exceptional, and most estimates are less reliable than those presented in the two charts. It is particularly evident that the differences between the magnitudes of the correlation coefficients are not very prononunced even in the above economically meaningful cases — which is not at all surprising. This also shows that it is *hardly possible to select the best approximation on the basis of statistical criteria only*. This means that it seems reasonable either to have a uniform procedure, that is to choose the linear trends or the trends of exponential character in all cases, or to resort to the economic analysis of the individual extrapolations.

In order to give a more comprehensive picture on the *reliability of the extrapolation of the technical coefficients*, in Table 1 we present the regression coefficients of the linear regression equations together with their standard deviations, and in Table 2 the correlation coefficients obtained from our linear

Table 1

Regression coefficients of the linear regression equations used to extrapolate input-output technical coefficients

	1.	2.	3.	4.	5.
1.	.000261	—.005813	—.009130	—.000591	.000206
	(.000149)	(.000156)	(.000124)	(.000039)	(.000069)
2.	.000303	.001804	—.000016	.000519	.000011
	(.000101)	(.000303)	(.000155)	(.000051)	(.000028)
3.	.000113)	.001664	.005784	.000597	.000417
	(.000110)	(.000089)	(.000303)	(.000103)	(.000054)
4.	.000066	—.000229	—.000271	.000674	—.000199
	(.000055)	(.000081)	(.000172)	(.000160)	(.000069)
5.	.000027	—.000041	—.001550	.000043	.006784
	(.000004)	(.000003)	(.000030)	(.000083)	(.000278)

Source: [8], Tables 1—5
( ) Standard deviation of the regression coefficients

trends and from our trends of exponential character, respectively. For lack of space only parameters of the first five industries are presented, but even this few data will convey a general picture. It must be mentioned that the results not presented in the above Tables are in many cases more favourable, and that the results obtained for the industries of Basic Materials and Electric Energy are especially unreliable. The analysis of Table 1 also shows that the regression equations determined may in most cases be used to obtain numerical forecasts:

Table 2

Correlation coefficients of the linear regression equations and regression equations of exponential character used to extrapolate the input-output technical coefficients

		1.	2.	3.	4.	5.
1	L	.0619	.9676	.9915	.8300	.1604
	E	—.2654	.9803	.9913	.8409	.1464
2	L	.1620	.4320	.0002	.6898	.0035
	E	.1619	.5677	—.1928	.7203	—.1050
3	L	.0222	.8815	.8868	.4183	.5605
	E	—.2769	.8397	.8653	.3602	.5657
4	L	.0299	.1465	.0508	.2750	.1514
	E	—.3869	.1363	—.0627	.2556	.0793
5	L	.4760	.8100	.9825	.0057	.9272
	E	.5054	.8255	.9909	—.6165	.9053

Source: See Table 1

the standard deviations of the regression coefficients are in most cases much smaller than the regression coefficients themselves, the difference being sometimes above one order of magnitude. There are, of course, also some opposite cases; it can be observed, however, that in these cases also the absolute values of the regression coefficients are low, what means that these parameters may well be represented by the averages of the observed values, because the regression coefficients are not significantly different from zero. Nevertheless, in the calculations reported here, not average values of the observed values were used in such cases, as the analysis of the results showed that the results obtained by the two methods do not differ significantly. It must also be mentioned that in some cases we did not obtain a positive value for the parameter h in the trends of exponential character. Such cases occurred when one or more of the observed values were higher or lower, respectively, than the chosen asymptote. This means that this method of approximation may not be used. It is also evident that in these cases the parameters have no observable trend. In these few special cases the estimates of exponential character were clearly impossible to determine, and the arithmetical averages of the observed parameter values were used as forecasts.

The analysis of the correlation coefficients may at first glance be misleading. In most cases we have obtained extremely low values. These low values, however, do not show the unreliability of the extrapolated values, but only reflect the fact that *these parameters have no definite trend.* It may also be noted that in these cases also the absolute value of the regression coefficients

is small, so that low correlations exert in most cases no influence on the reliability of the estimates.

It is also possible to draw some conclusions of a different character from the magnitude of the correlation coefficients. In many cases a closer correlation could be obtained from the trends of exponential character than from the linear trends. This shows that in the general case, without any special reason for a different course of action, *the trend of exponential character should be chosen.*

Relying upon these findings, the following principles were laid down regarding the extrapolation of the individual technical coefficients. *The most simple methods of passive extrapolation* were adopted. Only linear trends as well as trends of exponential character based on the results of linear extrapolations were used. No statistical analysis was made to determine which of these curves may be considered as most reliable. The consistency of the estimates was ensured using in some cases the linear estimates, and in some other cases the estimates of exponential character for all the parameters. These estimates were used even in cases where the regression coefficients of the linear regression equations did not significantly differ from zero. Only in cases where non-negative values were obtained for the exponents of the trends of exponential character and thus the curves could not be determined have we used the arithmetic average of the observed values as independent extrapolations. There were only three such cases, all of them in connection with parameters of a very small absolute value. The values obtained for 1975 on the basis of linear forecasts were used as the asymptotes of the curves of exponential character only because — according to preliminary calculations — the estimates of exponential character obtained in this way for 1975 were significantly different from the linear estimates for both 1970 and 1975. Considering that the immediate objective was to provide a basis for calculations covering the period up to 1970, this method could be considered as acceptable within these bounds. The *values obtained for the years after 1970, and especially for those after 1975 must be considered as very unreliable,* so that their utilization cannot be advocated. Such extrapolations may be attempted later using more data and perhaps more refined methods.

Estimation of the other parameters

For the extrapolations of the parameters the same method was used as for the extrapolation of the technical coefficients themselves. *Only linear trends and trends of exponential character* were determined by the method described above. Data were taken from the publication of the Central Statistical Office dealing with the input-output tables of 13 sectors [8]. This means that

no attempt was made to use additional information. Accordingly, only a part of the possibilities offered by the method was exploited, and for two reasons. For one, the comparison of the data obtained from other sources with the data of the above publication presents some difficulties, and we could not have attempted a satisfactory solution of these statistical problems without having access to additional information and to the support of some experts. On the other hand, as already stated, the selection of the more appropriate curve must partly be based on economic considerations; it could not be assumed, however, that all the relevant informations were available to us.

A different procedure was used only in case of forecasting the *weights* used in determining the weighted row sums, i.e. in connection with the extrapolation of the relative importance of the different industries. Economic trends can easily be recognized here. Considering that the independent extrapolations remain unmodified in the course of the application of the method only in case of these parameters, special caution is recommended here. In the case of the smaller industries where the importance of the difference is negligible trends of exponential character were used. As to Chemicals and "Other industries" representing the industrial activity of the non-industrial sectors, a very rapid increase in production must be expected: exponential forecasts were therefore adopted in these sectors. Exponential forecast was also used in the case of private handicrafts, because all the other methods — owing to the rapid decrease of the gross product of this industry — led to negative values within the period considered. Finally, the relative importance of three sectors was first increasing and later decreasing over the period under consideration. Owing to the fact that the share of these sectors is bound to decrease in the long run, we have omitted the 1959 data, and have extrapolated the relative importance of these sectors from the remaining five values. This procedure is, of course, arbitrary, but it is based on additional information: passive methods of extrapolation would have resulted in serious distortions in these three cases. The sum of values extrapolated by this method was almost exactly unity, and only negligible correction was necessary to ensure that the sum of the parameters should meet this requirement.

Consistency of the estimates

Using the method described above, separate sets of consistent estimates have been determined for the year 1970 on the basis of extrapolations obtained from the linear trends as well as from the trends of exponential character. Variants A and B required the solution of equation systems consisting of 13 equations each, and thus these variants presented no computational difficulty. The task was made even simpler by the fact that — owing to the employment

of extrapolations of the same type — the set of independent extrapolations was nearly consistent, and thus the extrapolated values of the parameters were scarcely modified by the calculations. It could also be observed that — what is easy to understand in this special case — the computations using the sums of columns and the weighted sums of rows have led to nearly the same results. This corresponds closely to the experiences of Sándor Németh [4], [5] who has obtained nearly consistent sets of values even without applying any procedure to ensure the consistency of his estimates.

Accordingly, we made no attempt *to differentiate the weights* according to economic considerations, because, on the one hand, we had no access to the necessary informations and because, on the other, the results obtained would not have differed significantly even in the case of using different weights. According to the experiences gained up to now, such a differentiation of the system of weights may be reasonable only if — owing to the use of the active methods of extrapolation — the independent extrapolation of the different parameters leads to heavier inconsistencies. The differentiation of weights still had some role even in this case, but this role was of a purely technical nature. If the extrapolated sums of columns or weighted sums of rows are smaller than the sums of the elements of the same column or row, the method applied diminishes proportionally all the elements of the column or the row. Now, if the original values of the technical coefficients are zeros, this modification leads to negative technical coefficients of small absolute values, which is nonsensical from the economic point of view. In these cases the weights allotted to the parameters were increased in order to obtain zeros instead of negative values. Owing to the fact that in most such cases only the fourth or fifth digit was different from zero, this result could sometimes be obtained only by using great weights.

Variant C requires the solution of an equation system consisting of 169 equations. This is a rather large problem even using modern electronic computers. Considering that the results obtained by Variants A and B do not differ significantly, no better practical results and no experiences considering the applicability of the method could have been obtained from this Variant. As a result, these computations were dropped from our program although the computer program was available. Should we have some active extrapolations for some parameter values, this method could be used.

Variant D requires in this case the solution of equation systems consisting of 39 equations. This task presents no computational difficulties. Considering that from among the Variants actually computed this Variant contains the greatest number of independent estimates and of the conditions of consistency, and considering further that — owing to the results of the extrapolations and to several other reasons — the use of forecasts of exponential character seems to be most expedient, *the results obtained using Variant D and extrapolations*

Table 3

Matrix of input-output technical coefficients, 1964

Total coefficients, observed data

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	.3427	.2130	.2295	.0267	.0220	.1115	.0434	.2035	.0083	.1044	.0392	.0036	.0680
2.	.0307	.2202	.0190	.0169	.0064	.0812	.0463	.1161	.0181	.0690	.0096	.0193	.0332
3.	.0590	.0570	.1894	.0486	.0148	.0487	.0160	.0326	.0353	.0540	.0174	.0036	.0237
4.	.0120	.0235	.0309	.2726	.0157	.0744	.2021	.0200	.0080	.0240	.0422	.0310	.2609
5.	.0014	.0007	.0224	.0183	.1861	.0112	.0123	.0018	.0389	.0030	.0026	.0005	.0000
6.	.0277	.0021	.0000	.0000	.0060	.0000	.0000	.0697	.0274	.0267	.0000	.0000	.0000
7.	.0000	.0000	.0000	.0000	.0000	.0000	.0005	.0014	.0047	.0004	.0012	.0002	.0000
8.	.0154	.0167	.0203	.0153	.0150	.0000	.0024	.0173	.0079	.0102	.0187	.0010	.0000
9.	.0090	.0004	.0174	.0612	.3828	.1807	.0032	.0083	.3055	.0162	.0103	.0031	.0474
10.	.0276	.0072	.0111	.0117	.0245	.0482	.0160	.0743	.0017	.0079	.1504	.6132	.0253
11.	.0081	.0064	.0040	.0078	.0186	.0166	.1397	.0117	.0126	.0051	.0058	.0078	.0063
12.	.0055	.0033	.0088	.0041	.0033	.0009	.0018	.0016	.0011	.0031	.0001	.0000	.0142
13.	.0040	.0010	.0020	.0011	.0003	.0000	.0000	.0012	.0003	.0006	.0171	.0002	.0000

Source: see Table 1

Table 4

Matrix of extrapolated input-output technical coefficients, 1970

Total coefficients, linear extrapolation, column sums as conditions of consistency

(Variant A)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	.3452	.1398	.1208	.0183	.0257	.0574	.0351	.1926	.0146	.0980	.0218	.0022	.0872
2.	.0370	.2514	.0186	.0242	.0072	.0444	.0444	.1346	.0276	.0603	.0095	.0130	.0339
3.	.0632	.0735	.2568	.0527	.0190	.0364	.0045	.0450	.0549	.0571	.0320	.0029	.0328
4.	.0125	.0184	.0286	.2808	.0129	.0399	.1654	.0080	.0098	.0142	.0292	.0211	.3015
5.	.0018	.0000	.0034	.0205	.2661	.0185	.0112	.0009	.0089	.0029	.0054	.0001	.0000
6.	.0123	.0000	.0000	.0000	.0074	.0000	.0000	.0862	.0533	.0117	.0016	.0000	.0000
7.	.0000	.0000	.0000	.0000	.0000	.0000	.0007	.0008	.0069	.0004	.0027	.0000	.0000
8.	.0111	.0109	.0034	.0205	.0104	.0000	.0026	.0182	.0127	.0122	.0243	.0005	.0000
9.	.0094	.0000	.0130	.0440	.2932	.2780	.0030	.0000	.2917	.0161	.0103	.0027	.0341
10.	.0333	.0057	.0109	.0100	.0287	.0285	.0242	.0652	.0065	.0058	.1617	.6532	.0365
11.	.0034	.0061	.0011	.0064	.0029	.0125	.1717	.0064	.0146	.0029	.0022	.0008	.0060
12.	.0045	.0015	.0122	.0019	.0052	.0026	.0005	.0000	.0057	.0043	.0016	.0000	.0270
13.	.0007	.0004	.0018	.0000	.0003	.0000	.0000	.0000	.0038	.0000	.0016	.0000	.0000

Source: See Table 1

Table 5

Matrix of extrapolated input-output technical coefficients, 1970

Total coefficients, extrapolation of exponential character, column sums aud import coefficients as conditions of consistency

(Variant D)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	.3438	.1643	.1590	.0210	.0247	.0751	.0386	.1915	.0116	.0992	.0290	.0036	.0813
2.	.0358	.2422	.0193	.0220	.0064	.0574	.0450	.1289	.0236	.0630	.0099	.0158	.0347
3.	.0617	.0671	.2330	.0513	.0174	.0406	.0070	.0413	.0473	.0582	.0326	.0041	.0310
4.	.0099	.0216	.0321	.2759	.0133	.0517	.1788	.0129	.0084	.0171	.0343	.0249	.2878
5.	.0019	.0003	.0097	.0205	.2388	.0162	.0113	.0021	.0268	.0027	.0043	.0012	.0000
6.	.0170	.0008	.0000	.0002	.0071	.0000	.0000	.0830	.0438	.0165	.0010	.0009	.0000
7.	.0002	.0000	.0000	.0002	.0002	.0000	.0004	.0019	.0054	.0002	.0021	.0010	.0000
8.	.0127	.0111	.0088	.0185	.0098	.0000	.0023	.0187	.0103	.0115	.0224	.0016	.0000
9.	.0092	.0000	.0172	.0506	.3258	.2495	.0029	.0026	.2963	.0163	.0113	.0037	.0384
10.	.0321	.0064	.0108	.0097	.0272	.0352	.0213	.0696	.0040	.0064	.1574	.6723	.0317
11.	.0054	.0063	.0019	.0071	.0083	.0139	.1594	.0091	.0136	.0035	.0032	.0042	.0054
12.	.0048	.0022	.0097	.0028	.0048	.0020	.0009	.0009	.0034	.0036	.0011	.0009	.0218
13.	.0036	.0006	.0015	.0006	.0005	.0000	.0000	.0001	.0018	.0000	.0011	.0010	.0000

Source: See Table 1

of exponential character seem to be the most reliable in the present state of our research. The values of parameters obtained by this method are presented in Table 5. For the sake of comparison actual values computed by the Central Statistical Office for the year 1964 are reported in Table 3, and a consistent system of parameter values obtained for the year 1970 from linear extrapolations using Variant A in Table 4.

Even a cursory glance at the results shows convincingly that the *use of the values obtained by the method* presented here *seems more expedient* than the use of the values obtained from the original statistical data. The matrices obtained from the extrapolated data differ from those obtained from the actual data to a great extent. It seems, however, that there is no major difference between the extrapolated matrices obtained by different methods. The differences between matrices computed from linear extrapolations and from extrapolations of exponential character are in most cases smaller than one year's average change. This means that these differences have little practical importance in the present case. Of course, this is true only for extrapolations for the year 1970; the difference between values obtained by different methods is much greater in later years.

It should be mentioned, finally, that no detailed statistical analysis of the results was attempted up to now. We have not attempted to determine to what degree the reliability of the parameters has been enhanced by the method applied here to ensure their consistency. On the basis of the results obtained thus far we may, however, assume that the results obtained by this method up to 1970 may be considered as reliable, while the results obtained for later years may only be used with the greatest caution, and the results for 1975 are most unreliable.

Conclusions

1. In this paper a simple method for the consistent extrapolation of input-output technical coefficients was presented. The results obtained thus far by this method seem to indicate that the method may be used for this purpose.

2. The method allows many variants. The technical coefficients themselves, as well as the parameters used to test the consistency of these coefficients may be extrapolated by different methods. Also the consistency of these extrapolations may be ensured by different variants built on the same underlying principles. In the case of middle-range extrapolations the different methods yield nearly identical results, and thus a great emphasis on these methodological questions seems to be justified only in the case of long-range extrapolations.

3. The results obtained thus far seem to justify further computations and the extension of the method to matrices of a more detailed sectoral breakdown. Such an extension presents no new conceptual problems, but is, of course, very costly in time and effort. In these computations a further possibility of control is provided by the results obtained for the matrices of 13 sectors, but, at the same time, the conversion of these matrices to a uniform price basis presents grave difficulties.

4. The results may be highly refined by using longer time series for the extrapolation of the column sums, the weighted row sums, and the share of industries, as well as by adopting the method of active forecasting, utilizing planners' estimates and so forth. It would also be highly expedient to have additional basic information; this would most probably allow us to obtain more reliable extrapolations for the years after 1970.

5. The adoption of the results in actual planning practice involves a great problem. In the period observed there were but a few price changes, while in the period ahead us great changes in the price structure are to be expected. This must exert an influence on the development of technical coefficients. We have already launched a further study, using different methods, in order to determine a component describing the effect of changing prices and supplementing the trend component defined here; it is very probable, however, that of these two the trend component will be by far the more important.

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Appendix

Sectoral breakdown of the input-output tables

1. Basic materials and electric energy
2. Machine-building
3. Chemicals
4. Light industry
5. Food industry
6. Other industries
7. Private handicrafts
8. Building industry
9. Agriculture
10. Transports and communications
11. Domestic trade
12. Foreign trade
13. Other productive activities

ПРОГНОЗИРОВАНИЕ МАТРИЦ ТЕХНОЛОГИЧЕСКИХ КОЭФФИЦИЕНТОВ МЕЖОТРАСЛЕВОГО БАЛАНСА

Д. САКОЛЦАИ—П. ВАШАРХЕЙИ

Технологические коэффициенты межотраслевого баланса в Венгрии все больше применяются при планировании на длительную и среднюю перспективу. В настоящий момент, однако, в распоряжении имеются лишь коэффициенты, основанные на фактических данных, относящихся к прошлому периоду, и их использование применительно к будущему, а в особенности — к периодам далекого будущего, может привести к серьезным искажениям. Ввиду того, однако, что таких статистических матриц уже имеется в достаточном количестве, имеется возможность их экстраполяции. Статья занимается решением этой задачи.

В первой части статьи излагается метод. Экстраполяция отдельных коэффициентов основывается на определении и экстраполяции аналитических трендов. На основании аналитических трендов экстраполируются и суммы столбцов, и взвешенные суммы строк, имеющие самостоятельный экономический смысл, а также используемые при их определении коэффициенты взвешивания: соотношения валовой продукции отдельных отраслей в общем объеме продукции. Эти независимые экстраполяции были согласованы при помощи программирования, основанного на ограничивающих условиях и квадратичных целевых функциях, где первыми являются условия консистенции между различными независимыми экстраполяциями, а целевая функция заключается в том, что согласованные между собой прогнозы должны как можно лучше приближаться к первоначальным.

Во второй части статьи приводятся результаты. Здесь автор сообщает статистические показатели экстраполяций, наиболее вероятные матрицы и показывает некоторые возможности сопоставления.

K. Forgács

ROLLE UND BESCHAFFENHEIT DES FAMILIENBETRIEBES IN DER WESTDEUTSCHEN LANDWIRTSCHAFT

Rolle des Familienbetriebes in der westdeutschen Landwirtschaft — Begriffsbestimmung des Familienbetriebes — Verschiebung der Grenzen des Familienbetriebes gegen die höheren Grundbesitz- und Betriebsgrössengruppen — Beschaffenheit des Familienbetriebes in der Periode der technischen Umwälzung.

In der westdeutschen Landwirtschaft ist die Zahl der Familienbetriebe — ähnlich wie in anderen kapitalistischen Ländern — sehr bedeutend. Zusammenhängend mit dem Fortschritt der Mechanisierung und der Steigerung der Arbeitsproduktivität geht der Bedarf an menschlichen Arbeitskräften in der Landwirtschaft und innerhalb dieser in einem grossen Teil der Betriebe weiterhin zurück. Demzufolge werden in vielen Betrieben die Lohnarbeiter entlassen und die Erzeugung wird ausschliesslich mit Familienarbeitskräften fortgesetzt.*

Die Bewirtschaftung ohne Lohnarbeiter ist kennzeichnend für die Mehrzahl der westdeutschen Betriebe, auch die verhältnismässige Rolle der Familienbetriebe erhöht sich in der gegenwärtigen Zeitspanne. Unter solchen Umständen erscheint es als wichtig die Frage zu klären, ob jene Betriebe, die keine ständigen Lohnarbeiter beschäftigen und die Familienmitglieder neben ihrem — ihnen nach ihrer eigenen Arbeit gebührenden — Arbeitseinkommen im allgemeinen keines Gewinns teilhaftig werden, dem kapitalistischen Sektor angehören oder nicht.

In der westdeutschen Landwirtschaft wurden in den fünfziger und sechziger Jahren riesige Investitionen durchgeführt. So z. B. steht die westdeutsche Landwirtschaft mit einem mehr als 1,1 Millionen betragenden Schlepperbestand an dritter Stelle der Welt, hinter den Vereinigten Staaten und der Sowjetunion. Die Mehrzahl der Betriebe wäre aus eigener Kraft nicht im Stande gewesen die bedeutenden Ausgaben der zeitgemässen Bewirtschaftung zu decken. Dazu war die Mobilisierung des in der Industrie akkumulierten Kapi-

* Die Mehrzahl der westdeutschen Betriebe wirtschaftete auch vor dem Krieg ohne Lohnarbeiter. Diese Erscheinung war aber hauptsächlich in den kleinsten Grundbesitzkategorien ersichtlich, in den grösseren Betrieben war die Beschäftigung familienfremder Arbeitskräfte ziemlich allgemein.

tals notwendig. Die Angaben zeigen, dass die Schuldenlast der westdeutschen Landwirtschaft derzeit bereits 20 Milliarden Mark übersteigt und das jährliche Wachstum der Kreditschulden vom Anfang der fünfziger Jahre an ungefähr mit dem Betrag der die Erweiterung bezweckenden neuen Investitionen übereinstimmt. Die technische Umformung der Agrarproduktion ist nur mit Einbeziehung von ausserlandwirtschaftlichem Kapital zu verwirklichen. Damit im Zusammenhang stellt sich aber die Frage, wie sich die Verbindung zwischen den das Kapital anlegenden Industrie-, Handels- und Bankmonopolien einerseits und den Familienbetrieben anderseits gestaltet, weiters auf welchem Weg die kapitalistische Entwicklung der Landwirtschaft in der gegenwärtigen Zeitspanne vorwärtsschreitet?

Diese Fragen sind scheinbar weit von der Problematik der Familienbetriebe entfernt, aber die Analyse der neuen Entwicklungstendenzen in der Landwirtschaft kann immer weniger von den landwirtschaftlichen Interventionen der Monopolien und des Staates getrennt werden. Die Beachtung der technischen und sozialen Wandlungen zeigt mehrere Begriffe und Probleme in einer neuen Beleuchtung. Auch die Familienbetriebe können nicht vom Einfluss der in der Umgebung der Landwirtschaft und in der Landwirtschaft selbst vor sich gehenden Wandlungen abgesondert, ihre Lage und ihre Beschaffenheit in der derzeitigen Landwirtschaft kann sogar nur im Zusammenhang mit diesen erklärt werden. Es ist einleitend notwendig die Rolle des Familienbetriebes in der westdeutschen Landwirtschaft darzulegen und seinen Begriff zu bestimmen.

Rolle des Familienbetriebes in der westdeutschen Landwirtschaft

In der westlichen agrarökonomischen Literatur wird in den Begriff des Familienbetriebes eine breite Skala der landwirtschaftlichen Betriebe eingereiht, im wesentlichen aufgrund eines einzigen Merkmals: der eigenen Arbeit. Als Familienbetriebe gelten also all jene landwirtschaftlichen Betriebe, in denen der Betriebsinhaber und seine Familienangehörigen sämtliche Arbeit ohne ständig eingesetzte Lohnarbeiter, aber im Falle einer Arbeitsspitze vermittels Beschäftigung von Saisonarbeitern verrichten. Es stehen Angaben zur Verfügung, die die Zahl der Lohnarbeitsbetriebe insgesamt und auf die einzelnen Betriebskategorien bezogen zeigen. Im Laufe der allgemeinen landwirtschaftlichen Erhebung in 1960 wurden alle jene Betriebe aufgenommen, die mit ständigen bzw. saisonalen Lohnarbeitern produzieren (Tabelle 1).

Den Daten nach beschäftigen nur 8,5 v. H. sämtlicher landwirtschaftlicher Betriebe ständig Lohnarbeiter und nur 7,4 v. H. stellen Saisonarbeiter ein. Das Bild kann aber nicht vollständig sein, wenn wir die Arbeitskräftelage der einzelnen Betriebskategorien nicht kennen. Das Übergewicht der Klein-

Tabelle 1

Zahl und Anteil der landwirtschaftlichen Lohnarbeitsbetriebe in 1960—1961

Betriebsgrösse ha	Zahl und Anteil der Lohnarbeitsbetriebe		Zahl und Anteil der Saisonarbeiter einsetzenden Betriebe	
	1000	v. H.	1000	v. H.
0,5— 2	9,2	2,0	17,0	3,8
2— 5	9,2	2,4	17,1	4,5
5—10	13,5	4,0	21,2	6,2
10—20	31,3	11,0	32,8	11,5
20—50	56,2	46,1	24,3	19,9
über 50	15,0	91,5	5,3	32,3
Zusammen	134,4	8,5	117,7	7,4

Quelle: Berechnet, siehe Angaben: Wirtschaft und Statistik, 1963. No. 2. S88.

betriebe beeinflusst stark den Anteil der innerhalb sämtlicher Betriebe ausgewiesenen Lohnarbeitsbetriebe, weil bei den kleineren Besitzkategorien relativ in sehr wenig Betrieben Lohnarbeiter beschäftigt werden.

Gemäss der Tabelle wirtschaftet die Mehrzahl der Betriebe in den Grundbesitzgruppen unter 10 ha — 98—96 v. H. — ohne ständige Lohnarbeiter. In den Besitzgrössen von 10—20 ha werden nur in jedem zehnten Betrieb Lohnarbeiter eingesetzt. Sogar in mehr als der Hälfte der Betriebe mit einer Flächengrösse von 20—50 ha werden auch keine ständigen Lohnarbeiter beschäftigt, die Arbeit wird zum Grossteil oder zur Gänze von der Bauernfamilie selbst verrichtet. Allein in den Grundbesitzkategorien über 50 ha ist der Anteil der Familienbetriebe gering, im ganzen 8 v. H.

Die Angaben beziehen sich auf 1960, als die Zahl der ständig beschäftigten Lohnarbeiter noch 327 000 betrug. In den seither vergangenen Jahren setzt sich die Verminderung der Zahl der familienfremden Arbeitskräfte fort, infolgedessen wirtschaften noch weitere Betriebe ohne Einsatz fremder Arbeitskräfte.* Eben die Mechanisierung bringt in erster Reihe den Rückgang des Arbeitsbedarfs der Betriebe mit sich, was zur Folge hat, dass die Betriebe ausschliesslich durch Ausnutzung der Familienarbeitskraft weiterwirtschaften. Wegen der grossen Zahl der ohne ständige Lohnarbeiter wirtschaftenden Betriebe wäre es nicht angebracht und mit den Tatsachen nicht vereinbar, die Verwendung des Begriffs Familienbetrieb umzugehen.

* Im Wirtschaftsjahr 1963—64 arbeiteten nur mehr 257 000 ständige Lohnarbeiter in den anderthalb Millionen Betrieben der westdeutschen Landwirtschaft. Im selben Jahr bestand der Grossteil der landwirtschaftlich Beschäftigten, annähernd 90 v. H., aus Familienarbeitskräften. Innerhalb der ständigen Arbeitskräfte mit Haupteinkommen aus der Landwirtschaft, ist der Anteil der Familienarbeitskräfte noch etwas grösser; 91,5 v. H. [1].

Begriffsbestimmung des Familienbetriebes

Auf dem weiten Gebiet der Familienbetriebe sind verschiedene Besitz- und Betriebsgrössen zu finden, die im wesentlichen auf Grund eines einzigen Kriteriums, des der eigenen Arbeit, in einen gemeinsamen Begriff vereinigt werden. Die Definition des Familienbetriebes von der Seite der Arbeitskraft her bedeutet auch, dass die Grösse des Familienbetriebes entscheidend durch die Arbeitskapazität der Bauernfamilien bestimmt wird, »denn nur diejenigen Betriebe sind als ‚Familienbetrieb' im eigentlichen Sinne anzusprechen, die eine kleine Bauernfamilie schon und eine grosse Bauernfamilie noch auslasten und in denen keine familienfremden Arbeitskräfte ständig benötigt werden.« [2]

Die kleinste Bauernfamilie stellt für den Betrieb im allgemeinen zwei Arbeitskräfte, meistens eine vollbeschäftigte männliche und eine teilweise eingesetzte weibliche Arbeitskraft. Die Bäuerin verrichtet den Grossteil ihrer Arbeit im Haushalt und kann im Betrieb nur für Saisonarbeiten beschäftigt werden. Die wirklich vollständige Auslastung der männlichen Arbeitskraft hängt von vielen Umständen ab: von der Grösse der Bodenfläche, von der Produktionsstruktur, vom Mechanisierungsgrad. Der Eigenart der landwirtschaftlichen Produktion entsprechend, ist eine gleichmässige Beschäftigung in den einzelnen Monaten des Jahres im allgemeinen nicht möglich. Wenn seine Arbeitskraft nicht gänzlich ausgelastet ist, vergrössert der Inhaber entweder seinen Betrieb, bzw. intensiviert die Produktionsstruktur, oder sieht sich nach einer anderen Erwerbsmöglichkeit um. Bei einem Teil der Familienarbeitskräfte wird die landwirtschaftliche Tätigkeit zu einer Nebenbeschäftigung, was besonders in den kleineren Betriebskategorien vorkommt. Darauf weist die Strukturveränderung der Familienarbeitskraft, bzw. die Erhöhung des Anteils der teilweise beschäftigten Betriebsleiter und ihrer Familienmitglieder hin. Viele Familienbetriebe können nicht einmal die kleinste Bauernfamilie — genauer gesagt den Betriebsleiter selbst — mit einer, seine gesamte Arbeitszeit in Anspruch nehmenden Tätigkeit versorgen und werden daher zu einer Nebenerwerbsquelle. Diese Nebenerwerbsbetriebe können im engeren Sinn des Wortes nicht mehr als Familienbetriebe betrachtet werden. *Die untere Grenze des Familienbetriebes — zugleich die oberste Grenze des Nebenerwerbsbetriebes — ist also dort zu suchen, wo der Betrieb so gross bzw. so arbeitsintensiv ist, dass er die kleinste Bauernfamilie schon mit Arbeit versorgt.*

Es gibt aber auch grössere Bauernfamilien, als die kleinste, wo mehr als ein ständiger Arbeiter oder mehrere teilweise einbeziehbare Familienmitglieder zur Verfügung des Betriebes stehen. Die grössere Arbeitskapazität ermöglicht im wesentlichen die Bewirtschaftung einer bedeutend grösseren Bodenfläche oder eine intensivere Bewirtschaftung auf einer kleineren Fläche. *Die obere Grenze des Familienbetriebes endet und die untere Grenze des kapitalistischen Betriebes beginnt dort, wo die grosse Ausdehnung oder der Intensitätsgrad des*

Betriebes eine Arbeitsmenge erfordert, die die Arbeitskraft der Familie noch bewältigen kann, jedoch schon den Einsatz von Saisonarbeitern notwendig macht.

Neben den »reinen Typen« des eigentlichen Familienbetriebes gibt es zahlreiche Betriebe, in denen ein bis zwei ständige, meistens weibliche Arbeitskräfte angestellt werden, der Grossteil der Arbeit aber durch die Familienmitglieder verrichtet wird. Daraus ergibt sich, dass der bedeutend grössere Teil des im Ertrag realisierten Bruttoeinkommens aus der Arbeit der Familienmitglieder stammt und die gesamte Summe des Lohns der familienfremden Arbeitskräfte und des das Einkommen der Familie erhöhenden Mehrwertes nur einen kleinen Anteil beträgt.

Zur Darstellung des Anteils der eigentlichen kapitalistischen Betriebe, der Familienbetriebe und der Nebenerwerbsbetriebe unternehmen die westdeutschen Ökonomen G. Müller und H. Kötter einen Versuch. Sie verwenden Angaben des Jahres 1956 (Tabelle 2).

Obzwar der ausgewiesene Anteil der Lohnarbeitsbetriebe unwahrscheinlich niedrig ist — die Verfasser wenden den Begriff Familienbetrieb in einem übertrieben weiten Sinn an — sind die Zahlen doch dazu geeignet, die Aufmerksamkeit von neuem auf den grossen Anteil der Familienbetriebe und der Nebenerwerbsbetriebe in der westdeutschen Landwirtschaft zu lenken. Es ist interessant mit obigen die Feststellungen der landwirtschaftlichen Erhebung zu vergleichen, wonach insgesamt 8,5 v. H. sämtlieher Betriebe ständige Arbeiter beschäftigen. Ferner arbeiteten im selben Jahr 40,6 v. H. sämtlicher Betriebsleiter nebenberuflich in der Landwirtschaft.

Tabelle 2

Überblick über die Verteilung der landwirtschaftlichen Betriebe in 1956

	Anzahl der Betriebe		Fläche	
	1000	v. H.	1000 ha	v. H.
Lohnarbeitsbetriebe	64	3,2	3 190	23,7
Familienbetriebe	1 080	54,6	8 923	66,4
Nebenerwerbsbetriebe	834	42,2	1 345	9,9
Zusammen:	1 978	100,0	13 458	100,0

Quelle: Müller, G. — Kötter, H.; Wirtschaftliche und soziale Bestimmungsgründe der Lage der westdeutschen Landwirtschaft, Berichte über Landwirtschaft. 1956. No. 3. S. 398.

Die Nebenerwerbsbetriebe erstrecken sich nur auf einen kleinen Anteil, d. h. 9,9 v. H. der Gesamtfläche, da ungefähr zwei Drittel derselben über eine Bodenfläche von unter 2 ha verfügen. Diese Nebenerwerbsbetriebe sind weniger spezialisiert, z. B. nur 7—6 v. H. dieser Betriebe betreibt Gärtnerei als Haupt-

produktionszweig. Der Besitzer findet seinen Haupterwerb anderswo, z. B. im Bergwerk, im Baugewerbe, in der Holz- und Papierindustrie, im Verkehr usw., betrachtet dabei seinen Kleingrundbesitz als Nebenerwerbsquelle bzw. als eine Möglichkeit zur Freizeitgestaltung.

Die kapitalistischen Lohnarbeitsbetriebe nehmen — im Gegensatz zu ihrer geringen Zahl — annähernd ein Viertel der Fläche ein. Sie produzieren in grosser Menge Waren und in einem bedeutenden Teil schreitet die Spezialisation schnell vorwärts. Die Familienbetriebe bewirtschaften mehr als 60 v. H. der Gesamtfläche und machen wenigstens die Hälfte der Zahl sämtlicher Betriebe aus. Unbestreitbar bedeuten die Familienbetriebe die typischste Wirtschaftsform, bilden aber zugleich eine ausserordentlich heterogene Gruppe unter den Betrieben der westdeutschen Landwirtschaft.

Es ist ziemlich schwer die aufgrund der Arbeitskraft bestimmte unterste und oberste Grenze der Familienbetriebe in Flächengrössen auszudrücken. Z. B. in der Gruppe unter 10 ha findet man Nebenerwerbsbetriebe, Familienbetriebe, ja sogar kapitalistische Lohnarbeitsbetriebe kommen vor. Auf Grossbesitzen über 50 ha wieder produzieren nicht nur kapitalistische Grossbetriebe, sondern auch Familienbetriebe. »Unter den neuen Verhältnissen — je Familie zwei erwachsene Arbeitskräfte berechnet und dazu einen Schlepper mit seinen Arbeitsmaschinen — gelten in Westeuropa 20—50, in den überseeischen Ländern aber 50—80 ha als eine Betriebsgrösse, die den Ausmassen des Familienbetriebs entspricht.« [3] Ja sogar in einem Teil der Betriebe über 50 ha werden keine ständigen familienfremden Arbeiter eingesetzt, sondern neben Auslastung der Familienarbeitskräfte fallweise Saisonarbeiter beschäftigt. Auf diesen grösseren Grundbesitzen kommt es aber oft zu einem Arbeitskräftemangel, oder es entsteht ein über die Familienarbeitskräfte hinausreichender Lohnarbeiterbedarf. Es ist unzweifelhaft, dass derzeit in der DBR die Mehrheit der Familienbetriebe innerhalb der Grundbesitzkategorien bis zu 10—50 ha zu finden ist. Dies zeigt, dass *die Grundlage des Familienbetriebes ein kleinerer oder ein grösserer Grundbesitz gleicherweise* sein kann, der im wesentlichen ohne Ausbeutung familienfremder Arbeitskräfte bewirtschaftet wird.

Die Feststellung des klein- oder grossbetrieblichen Charakters der Familienbetriebe bildet ebenfalls eine wichtige Frage. Dazu ist es aber notwendig zu bestimmen, aufgrund welches Hauptmerkmals die Klein- und Grossbetriebe voneinander abgegrenzt werden können?

Die Flächengrösse ist nicht geeignet, eindeutig das Ausmass des Betriebes zu bezeichnen. Es ist eine vielseitig analysierte und geklärte Feststellung, dass sich die Grenzen des Kleingrundbesitzes und Kleinbetriebes miteinander nicht decken, da auch auf kleinen Bodenflächen eine grossbetriebliche Wirtschaft geführt, bzw. in grosser Menge Waren produziert werden kann. Je grösser aber die Grundbesitzkategorie, desto grösser ist zweifellos der Anteil der Grossbetriebe.

Die Beschäftigung von familienfremden Arbeitskräften kann unter den derzeitigen Umständen an sich auch nicht jenes vertrauenswürdige Merkmal bilden, auf Grund dessen man den Gross- und den Kleinbetrieb unterscheiden kann. Die Ansicht, nach der jede nur mit Familienarbeitskraft, ohne Lohnarbeiter produzierende Wirtschaft als Kleinbetrieb betrachtet werden kann, ist nicht annehmbar. In der gegenwärtigen Zeitspanne wird die Betriebsgrösse nicht so entscheidend durch den Einsatz familienfremder Arbeitskräfte bestimmt, wie in früheren Jahrzehnten. Der Grund dessen besteht darin, dass sich die Arbeitskapazität der Bauernfamilie im Zuge der Mechanisierung erhöht und es dadurch ermöglicht wird, dass der Betrieb in grosser Menge Waren herstellt. Deshalb kann man bei den Familienbetrieben neben einer Mehrheit von Kleinbetrieben, in der Zeitspanne der technischen Umwälzung der Landwirtschaft auch Grossbetriebe vorfinden.

Auch aufgrund der Grösse des angelegten Kapitals allein kann man den Unterschied zwischen Kleinbetrieb und Grossbetrieb auf alle Wirtschaften bezogen nicht ausdrücken. In der Zeitspanne der technischen Revolution ist jeder Betrieb zu grossen Investitionen gezwungen, und wenn er dazu über keine eigenen Geldmittel verfügt, versucht er seinen Betrieb mit Hilfe von Krediten zu modernisieren. Auch die Höhe der Investitionen kann nicht in jedem Fall ausschlaggebend sein. Die Frage ist, bis wohin reichen die Kleinbetriebe, wo fangen die Grossbetriebe an? In sehr vielen Betrieben der westdeutschen Landwirtschaft überschreiten die investierten Beträge weit die Möglichkeiten des Betriebes und führen zu einer beträchtlichen Verschuldung. Ausserdem ermöglichen die kleineren Grundbesitze die Ausnutzung weder der teuer gekauften neuen Maschinen noch der zur Verfügung stehenden Familienarbeitskräfte. Gegenwärtig bildet die Mechanisierung in vielen Betrieben einen Labilitätsfaktor. Deswegen kann die wirtschaftliche Potenz und das Ausmass des Betriebes nicht unmittelbar von der Höhe des investierten Kapitals abgeleitet werden.

Unter den gegenwärtigen Umständen kann weder die Grösse der Bodenfläche noch die Beschäftigung familienfremder Arbeitskräfte, noch die Höhe des investierten Kapitals als ein Merkmal primärer Wichtigkeit erachtet werden, aufgrund dessen die Grenze zwischen Klein- und Grossbetrieben gezogen werden kann. In der modernen Landwirtschaft können auch auf kleinen Bodenflächen, ohne Einsatz familienfremder Arbeitskräfte, nebst relativ geringer eigener Kapitalanlage grosse Warenmengen produzierende, intensiv wirtschaftende Betriebe gefunden werden. Zugleich ist aber auch die Zahl jener Betriebe bedeutend, die wegen schlecht ausgelasteter Maschinen, wegen einer ungenügenden Effizienz der Familienarbeitskraft und der verzettelten Produktionsstruktur aus ihren Verkaufserlösen nur ein niedriges Einkommen erzielen können. Die Investitionen zahlen sich gegenwärtig dann aus, wenn der Betrieb mit ihrer Hilfe im Stande ist grosse Warenmengen zu erzeugen. In diesem Fall

belasten nämlich die Kosten der Mechanisierung und der Bauten (in Form von neuen Investitionen, Instandhaltungskosten, Kredittilgung, Zinszahlung usw.) weniger die Verkaufserlöse, und die Möglichkeit zur Erzielung eines grösseren Bruttoeinkommens ist gegeben. Deshalb kann man an die Grenze zwischen Klein- und Grossbetrieb eindeutiger mittels der produzierten Warenmenge herankommen.

Diese Feststellung schliesst jedoch nicht den Einfluss der Grösse der Bodenfläche, des Arbeitskraftbesatzes, der verfügbaren Kapitalmenge und der rationellen Kombination dieser auf die Betriebsgrösse aus. Ihre Wirkung zeigt sich aber meistens in der Grösse des Warenproduktes. Ein häufiger Fall ist, dass die Steigerung der Produktion, die Auslastung der Maschinen dadurch erreicht werden kann, dass der Betriebsinhaber neuen Boden kauft oder pachtet. Derzeit ist es nicht typisch, aber möglich, zur Erhöhung des Verkaufserlöses Lohnarbeiter einzusetzen. Weiterhin ist auch zu beachten, dass Mangel an eigenem Kapital oder gänzliche Verschuldung nicht nur die Steigerung der Warenproduktion, sondern auch das Weiterführen der Bewirtschaftung verhindern kann. Unzweifelbar ist, dass auf grösseren Bodenflächen die Maschinen wirtschaftlicher ausgenutzt werden können, weiters, dass mit grösserem eigenen Kapital — und dadurch mit einem grösseren Kreditrahmen — bedeutendere Investitionen verwirklicht werden können. Sogar durch eine höhere Arbeitskapazität der Bauernfamilie kann eine vorteilhaftere Produktionsstruktur ausgebildet werden. All diese Faktoren wirken auf das Ausmass der Warenproduktion und beeinflussen dadurch das Einkommen des Betriebes.

Die Grenzziehung zwischen Kleinbetrieb und Grossbetrieb wurde im Prozess der jetzigen technischen Umgestaltung der Landwirtschaft zu einer besonders verwickelten Aufgabe. Mit den oben aufgeworfenen Gedanken kann die Lösung dieses weitverzweigten Problems nicht herbeigeführt werden. Aus der bisherigen Analyse geht jedoch hervor, dass die Familienbetriebe nicht in ihrer Gänze als Kleinbetriebe zu betrachten sind. *Unter den Familienbetrieben findet man neben zahlreichen Kleinbetrieben auch Grossbetriebe*, die bestrebt sind, sich auf eine spezialisierte Massenproduktion einzurichten.

Verschiebung der Grenzen des Familienbetriebes gegen die höheren Besitz- und Betriebsgrössengruppen

Die Analyse der Arbeitskräftelage in der westdeutschen Landwirtschaft zeigt, dass in der Zeitspanne nach dem Krieg die Zahl sowohl der Lohnarbeiter als auch der Familienarbeitskräfte — und im Zusammenhang mit letzteren auch die Betriebszahl — zurückging. Die gleichgerichtete Veränderung in den beiden Hauptgruppen des Arbeitskräftebestandes trägt die Durchsetzung zweier Tendenzen in sich, die die Wandlung der Lage, oder mit anderen

Worten, der Rolle des Familienbetriebes widerspiegeln. Die erste Tendenz ergibt sich aus dem Rückgang der Zahl der Lohnarbeiter, der sich auf sämtliche Grundbesitzkategorien ausdehnt. Dadurch breitet sich die Bewirtschaftung durch die Familie nicht nur in den kleineren, sondern auch in den mittleren und grösseren Betrieben aus. Die zweite Tendenz knüpft sich an die Verminderung der Zahl und die Strukturveränderungen der Familienarbeitskräfte, was wieder entscheidend mit dem Ruin der Betriebe unter 10 ha bzw. mit ihrer Umformung zum Nebenerwerbsbetrieb zusammenhängt. Mit anderen Worten, in den kleineren Betrieben geht die Zahl der Familienarbeitskräfte zum Grossteil zurück. Dabei ist aber auch die Zunahme des Anteils der teilweise beschäftigten Familienarbeitskräfte für die kleineren Grundbesitzkategorien kennzeichnend. Dies alles bedeutet, dass der Familienbetrieb in der Gruppe unter 10 ha zurückgedrängt wird, entweder dadurch, dass er zugrundegeht oder dadurch, dass er zu einer Nebenerwerbsquelle wird. Der Familienbetrieb gewinnt in den grösseren, verliert in den kleineren Grundbesitzkategorien an Boden, als Ergebnis der zwei Vorgänge.

Im Zusammenhang mit der Entwicklung der Technik, der Steigerung der Mechanisierung und der Ausgestaltung einer spezialisierten grossbetrieblichen Produktion, erfordert die Bewirtschaftung ohne Lohnarbeiter immer grössere Betriebsflächen. In den kleineren Grundbesitzkategorien ist aber die gänzliche Auslastung einer oder zwei Arbeitskräfte, ja sogar der wirtschaftliche Betrieb der Maschinen immer weniger möglich. Deshalb *verschieben sich in der gegenwärtigen Zeitspanne die Grenzen des Familienbetriebes immer mehr gegen die höheren Besitzgrössengruppen.*

Das Eingehen der Kleinbetriebe oder ihre Umgestaltung zu Selbstversorgungsbetrieben bedeutet aber nicht zugleich den Untergang des Familienbetriebes. Den Kleinbetrieb und den Familienbetrieb kann man nicht in jedem Fall miteinander gleichsetzen, weil derzeit die produktivere Arbeit der Bauernfamilie die Produktion einer grossen Warenmenge ergeben kann. Im Rahmen des Familienbetriebes können sowohl Kleinbetriebe als auch Grossbetriebe vorkommen, aber die Rolle und Zahl der Kleinproduzentenbetriebe vermindert sich beständig, dagegen entfaltet sich die vorteilhaftere Lage der Grossbetriebe zunehmend. *Darum erhöht sich der Anteil der mechanisierten Grossbetriebe innerhalb der Familienbetriebe und auch ihre Rolle in der landwirtschaftlichen Warenproduktion.*

Die Verschiebung der Grenzen der Familienbetriebe gegen die grösseren Grundbesitz- und Betriebskategorien ergibt sich aus der sich in der Landwirtschaft entfaltenden technischen Revolution. Das Fortschreiten der Mechanisierung, die Steigerung der Arbeitsproduktivität und als Folge dessen die Verminderung der Zahl der familienfremden Arbeitskräfte stellt eine Grundtendenz in der derzeitigen Entwicklung der Landwirtschaft dar, mit deren Wirkung man durchaus rechnen muss. Die Substituierung der menschlichen

Arbeit durch Maschinen hat nämlich zum Ergebnis, dass früher Lohnarbeiter beschäftigende Betriebe nun mit der Arbeitskraft der Familie produzieren können. Natürlich geht der klassische Weg der kapitalistischen Entwicklung in der Landwirtschaft — d. h. die Umwandlung eines Teiles der persönlichen Bauernwirtschaften zu kapitalistischen Betrieben — in der westdeutschen Landwirtschaft auch heute und in der Zukunft weiter vor sich. *Im Zeitalter der technischen und strukturellen Umwälzung aber — die in der Deutschen Bundesrepublik in den fünfziger Jahren begann und sich auch in der nächsten Zukunft noch fortsetzen wird — ist es für die Entwicklung kennzeichnender, dass sich die bisherigen Lohnarbeitsbetriebe auf die Arbeitskapazität der Familie beschränken.*

Beschaffenheit des Familienbetriebes in der Periode der technischen Umwälzung

Die Verbreitung der Familienbetriebe zu Lasten der kapitalistischen Betriebe in der grossbetrieblichen Produktion und in den grösseren Grundbesitzkategorien ist unbedingt eine der am meisten problematischen Erscheinungen in der modernen Landwirtschaft. Wie wird wohl die kapitalistische Entwicklung der Landwirtschaft in der Periode der technischen Umwälzung vor sich gehen, wenn die Bildung von Lohnarbeitsbetrieben an Stelle von persönlichen Bauernwirtschaften nur auf ein enges Gebiet beschränkt wird?

Wäre es möglich, dass die sich innerhalb der heterogenen Gruppe der Familienbetriebe zeigenden Vorgänge die Haupttendenz der Kapitalisierung bedeuteten? Die Grenzen der Familienbetriebe verschieben sich tatsächlich gegen die grösseren Besitz- und Betriebsgrössengruppen. Der Prozess der Differenzialisierung schreitet innerhalb der Familienbetriebe in einem schnellen Tempo vorwärts, wobei in deren Verlauf die schwächeren Kleinproduzentenbetriebe zugrundegehen oder ihre wirtschaftliche Bedeutung verlieren. Die zeitgemässen Grossbetriebe dagegen verstärken ihre wirtschaftliche Lage — öfters ohne Lohnarbeitsbetriebe zu werden.

Zur Bestimmung der Beschaffenheit der Familienbetriebe — besonders der problematischen Grossbauernwirtschaften — kann man nur davon ausgehen, dass diese Betriebe ihr Bestehen auf ihre eigene Arbeit und den Privatbesitz gründen. Aus diesen beiden Pfeilern ergibt sich das Doppelgesicht der Familienbetriebe. Die Wirtschaft ohne Lohnarbeiter bedeutet, dass auf die Glieder der Bauernfamilie eine grosse Arbeitslast entfällt, besonders in den intensiv wirtschaftenden Betrieben bzw. weit ausgedehnten Besitzen. Die Quelle eines entscheidenden Anteils oder des gesamten Einkommens ist die Arbeit der Bauernfamilie. Die Betriebseigentümer bemühen sich die zur Verfügung stehenden Arbeitskräfte auszulasten und ihr Ziel ist, die Arbeitsausnutzung so gut als möglich zu verwerten, d. h. das nach Deckung der sächlichen

Ausgaben des Betriebs aus dem Verkaufserlös verbleibende Familieneinkommen möglichst gross zu gestalten. Aufgrund ihrer eigenen Arbeit gehören die Einzelbauern nicht der ausbeutenden Klasse an und ihre Betriebe können unter den jetzigen Verhältnissen nicht als eindeutig kapitalistische betrachtet werden.

Zweifellos bietet aber das Privateigentum Möglichkeiten zur Ausbeutung familienfremder Arbeitskräfte. Die derzeitigen Familienbetriebe konnten einen Teil ihres Vermögens dadurch erreichen, dass sie sich einen Teil des durch die Lohnarbeiter produzierten Mehrwertes aneigneten. Auch zurzeit beschäftigen sie bei Arbeitsspitzen Saisonarbeiter, wenn dies rentabler ist als der Ankauf einer neuen Maschine. Das Privateigentum der Familienbetriebe ergibt Möglichkeiten zur Ausbeutung, aber diese Möglichkeit verwirklicht sich nicht unter allen Umständen. Derzeit stehen bei den Familienbetrieben nicht die sich aus dem Privateigentum ergebenden Züge im Vordergrund, sondern ihre auf die eigene Arbeit gestützte Bewirtschaftung. Diese Feststellung kann vorläufig mit der grossen Arbeitsbelastung der Familienmitglieder, also mit ihrer bäuerlichen Lebensart untermauert werden; weiters dadurch, dass derzeit ein bedeutender Teil ihres Einkommens die eigene Arbeit ist. Aber darüber hinausgehendes, kann die Beschaffenheit der Familienbetriebe und die kapitalistische Entwicklung der Landwirtschaft nicht ganz verstanden werden, wenn nicht die Umstände analysiert werden, die auch die technische Entwicklung der Landwirtschaft förderten.

Die schnelle Entwicklung der Produktionskräfte der Landwirtschaft kann nicht von anderen Wirtschaftszweigen, in erster Linie vom Entwicklungsgrad der Industrie abgesondert betrachtet werden. Hier ist nicht nur davon die Rede, dass die zeitgemässe Industrie die Produktionsmittel der modernen Wirtschaft herstellt, sondern auch davon, dass die ganze Landwirtschaft, oder mit anderen Worten die überwiegende Mehrheit der Betriebe nicht über genügendes Kapital verfügen, um ihre Wirtschaft rationalisieren zu können. Die Industrie- und Handelsunternehmen spielen eine grosse Rolle in der Entwicklung der Landwirtschaft, aber diese Rolle beschränkt sich nicht nur auf das Gebiet der Produktionskräfte. Aus den Prozessen der Mechanisierung und Chemisierung der landwirtschaftlichen Produktion, aus der Steigerung der Arbeitsproduktivität, aus der Verminderung des Arbeitskraftbedarfs allein können die in den Produktionsverhältnissen eintretenden Veränderungen noch nicht verstanden werden, man muss auch das Eindringen der Industrie-, Handels- und Bankmonopolien in die Landwirtschaft in Betracht ziehen. Aufgrund der Analyse der Beziehungen zwischen den anderen Wirtschaftssektoren und der Landwirtschaft kann man die Bewegsgründe der schnellen Entwicklung der Produktionskräfte besser und vollständiger erklären, ausserdem gibt die Kenntnis über die Verbindungen zwischen den Monopolien und den landwirtschaftlichen Betrieben eine Antwort auf die Veränderung der Wirtschaftsverhältnisse. »Genauer gesagt: die Umgebung der Landwirtschaft veränderte

sich im Laufe des vergangenen Jahrhunderts derart, dass unter diesem Einfluss auch die Landwirtschaft in den letzten Jahrzehnten dieser Umformung gefolgt hat und sich sowohl in ihrer ganzen Beschaffenheit, als auch in ihren Betriebsverhältnissen in einem stürmischen Tempo veränderte.« [4]

Die entwickelten kapitalistischen Länder — so auch die Deutsche Bundesrepublik — können die technische und strukturelle Rekonstruktion der Landwirtschaft dann verwirklichen, wenn sie bereits über eine zeitgemässe Industriebasis verfügen. Die Kapitalisten sind gezwungen die Landwirtschaft umzuwandeln, weil die Entwicklung einer modernen Industrie und eines modernen Handels durch die zurückgebliebene Landwirtschaft in grossem Masse behindert werden.

Die stürmische Entwicklung der Produktionskräfte der westdeutschen Landwirtschaft ist vielerseits mit der zeitgemässen Industrie verknüpft, die die modernen Produktionsmittel, die notwendigen Kapitalien zusichert und einen bedeutenden Teil der frei gewordenen Agrarbevölkerung aufnimmt. Weiters organisiert besonders das Monopolunternehmen in seinem eigenen Interesse die Integration des industriellen und landwirtschaftlichen Produktionsabschnitts und konzentriert dadurch gleichzeitig die Agrarproduktion. *Die technische Umformung der Landwirtschaft geht unter der Aegis der Industrie und der Monopolien vor sich.*

Zusammen mit den Produktionskräften kann auch die Umformung der Produktionsverhältnisse nicht von den landwirtschaftlichen Interventionen der Monopolien abgesondert werden. *Die hochgradige Synthese der industriellen und landwirtschaftlichen Produktion bedeutet zugleich auch die Vereinigung des Industriekapitals und der landwirtschaftlichen Arbeit.* Innerhalb der integrierten Produktionskette gesellt sich zur Kapitalanlage des Industrieunternehmens die Arbeit des Landwirtschaftsbetriebes. Die Organisierung der Beziehungen zwischen industrieller und landwirtschaftlicher Produktion kann — ausser der vertikalen Integration — verschiedene Formen annehmen, wesentlich ist jedoch, dass ohne das in der Industrie aufgestockte Kapital ihre Verwirklichung unvorstellbar ist. Gegenüber dem in die Landwirtschaft eindringenden Fremdkapital stehen Hunderttausende von Familienbetrieben, die in erster Reihe danach streben ihre zur Verfügung stehenden Arbeitskräfte nutzbar zu machen. In diesem Prozess geraten die Bauernproduzenten stufenweise auf jenen Pol der kapitalistischen Gesellschaft, dem gegenüber die Monopolien stehen.

In der derzeitigen Zeitspanne ist die Trennung des Bodens als Arbeitsbedingung und als Besitz schon weit fortgeschritten. (In der Formulierung Lenins, die Loslösung des Bauern vom Boden.) Dieser Prozess kommt einesteils darin zum Ausdruck, dass auf den Grundbesitzen oft eine grössere Schuld als die Hälfte ihrer Bodenpreise lastet. Andererseits erreicht die Mehrheit der Bodenbesitzer nicht jene Einkommen, die ihnen als Eigentümer und als Unternehmer auf anderen Gebieten des Wirtschaftslebens zukämen, sondern die

Wirtschaft bezahlt nur ihre Arbeitskraft. Natürlich ist der Boden eine bedeutende Reserve und ein Sicherheitsfonds für den Bauern, so dass seine Lage etwas günstiger als die des vermögenslosen Arbeiters ist. *Andererseits gibt aber der Bodenbesitz unter den jetzigen Umständen immer weniger Möglichkeiten dazu, dass sich der Bauer — als kapitalistischer Unternehmer — vom Arbeiter unterscheide.* Das Vertragssystem der vertikalen Integration ist derzeit eines der bedeutendsten Mittel zur Umformung des Bauern zum Lohnarbeiter.

Die sozialen Verhältnisse der Landwirtschaft können von den landwirtschaftlichen Interessen der Monopolien nicht abgesondert werden. Der im Vordergrund stehende Moment in der kapitalistischen Entwicklung der Landwirtschaft unter den Bedingungen der technischen Umwälzung ist nicht der, dass die Familienbetriebe in immer grösserem Masse zu Lohnarbeitsbetrieben werden. Diese Art der Kapitalisierung zeigt sich natürlich auch in der heutigen Landwirtschaft, aber nicht dies ist heute kennzeichnend. Weiters kann auch die innerhalb der Gruppe der Familienbetriebe vor sich gehende Differenzierung im allgemeinen nicht die Entfaltung der kapitalistischen Züge der Familienbetriebe zum Resultat haben, da diese neben den Mammutmonopolien nur eine kleine und untergeordnete Rolle spielt. Die Lage des Besitzers wird im allgemeinen dadurch charakterisiert, dass er zu einem formalen Eigentümer seines Betriebes und zu einem tatsächlichen Arbeiter des Industrie- oder Handelsunternehmens wird. Auf diese, sich auf die Kooperation der Industrie und Landwirtschaft beziehende Gefahr weist das Dokument der vorjährigen Sitzungsperiode der Europäischen Landwirtschaftlichen Föderation hin. »Diese Entwicklung wirft das Problem der traditionellen Bauernwirtschaft klar auf: dem landwirtschaftlichen Produzenten droht die Gefahr in seinem eigenen Betrieb zum Lohnarbeiter zu werden.« [5] *Die allgemeine Tendenz ist, dass nicht die landwirtschaftlichen Betriebe mehr familienfremde Arbeitskräfte beschäftigen, sondern dass der Eigentümer und seine Familie für monopolistische Unternehmen arbeiten. Unter solchen Umständen stehen nicht die sich aus dem Privateigentum ergebenden Züge, sondern die sich auf die eigene Arbeit gründende Bewirtschaftung der Familienbetriebe im Vordergrund.*

Die Anpassung der Familienbetriebe an die Anforderungen der modernen Produktionskräfte werfen in ihrer Mehrheit unlösliche Probleme auf. Die Schwierigkeiten ergeben sich in erster Reihe daraus, dass man in vielen Betrieben die Maschinen und die Arbeitskräfte nicht optimal ausnutzen kann. Dieser Umstand verteuert die Produktion sehr, was bei der Verwirklichung der Agrarpläne des Gemeinsamen Marktes besonders schwerwiegende Sorgen verursacht. Deshalb besteht das Hauptziel der Landwirtschaftspolitik der westdeutschen Regierung darin, solche »lebensfähigen« Betriebe auszugestalten, die zur rationellen Ausnutzung der neuesten Technik und zu einer rentablen Wirtschaft geeignet sind. Es ist zweifellos, dass die Familienrahmen nicht in jeder Zeitspanne den wirtschaftlichen und politischen Interessen des Monopolkapitals

entsprechen. Derzeit stellen aber die Familienbetriebe billige Arbeitskräfte für das »agro-business« der Industrie, des Handels und der Bankmonopolien.

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РОЛЬ И ХАРАКТЕР СЕМЕЙНЫХ ХОЗЯЙСТВ В ЗАПАДНОГЕРМАНСКОМ СЕЛЬСКОМ ХОЗЯЙСТВЕ

К. ФОРГАЧ

Ведение хозяйства без употребления наемного труда характерно для большинства западногерманских хозяйств. Поэтому было бы нецелесообразно и не соответствовало бы действительности игнорирование понятия семейного хозяйства.

Семейными считаются все хозяйства, в которых работы выполняются собственником хозяйства и членами его семьи без постоянного применения наемного труда, однако, с употреблением сезонных рабочих в пиковые периоды скопления работ. Поэтому величина семейного хозяйства *в решающей мере определяется трудовыми ресурсами крестьянской семьи.* Нижний предел семейного хозяйства — и одновременно верхний предел обеспечивающего побочный доход хозяйства — располагается там, где хозяйство настолько велико или настолько трудоемко, что им обеспечивается занятость для самой малой крестьянской семьи. В то же время верхний предел семейного хозяйства заканчивается там, — и начинается нижний предел капиталистического хозяйства, — где из-за больших масштабов или высокой степени интенсивности хозяйства возникает такой объем работ, который семейная рабочая сила еще в состоянии выполнить, но уже требуется наем сезонных рабочих.

Согласно теоретическим заключениям и практическому опыту *основой семейного хозяйства равным образом может быть меньшее или большее владение.* Величина земельной площади, количество рабочей силы, имеющиеся в распоряжении количества капитала и рациональное сочетание производственных факторов в значительной степени влияют на масштабы хозяйства. Их воздействие, однако, в большинстве случаев сказывается на величине товарной продукции. И в этом отношении между семейными хозяйствами имеются большие расхождения. *В период технического преобразования наряду с большинством, состоящим из мелких хозяйств, в обширной среде семейных хозяйств можно найти и крупные хозяйства.*

С ростом механизации и осуществлением специализированного производства на все больших земельных площадях можно вести хозяйство без применения наемного труда. Во владениях меньших категорий все менее возможно полное использование рабочей силы одного-двух человека и даже экономически эффективная эксплуатация сельскохозяйственных машин. Поэтому в настоящем периоде пределы семейного хозяйства приближаются к большим масштабам владений и хозяйств. Эта тенденция в настоящее время ограничивает процесс превращения небольшой части индивидуальных крестьянских хозяйств в капиталистические хозяйства, применяющие наемный труд. Естественно, в западногерманском сельском хозяйстве и в будущем будет осуществляться традиционный путь капиталистического развития сельского хозяйства. *В период технического и структурного преобразования, — начавшегося в Федеративной Республике Германии в пяти-*

десятых годах и продолжающегося еще и в ближайшем будущем, — однако более характерным является процесс перехода хозяйств, применявших до сих пор наемный труд, к производству за счет рабочей силы семьи.

При определении характера семейных хозяйств можно исходить из того, что их существование основывается на собственном труде и частной собственности; из этих двух существенных определяющих черт вытекает их своеобразный двойственный облик. Частная собственность может стать решающей стороной в случае, если семейные хозяйства получают прибавочную стоимость. В настоящее время источником решающей части дохода является собственный труд, а при этом монополии присваивают часть производимого в сельском хозяйстве прибавочного продукта.

Техническое преобразование сельского хозяйства происходит под эгидой промышленности и монополий. Складывающийся на высоком уровне синтез промышленного и сельскохозяйственного производств одновременно означает и объединение промышленного капитала и сельскохозяйственного труда. Проникновению чужого капитала в сельское хозяйство противопоставлены сотни тысяч семейных хозяйств, стремящихся к использованию имеющейся в их распоряжении рабочей силы. В этом процессе сельские производители постепенно оказываются на противоположном монополиям полюсе капиталистического общества. *В настоящее время, как правило, не крестьянские хозяйства применяют больше чужой рабочей силы, а собственник и его семья работают для монополистического предприятия.* Хозяева своеобразным образом становятся рабочими, «надомниками» монополистического предприятия. В таких условиях на передний план выдвигаются не те черты семейного хозяйства, которые вытекают из частной собственности, а черты, основанные на собственном труде. Поэтому в настоящее время семейные хозяйства, как правило, нельзя причислять к капиталистическому сектору.

REVIEWS

I. SCHWEITZER

TEN YEARS OF THE DEVELOPMENT OF ECONOMICS IN HUNGARY

At the request of the Presidium of the Hungarian Academy of Sciences, the Academy's Commission for Economics undertook the task to summarize the results achieved in Hungarian economics in the past ten years, to evaluate the conditions of development and to determine the research tasks to be considered as the most important ones. In the following we try to review briefly the most important statements by this distinguished body of Hungarian economists.

The document prepared covers thus the period after 1958. This period has been characterized in the entire intellectual life of Hungary by efforts at doing away with dogmatism, doctrinaire reasoning and the distortions of Marxism, and by simultaneous fighting the erroneous anti-Marxist ideologies striving to take the place of the dogmatic theses. Though the report of the Commission restricted its findings to economics and avoided to "rank" the various disciplines, it is stated here that among the contributions of Hungarian science to the cleaning of Marxism from distortions and to its further development in the last ten years the results attained by economics do not rank last.

The development of Marxist economics required — as stated in the report — that some *basic categories* of political economy should be revised and restated by bringing them into harmony with the new findings. Criticizing the all too simplifying interpretation of productive forces and production relations by Stalin, the Hungarian scientists successfully contributed to a fuller interpretation of the Marxist concepts of the mode of production, forces of production, production relations and ownership relations.

In certain respects the Hungarian scientists further developed the theories relating to the objective character of economic laws in a socialist economy, their tendencies and reciprocal effects.

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In the last ten years Hungarian economics had to solve particularly great tasks. The problems accumulating in the economy, the relatively low level of efficiency and the growing disproportions all indicated that new ways must be found. The Hungarian Socialist Workers' Party, recognizing that a balanced and rapid economic growth requires a *fundamental reform of the control and management of the economy* availed itself of the help of hundreds of economists, first to disclose in various committees the deficiencies in economic control and then to point out the directions of the reform. The reform

brought fundamental changes in the system of economic control and economic regulation, or, in the term used by Hungarian economists: in the economic mechanism. Participation in working out a new economic mechanism has been the greatest achievement of Hungarian economists over the last ten years.

The activity aimed at a reform of the economic mechanism considerably accelerated the development of economic theory. The tasks connected with the preparation of the reform led to a new approach to reality, to new ways of approach to the problems and to new types of research. The theoretical standpoint on the necessity of an organic union between *plan and the market* has been elaborated by the economists by starting from the concrete Hungarian conditions.

Beside several other subjects related to the reform of the economic mechanism, substantial progress has been made in further developing the theoretical and methodological bases of a *price system* corresponding to socialist relations and, together with it, the Marxian theory of value. Our economists have analysed the factors determining the centre of movement of the prices under conditions of socialism. They proved that the differences between the capital and land intensities of products must find an expression also in prices. They revealed that there must be an organic connection between the domestic and external price proportions. Criticism of the earlier price system played an important role in the fact that it was first in Hungary that the various ideas about the types of prices were built into a product-type model and were actually worked out; similarly, the economic contents of the shadow prices emerging from mathematical programing were first analysed in this country. Our economists elaborated in detail the different role of prices in the two different types of socialist economy: the economy controlled by means of detailed and direct instructions based on the plan and the one relying on the effects of a purposefully regulated market.

During the preparation of the reform the problems of *material incentives* both to individuals and enterprises were raised in a new manner.* With the expansion of the active role of socialist commodity relations the principle of income distribution according to work performed had to be harmonized with the material interests of the enterprise collective. It was in this period that research started into the theoretical problems related to the interest of socialist enterprises in profits, profit taxation and the regulation of the use of profits. Several studies have dealt with the material incentives for those participating in the realization of investments. Our economists have proven that the almost totaly centralized and gratuitous allocation of investments does not act towards the careful selection of efficient solutions.

In connection with the reform of the economic mechanism, the economists treated the functions of the *socialist enterprise* in a novel manner. They emphasized the importance of the autonomy of enterprises in their economic activities and the role of the profit motives as well as that of their market relations.

Several economists have successfully dealt with the problems and the assessment of the factors affecting demand, the interrelations between market and commodity trade as well as the factors affecting supply. As a result, the

* This necessitated the revision of the then valid interpretation of income distribution according to performance.

elaboration of a *theory of demand* corresponding to the conditions of socialism has made substantial progress.

Important results have been achieved by those engaged in research into the *theory of money*. From the results, the statement should be mentioned according to which the domestic currency used either in the socialist or the capitalist economies is credit money with no intrinsic value. Thus, the concept according to which modern money, too, is unequivocally gold, and that the token money used in domestic circulation is a substitute of gold, has been discarded.

Important theoretical problems were elaborated by the research workers in connection with the issue of credit money, the supply of currency circulation through creating liquidity by means of short-term bank credits; their work has greatly contributed to disclosing the complicated interrelations between the accumulation of money and real accumulation.

A process similar in importance to the reform of the mechanism, but taking place a few years earlier in the Hungarian economy, was the *socialist reorganization of agriculture*, the general transition from individual peasant farming to cooperative farming. Similarly to the reform of the mechanism, it claimed the active participation of the economists and similarly gave rise to certain scientific results and theoretical statements.

The most important discussion, not yet concluded, centers on the character of *material interestedness in the cooperatives*. Part of the economists were of the opinion that the main interest of the cooperatives was in maximizing gross income per member. They called attention to the possible consequences, and analysed the connection between income distribution and the forms of income, and the special characteristics of agricultural production. According to another viewpoint, the cooperatives are collective enterprises to which the basic enterprise categories apply in the same manner as to the other enterprises. In their opinion, income is divided into remuneration for work and profits (or losses). Accordingly, the statement is incorrect that cooperatives are interested in per capita gross income. The members are interested in remuneration for work and in a share in the income. The cooperative as an enterprise is, however, interested in maximizing net income (profits).

The theoretical investigations connected with the cooperative system also dealt with the problems of *income distribution*, with the justification of the too numerous forms of income distribution and remuneration, and the conditions of their application. Several research workers dealt with the problems connected with the application of the theory of land rent under socialist conditions.

In connection with the development trends in Hungarian agriculture, there emerged the questions related to the *industrialization of agriculture*, the introduction of large-scale production. In this connection, two views could be distinguished. One would consider agriculture as a raw material basis only, the other would treat it as a sector playing a decisive role in the vertical connections between the branches of the economy. Recently, the problems of capital intensity, fixed and circulating asset management, and investment efficiency have come to the foreground of economic research into agricultural questions. It is worth mentioning that the Hungarian methods of representative (sample) surveys in agricultural units have roused the interest also of the FAO.

Research work aimed at working out the *scientific bases of long term planning* and, in this connection, the coordinated study of the role of the concept of economic policy, its formulation methods and the conditions of drawing up plan variants has started on new bases in recent years and has already brought some results. Research into the conceptual interrelations and problems of the social reproduction process has already yielded substantial results in laying the scientific foundations of the work of long-term planning. The application of modern mathematical methods has led to new achievements in this field. Of all socialist countries it was in Hungary that the utilization of *input-output analysis* for disclosing the interrelations in the reproduction process was first employed in a comprehensive manner. This has also yielded results which are important from the theoretical point of view. The application of mathematical programming both on the sectoral and the national levels has raised new theoretical problems but it has also helped to a more profound knowledge of the nature and the quantitative determination of important economic categories and objective relationships. Extensive discussions have started about some fundamental categories of social production, such as the contents of the national income concept and on the differentiation between productive and non-productive labour in terms of modern theory.

The results achieved by Hungarian economists — mainly in the statistical field — with the aid of the system of national balances and input-output analysis are highly important both from the point of view of laying the scientific foundation of long-term planning and from that of *the factual analysis of the reproduction* process. These researches have disclosed new relationships within the economy as regards the relative proportions of the various sectors and showed the weight of agriculture to be much greater than was believed earlier. They also pointed out important relationships concerning the role of employment and the supply of fixed assets in the development of Hungarian national income. The drawing up of manpower balances enabled a comprehensive analysis of the manpower situation on the basis of up-to-date methods. Extensive and successful statistical investigations were carried out into the living conditions of the population.

It is of outstanding importance that the statistics of social stratification have been developed, enabling a thorough analysis of the differences in standard of living between agricultural and non-agricultural, intellectual and manual workers and between executives and their subordinates.

Considerable contributions were made by researchers in the field of industrial (business) economics to the regulation of the reproduction process. The research project which, within the framework of investigations connected with the utilization of fixed assets, proved the economic advantages of introducing continuous work, deserves attention even by international standards. At the same time, the economic and measurement problems of industrial productivity and the system of productivity indicators were also worked out. Parallelly, investigations took place in the field of international comparisons of the productivity of labour.

All over the world, interest is growing in investigations centered on man as a source of labour power. This approach is also spreading in Hungary, and manifesting itself, on the one hand, in various scientific publications, and, on the other hand, in concrete or intended economic measures.

The study of the general principles of *regional economics* is of but recent

standing. As a result of the theoretical and methodological investigations the practical works are beginning to emerge. The most important of these are the researches aimed at determining the criteria of industrial location.

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Hungary is a small country with natural conditions unfavourable from several points of view. The scarcity of raw materials determines one of the characteristics of the economic structure, the particularly high import intensity of the economy. Therefore, even at a relatively moderate level of economic and technological development, an active balance of trade in manufactures is of vital importance for Hungary. This is how the substance of the "*open*" *character of the economy* can briefly be formulated. The formulation is the result of economic research, and a scientific foundation of the corresponding economic policies has been at the centre of investigations carried out by distinguished Hungarian scientists throughout the past decade.

Research workers engaged in problems of foreign trade analysed the conclusions to be drawn by Hungarian foreign trade organs from the trends in business fluctuations and in world trade and from the development trends of the Western economic groupings, particularly the Common Market. Concrete investigations have pointed out how some of our development objectives (e.g. the development of the machine-tool industry) are connected with the international division of labour, with specialization between the socialist countries. Comprehensive surveys of the problems connected with the foreign trade in machinery which have established the extraordinary importance of the international specialization and cooperation in the engineering industry, gave rise to the view that an export surplus in manufactures can be achieved for some longer period only by developing an extensive and diversified *international division of labour*.

It is thus only understandable that the Hungarian economists paid particularly great attention to the development of the Council of Mutual Economic Assistance, the regional economic integration of the socialist countries. The team-work research has resulted in internationally recognized results which sought an answer to the question to what extent can the difficulties connected with industrial and agricultural raw material supply in the CMEA countries and the realization problems of manufactures be retraced to intersectoral differences in the efficiency of production, and to what extent to conflicts of national interest connected with increasing efficiency.

As can be seen, the attention of researchers engaged in the problems of foreign trade was absorbed mainly by tasks connected with immediate practice, those related to laying the foundations of the development of external relations. In this, perhaps the least developed, field of Marxist economic theory, i.e. in the theory of international economic relations, partial progress can only be noted (e.g. regarding the commodity character of the currency and the importance of the rate of exchange).

Beyond their great practical importance, essential theoretical results were yielded by the researches which — connected with the reform of the internal economic mechanisms of the socialist countries — raised the necessity of reform also in respect of the mechanism of international economic relations (primarily, of course, within the CMEA) and which set themselves the objective to analyse thoroughly the conditions and directions of the modifications.

The analysis was extended to the character of international commodity relations and of the international market, together with the related price system, multilaterality, convertibility, the international flow of capital, etc.

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Considerable results have been achieved in the analysis and evaluation of *recent development tendencies in the advanced capitalist countries*. These researches have proved — in harmony with the results of international Marxist research work — that state monopoly capitalism does not change the bases of capitalist production relations but is an organic part of it. It is an important statement that state monopoly capitalism is characterized, from the point of view of capital, by several compromises and that under such conditions it is improbable that very grave crises should break out. Analysis of the socio-economic effects of modern scientific and technical development is also part of this research work.

As regards the analysis of capitalist world economy, Hungarian research workers, too, have pointed to the remarkable tendency that trade between the industrially developed countries is expanding at a quicker rate than their production and that this expansion of trade and the integration of the markets is a condition of the growth of production. Important research projects had for their subject the monetary system of the capitalist world and its functional mechanism. Nor can the results be neglected which have been achieved in the analysis of the socio-economic problems of developing countries.

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In a period of so important changes as have taken place in the last ten years in the socio-economic structure of Hungary, interest is increasingly focussed on *economic history* in which the present-day development is rooted — and on analysis of this type.

Apart from the results of research into the economic history of the period of feudalism and of that immediate preceding World War I, which should not be lightly dismissed, particular attention must be paid to the efforts which helped us to understand the historical antecedents of the actual economic problems (monographical description of the history of factories in the 1920's, of the great depression of 1929—1933, of the agricultural development of the 1930's and of state interference in agriculture in those years, etc.). Of outstanding importance are, obviously, the research projects investigating the economic history of the period of the people's democracy. In the first stage, research concentrated almost exclusively on the period between 1945 and 1950. The results of these efforts served, however, as a satisfactory basis to start research into the economic development of the 1950's.

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The Commission has also dealt with the *inadequate progress* experienced in certain disciplines and certain fields in comparison to practical and educational requirements. As regards basic theoretical research, it was of the opinion that — in view of the actual conditions of capitalism — the analysis of the *political economy of capitalism* is not satisfactory. It would also be of great practical and theoretical importance — states the Report — to disclose the

laws or the important relationships existing both in capitalist and socialist economies.

The Report lists several subjects in the field of the *political economy of socialism* to which greater attention should be paid, such as

— the economic contents of the socialist ownership of the means of production, or more comprehensively, of the socialist ownership relations;

— the socialist theory of the enterprise;

— the Marxist theory of international economic relations, etc.

The Report also points to some concrete research subjects in the field of economics and deals also with the problems and tasks connected with the application of mathematical-statistical methods.

The Report states in detail that more successful economic research requires also the improvement of *conditions*. The proportion between qualified research workers and scientific assistants is unfavourable, financial means do not assure an adequate supply with mechanical aid. The sums destined for computational techniques are generally too much split up. It is desirable to create more forums for publications, especially as regards certain subjects; this applies to publications in Hungarian (e.g. the economic application of mathematical methods).* There is relatively little chance for Hungarian economic works — books and studies — to be published in foreign languages. The launching of Acta Oeconomica has only eased the problem but did not solve it.

The Report also mentions the deficiencies, the insufficiently organized character of connection, coordination and mutual information between the various institutions and places of research.

Nor is there satisfactory cooperation between the theoretical and practical economists. Connections are random and personal, they do not assume an institutional character. However, the importance of organized connections is great in both directions. This consideration gave rise to the proposal that the research institutes should work out certain research subjects on the basis of orders from the various organs and institutions and would finance their activity from the receipts thus earned, essentially on the basis of independent accounting.

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Finally, the Commission for Economics of the Hungarian Academy of Sciences has dealt with the primary objectives of future economic research projects. On the initiative of the Commission, research will continue to be concentrated on the following two subjects:

— The scientific foundations of planning, with special regard to the development of the realistically envisageable optimal pattern of the Hungarian economy.

— The improvement of the system of economic control and management.

In the first sphere, mainly the research projects relating to the connection between economic policy and economic planning, the contents of plans, their functions and character, the specific planning problems arising from the introduction of the new economic mechanism (mainly the planning of the indirect regulators), and the organization and techniques of planning should be stressed.

* In the meantime a new quarterly is going to be launched for mathematical economists: "szigma". Ed. note.

Of the investigations connected with planning, the Committee stressed the particular importance of creating a scientific-theoretical basis for the strategy of economic policy.

As regards the second field, the most pressing task is to analyse — within the scope of investigating the system of economic control and management — the first experiences gained with the new economic mechanism and to draw the necessary theoretical and practical consequences.

L. SZABÓ

SCIENTIFIC RESEARCH INTO THE PROBLEMS OF HOME TRADE

Prior to World War II Hungarian trade was characterized by strong decentralization. For example, in the early thirties, only 5 per cent of all shops were owned in partnership, almost 60 per cent worked without employees, and in the remaining number the average staff of employees barely exceeded two. With a trade network like this it was quite understandable that an actual demand for scientific trade research had not emerged. Therefore, at that time, aside from periodical statistical surveys and demoscopic studies on the supply and consumption of foodstuffs, no research worth mentioning took place in home trade.

With the advent of the state-owned and the cooperative trade in the late 40's, this was changed at its root. National and regional organization resulted in the development of a network of wholesale and retail trade enterprises, and regional trade cooperatives. This, however, brought a mass of new problems in financial management, the location and development the network, market research, advertising, etc. alike, and all awaited solution.

In order to satisfy these requirements on a scientific level, research began in two places. In 1954 the *Trade Development and Market Research Department*, working under the Ministry of Home Trade was brought into being. It operated for three years. In general, its methods of operation were suited to the requirements of a scientific institute. At the same time, departments in the University of Economics, and the College of Accounting began similar scientific activities.

By the late 1950's the modernization of trade, the introduction and expansion of the self-service system, the supermarket, the creation of shopping centres, the increased requirements in the organization and management of the enterprises, and particularly the emerging market problems, the contradictions appearing between supply and demand, made it necessary to establish differentiated bodies with larger capacities. Therefore, in 1959 the Institute of Home Trade Research was put into operation to deal with all of the major important problems in home trade requiring scientific research.

In its nine years of work the *Institute of Home Trade Research* has prepared and published over one hundred and fifty studies. About half of them have dealt with concrete market research, on the one hand, and with medium and long-range prognoses regarding general consumption, on the other. Within the framework of its scientific research the Institute took part in working out the five-year, and perspective national economic plans, and in the development of the methods for planning consumption. It carried out basic research in planning the models for city and provincial trade centres, and in the pre-

parations for the reconstruction of the national trade network. It achieved results in working out the ways of utilizing market research in a planned economy, and in the experimentation with and introduction of the methods for raising the degree of effectiveness in commerce.

The Institute has done extensive bibliographical and information work as well. It has published a whole series of bibliographies in fields touching on home trade, and with its periodical publications it supplies information to the experts of commercial enterprises. The Institute's bi-monthly periodical "Kereskedelmi Szemle" *(Trade Review)* has also been serving this purpose.

The preparations for the reform in economic management, the experiments carried out to ensure its success, and the introduction of the reform itself greatly increased the demands for home trade research. In this field the productive and commercial enterprises appeared with requests which a single institute was no longer able to meet. At the same time, the Ministry of Home Trade required increasing research for its trade policy conceptions, and for the preparations of the medium and long-range national commercial plans. Since these requirements had to be met as well, on January 1st 1967, three other institutes, apart from the Institute on Home Trade Research, were brought into existence. With these new institutes, and by ensuring the cooperation between them, it became possible to bring about a suitable capacity for handling the research requirements of the leading economic bodies and the enterprises as well.

The research activities of the four institutes in operation at present can be characterized by the following.

Institute of Home Trade Research

Operations here can be divided into four main groups: trade policies, foundation research for developing enterprise operation, and research on consumer's behaviour as well as documentation and information activities.

Included in the sphere of trade policies are primarily consumption, that is, the long-range planning of commodity turnover, and market fluctuation, as well as the working out of conceptions for the development of tourism. The studies aimed at developing enterprise activities deal mainly with providing a basis for business management decisions, planning enterprise operations, and examining problems in the internal management mechanism. Research on consumer's behaviour and motivation has only recently begun. At present the institute is carrying on experimental studies in shopping behaviour. The institute's new system of information activity is also noteworthy. Its main aim is to comprehensively inform the managers of trading companies and leading economic bodies about news in home trade abroad, research results, the development of consumption, etc. The Institute employs 35 experts, and also makes use of part-time experts.

Hungarian Institute for Market Research

In the earlier form of planned economy market research was only partially necessary. However, the reform in the system of economic management brought about a substantial change in this field. But now, in order that the

market mechanism should assert itself in the relations between industry, trade and consumers, market research has become an indispensable tool for business management. Despite the fact that the research carried on by the Institute for Home Trade Research ensured the immediate acquirement of market research methods, and organized education in this field had begun at the universities and colleges years earlier (with the aid of the Institutes' workers), the lack of specialists and of preparations on the part of the enterprises created burning problems which awaited solution. Therefore, the newly established Hungarian Institute for Market Research which has a permanent staff of almost eighty, as well as the cooperation of hundreds of experts had a number of tasks to solve. First of all, it had to develop market information models for the industrial, service, and commercial enterprises, as a basis on which the enterprises could bring about or organize their own market research apparatus. Since there was barely any research of this type in Hungary prior to this time, establishing these models was no small task. Beyond that, the Institute must satisfy the enterprise requirements for actual domestic and export research. All of these tasks appeared parallel with the organization of the Institute. In its year and a half of existence it has completed almost thirty national and foreign market surveys and at the moment is working on almost the same number of themes.

The sphere of study goes well beyond the field of home trade. The Institute deals with export and import market research, the assessment of the demands for cultural services, sociological research, and industrial and trade fluctuation research alike.

In order to aid enterprises with their market research the Institute publishes a theoretical and methodological journal called "Marketing—Piackutatás" ("piackutatás" meaning market research) in which, among other things, it reviews the most successful market research methods used abroad. The Institute is also responsible for the development of Hungarian marketing—market research methods. It is a member of the market researchers' international body, the ESOMAR, and maintains close relations with the major European market research institutes.

Institute for Work and Business Organization in Home Trade

As with market research, the economic reform increased the enterprises, interest in work and business organization, too. This made it necessary that scientific research in business organization should begin, similarly to the organizational institutes operating in other branches of the national economy.

Within a relatively short time, the Institute for Work and Business Organization in Home Trade not only had to construct the basic business organization models, but in the course of its operation had to satisfy also the actual demands of the wholesale and retail trade enterprises as well. The Institute, which at present already has a staff of over fifty, does research in the following main fields:

— Enterprise organization. Working out the organization, staff number, scope of authority and level of decisions and the most appropriate working conditions.

— Organization of processes. Determination of the internal work structure, organization of selling and transport processes in shops, restaurant units, and wholesale trade warehouses.

— Material-technical development. Planning modern networks, new units and reconstruction, technologies for effective commodity transport and other processes and equipment.

— Transport organization. Establishing effective shipping and commodity transport methods, a study of the relation between location and transport, the optimization of commodity transport costs.

The Institute for Organization and Information Processing in Home Trade

In Hungary, beginning from the early 1950's and in accordance with the requirements of a planned economy, all branches of the national economy, including the home trade enterprises and cooperatives, have been required to furnish statistical data. The enterprises' and leading economic bodies' statistical records were based on this system of reporting. The extent of the data to be processed was determined by the needs of national economic planning. As a result, while in industrial production records were kept in detail by products in wholesale trade the statistics were broken down only by groups of commodities, and in retail trade realization was divided only into main commodity groups. Exception were the durable consumer goods, for which realization records were submitted by items. The result of this system was that retail trade had no knowledge of the turnover of a given item in a specified period. Following the reform, this situation became untenable for the enterprises, and it became an immediate necessity to keep records of turnover by articles. This, however, can only be carried out by using large-scale electronic computers.

Planned economy makes it possible for all enterprises throughout the country — over and above their special requirements — to work out a system of records based on a unified nomenclature, while the processing of data can take place in regionally centralized machine stations.

The Institute for Organization and Information Processing in Home Trade, which is at present developing a central park of modern electronic machines, was brought about to solve this problem, and process the turnover data of the trading companies to the desired extent. However, before being able to do so, it had to complete diverse research and, within that framework, to draw up in complete detail the most advantageous methods of data processing and recording for the enterprises.

The Institute, with its staff of eighty, also carries on research of a different kind. It does experiments in operation research, calculates optimal transport, warehouse economy, and realization, as well as ensures the training of specially qualified experts for home trade.

The cooperation and international relations of the institutes

Coordination and cooperation between the institutes in research is ensured by a committee consisting of the directors of the institutes themselves. The institutes jointly organize national and international conferences and

symposiums in Hungary, and promote international relations. The Hungarian institutes are members of the Association of Trade Research Institutes in the Socialist countries, along with four Soviet, four Czechoslovak, two East German, one Roumanian, one Yugoslav, one Bulgarian, and one Polish institute. International cooperation has become quite intensive over the past two years. Joint studies have been written, there is a regular exchange of experts and joint discussions held several times a year have led to the solution of a number of scientific problems.

Selected studies published by the Institute of Home Trade Research

KÁZSMÉR, I., A városi kereskedelmi hálózat tervezése. (Planning a city-wide trade network.) Budapest, 1964.

FALL, L., A kereskedelmi munka hatékonysága. (The efficiency of trade.) Budapest, 1963—64.

SOÓS, J., A fogyasztás és áruforgalom távlati tervezésének módszere. (Methods of long-range planning in consumption and commercial turnover.) Budapest, 1964.

THUR, O., Koordinált kereskedelmi raktárberuházások közgazdasági előkészítésének módszere. (Methods of economic preparation for coordinated warehouse investments in trade.) Budapest, 1967.

SZABÓ, L., A piackutatás ismerete és módszertana. (Market research: review and methodology.) Budapest, 1967.

BOOK REVIEWS

CSIKÓS-NAGY, B.: *Általános és szocialista árelmélet.* (General and socialist price theory.) Budapest, 1968. Kossuth Könyvkiadó. pp. 425.

Csikós-Nagy's book "Árpolitika az átmeneti gazdaságban" (Price Policies in a Transitional Economy) published in 1958, and the later work, "A szocialista árképzés" (Socialist Price Calculation) which appeared in 1961, were basically excellent handbooks for those dealing with price calculation, handbooks which provided help in solving practical price formation problems, and supplied information on topical principles of price formation. The book "Szocialista árelmélet és árpolitika" (Socialist Price Theory and Price Policies)* published in 1966 was similar in character, differing from the previous works in that it was devoted particularly to the price reform of 1968. His present book is a work mainly theoretical in character. Its title itself deserves attention, for it suggests that, since the laws of socialist commodity production are specific forms of appearance of the general laws of commodity production, the socialist price theory can be discussed and understood only as part of the general price theory.

His definition of the category of price is also individual. He makes a distinction between price in the stricter and broader sense. Price, in the stricter sense is only an appearance of price in the broader sense; that is, the general price. By this definition we have the prices of definite products and services, while wages are the "price of labour", the rent, natural rent (for example the land rent) is the "price paid for land use" and interest is the "price paid for using capital". The introduction of a general interpretation of the price category is simply intended to show that the categories listed are closely connected with commodity production since, on the one hand, they themselves assume the character of price, while on the other they become components of the price. Otherwise, in general, the author continues to interpret price in the traditional, that is, the stricter sense.

In the chapter entitled Commodity-Economy Models, the author defines the *model of economic management* as a concise expression of the economic mechanism. His models are not mathematic ones, but condensed economic descriptions of the main types of management systems. The author distinguishes four separate basic categories:

1. The "pure" market model. He connects this type with the conditions existing in classical capitalism.

2. The influenced market model, which historically corresponds to state monopoly capitalism.

3. The "pure" planned model. These conditions exist in a socialist society based

* Reviewed in Acta Oeconomica Vol. 1. 1966. Nos 3—4. pp. 395—396. Ed. note.

on a system of plan instructions ("breakdown" of plans).

4. The guided market model. A system of socialist economic management where "it is assumed that whenever the market, in accordance with central guidelines, reacts on the plan, it basically *drives the economic processes to the optimum of the national economy*" (page 53).

The extent to which the price function asserts itself depends on the model of commodity economy. It is asserted most completely in the pure market model, and is most limited in the "pure" planned model. The latter, in its most extreme form goes as far as to eliminate the market, and here price provides only a basis for accounting. The author distinguishes the market price, which regulates market processes, and the accounting price which is completely independent from market relations. He defines three separate forms of the latter:

1. The *constant price* and *plan price* applied in statistics and planning with the intention of making the production outputs of various periods comparable through eliminating the effects of price changes.

2. Fictitious price, which embraces the various forms of *computed price systems*, — based on inputs such as the *value-proportionate price system* or the *shadow price system* based on optimum calculations.

3. *Internal accounting prices* which are intended to promote cooperation within the enterprises.

Following this review of the types of accounting prices, in the rest of the book the author means the market price, by the term "prices".

In practice this price is a guided (regulated) market price, and for this reason the author especially examines the operation of the guided market. The book is not intended to be an analysis of problems inherent in the theory of value, but rather deals with questions of price theory. As for the theory of value, the author accepts the Marxist labour theory of value and refers to it when and to what extent his price theory analyses make it necessary.

The fact that he takes the labour value theory as a basis, is also reflected in the structure of the part of the book on general price theory, where — following the general theoretical introduction we have already mentioned — he discusses the problems as follows: The social value of the commodity. Items reviewed here include the method for accounting inputs and calculating value, calculation of cumulative effects of changes in value, the work connected with the construction of various price models. This is followed by an analysis of the market, value judgement of a commodity, dealing with the fluctuation in supply and demand, and with the problems of achieving an equilibrium; also providing a study of the questions of supply and demand prices and of the equilibrium price. Finally, the part devoted to general price theory is completed by a review of the general guidelines of state price policies including the motives of, and possibilities for, state interference.

The second part of the book, Socialist price theory, is based mainly on the experiences of price formation in Hungary, reviewing the principles and methods of official pricing. A separate chapter deals with the dispute about the socialist price category. The discussion on price formation reflects not only the results already achieved but we can discern the future development trends in this field as well.

É. RADNÓTI

KOVÁCS, G.: *Gazdaságpolitikai célkitűzések és a mechanizmus.* (Целеустановки экономической политики и механизм.) Budapest, 1968, Kossuth Könyvkiadó. 223 стр.

Геза Ковач, которому за этот труд была присвоена степень доктора экономических наук, пытается в нём дать научный анализ социалистической экономической политике в целом. Эта попытка заслуживает внимания, тем более, что марксистская экономическая литература не богата произведениями, выдвигающими подобные вопросы.

Одна из основных мыслей книги — сформулированная в частности в вводной части — заключается в том, что целеустановки экономической политики и экономический механизм неотделимы друг от друга, и было бы неправильно вести в этих областях обособленные исследования. Научное обоснование целеустановок экономической политики не должно отставать от работ по усовершенствованию хозяйственного управления, так как во взаимовязи между целеустановками экономической политики и механизмом определяющая роль принадлежит целям экономической политики.

Из положений, содержащихся *в первой части*, (главы 1—3), следует подчеркнуть многостороннее представление взаимосвязи, наблюдающейся между имеющимися в хозяйствах социалистических стран диспропорциями и историческими условиями. Автор здесь анализирует роль теории и использование практического опыта; единство и организованность движения за построение социализма; соответсвие производственных отношений с развитостью производительных сил и противоречие между ними. Он уделяет также внимание таким моментам, как моральные факторы и складывающиеся об истине впечатления, указывая на то обстоятельство, что нивелированное разделение материальных благ для многих представляется существенной чертой социализма. Он раскрывает также, источником каких ошибок стала оценка НЭП — а как отступления, когда в период подготовки и первоначального осуществления первого пятилетнего плана в централизованный в силу необходимости механизм были снова включены некоторые элементы военного хозяйства. Уже в отношении этого периода автор доказывает, что централизованная система управления не обязательно тождественна централизованному детальному натуральному планированию и центральному распределению продуктов. Анализируя взаимосвязь между политикой и экономической политикой, он показывает, что требование примата политики действительно не только в периоды, когда ведется острая классовая борьба, а должно действовать постоянно, и что выдвижение на передний планэкономических вопросов не означает отказа от этого. Он указывает на то, что как политика, так иэкономическая политика имает перспективные и краткосрочные элементы, и хотя первостепенная роль принадлежит перспективным элементам, всё же в определенных границах и текущая деятельность оказывает в свою очередь воздействие на перспективные цели. Оценка с точки зрения будущего требует того, чтобы срок предвидения выходил за те границы, с которыми следует считаться, учитывая передающееся влияние принятых ранее решений. Автор подчеркивает, что, если речь идёт о законах, то подразумеваются естественно, все законы, действующие в определенный данный период; их совокупная система требований, вместе с её границами, учитывая заодно, что в системе требований законов имеются усиливающиеся и отмирающие элементы. Правильность политики и экономической политики, таким образом, есть, прежде всего, вопрос отношения к законам. Собственно, и догматизм, и ревизионизм связаны именно с этим, а не с тем, что один из них отстает, а другой забегает вперед.

В книге отводится широкий простор вопросам связи между политикой, экономической политикой и планом. Автор подчеркивает, что планы различного типа должны составлять единую систему. Он критикует практику, родившую аспект годового планирования, который по сути дела может быть охарактеризован таким образом, что статическим взаимосвязям придавалось большее значение, чем динамическим анализам. В этом определенную роль играло то обстоятельство, что метод балансирования признавался одним из абсолютно несомненных основных методов планирования.

Отдельно занимается автор вопросами взаимосвязи между планом и автоматизмами. Разграничивая автоматизмы и инстинктивность, он подчеркивает, что автоматизм отражает общественную сознательность в том случае, если опознаются и регулиру-

ются влияния, косвенные реакции принимаемых решений, иначе автоматизм сопровождается инстинктивностью. Исходным пунктом создания автоматизмов автор считает план развития народного хозяйства, и, согласно его трактовке, в социалистическом хозяйстве автоматизмы исходят из центра, и следствия их действия в свою очередь напрявляются в частности в центр. При монополистическом капитализме — как на это указывает автор — следствия автоматизмов направляются в прямой форме в центр, и из центра возвращаются к предприятиям косвенным путем. Точно так же различает он монопольно-капиталистическую и социалистическую практику относительно того, может ли остановиться план на уровне прогноза. Он подчеркивает, что план является программой действий и от того он еще не становится прогнозом, что он не доводится до предприятий. Характер программы действий, по мнению автора, связан с общественной сознательностью, с ее наличием, в то время как доведение плана до предприятий или его информационный характер связан лишь с тем, каким образом реализуется общественная сознательность.

Во второй части (главы 4—7) фигурируют, главным образом, проблемы методики планирования и анализа структуры. В этой части опыт, полученный из анализа взаимозависимостей между политикой, экономической политикой и планом, последовательно используется и со стороны методики планирования, в вопросах плановых вариантов, возможностей выбора, оптимизации планов, учета факторов неопределенности и ответственности за план. Автор многосторонне анализирует напряженный характер планов во взаимозависимости с тем, что при этом исходят скорее из прошлого или будущей перспективы, и показывает, что непрерывное планирование имеет значение только в рамках перспективного планирования, и что при разработке среднесрочных планов невозможно исходить или из базиса, или из будущих целей. Он указывает на невозможность европейского синтеза планирования и механизма. Он неопровежимо доказывает, что социалистическое и капиталистическое хозяйства не могут прийти к «единому оптимому» централизации и децентрализации. Качественные расхождения между обществами двух типов не могут быть устранены посредством единой системы планирования и управления.

Теоретически больше всего нового дают главы 8 и 9, рассматриваемые как *третья часть* книги Г. Ковача. Автор в них исключительно многосторонне анализирует четыре экономических закона, или, можно сказать, дважды два закона-близнеца. Он высказывает свою точку зрения о том, что в экономическом развитии в связи с первичными целеустановками выдающаяся роль принадлежит двум законам: закону накопления и закону роста жизненного уровня. Их — за неимением более точной формулировки — он называет законами-полюсами. В то же время во взаимозависимости со вторичной системой целей он также выделяет два закона как носителей экономического механизма. Один из них — закон стоимости, а другой — т. н. закон «X», которому автор не дает названия, который, однако, пожалуй, может рассматриваться как закон общественной, государственной централизации и централизованного использования ресурсов.

«Законы-полюса представляют собой — пишет автор — в структуре экономических законов точки сгущения», и далее: «мы располагаем определенной возможностью выбора — оставаясь на почве сознательности — посредством более подчеркнутого выдвижения на первый план того или иного закона-полюса. «Данный анализ направляется собственно на последний вопрос, заключающийся в следующем: закон накопления или же закон повышения жизненного уровня стоит на первом плане в течение длительного или короткого периода; по какой причине подчеркивается его применение, и какое исключительно важное значение для практики имеет скрывающая диалектическое противоречие функциональная связь этих двух законов, как в отношении решений, прини-

маемых на основании плановых вариантов, так и относительно фактора времени, а также изменения структуры. В систему взаимозависимостей автор включает также и вопросы соревнования между двумя системами, развития прогрессивных производственных отраслей и реализации принципа ведущего звена.

В этой части книги представляются и сложные взаимосвязи между законами-полюсами и законами-носителями. В этой взаимосвязи — во взаимосвязи между двумя парами законов — логической формой представляется одновременное выдвижение на первой план закона «X» и закона накопления, а с другой стороны, — закона стоимости и закона повышения жизненного уровня. Однако автор рассматривает и иные возможные формы комбинирования, из которых одновременное выдвижение на первый план закона накопления и закона стоимости не представляется ему настолько проблематичным, как ситуация, в которой на первый план попадает закон повышения жизненного уровня и закон «X». Но о каком комбинировании ни шла речь, в кругу рассматриваемых взаимозависимостей должную роль приобрели темп развития, отраслевая структура, метод хозяйственного управления, а часто даже такие факторы, как занятость, общественная мобильность и политическая атмосфера.

В четвертой части книги (главы 10—11) автор анализирует модели механизма и вопросы его усовершенствования. Модель в трактовке автора является упрощенной копией действительности, и он указывает на трудности, связанные с упрощением, и с которыми следует считаться при построении новой действительности на основании модели.

В этих главах рассматривает автор каким образом отвечает новый экономический механизм как по своему характеру, так и по своему функционированию, системе требований, устанавливаемых законами-полюсами и законами-носителями. Он дает оценку значению экспериментов, взаимосвязям между механизмами социалистических стран, вопросам осуществления принципов демократии, а также учету отраслевой и секторной специфики, развитию хозяйственной организации и вопросами руководства.

Из положений заключительной части следует подчеркнуть два замечания. Одно из них намекает на то, что чрезвычайное выдвижение на первый план периферических проблем рождает лжеобъективизм и аполитичность а другое предупреждает о том, что с устранением старых догм могут быть созданы новые.

И. Б.

BOGNÁR, J.: *A gazdasági növekedés irányítá sa a fejlődő világban* (Economic policy and planning in the developing countries). Közgazdasági és Jogi Könyvkiadó, Budapest, 1967. pp. 660.

Professor Bognár's book published in 19 67 in Hungarian and shortly available in English is an outstanding contribution to the quickly increasing literature on ec onomic growth in the developing countr ies.

The reviewer, however, is faced with a difficult task. This is not only and not even mainly so because of the difficulty to give an adequate account of a book of more than six hundred pages (Hungarian edition) in the available space, but rather because the true meaning and the important new ideas of the book are less contained in the details and more in the general approach and overall concept of the study. Therefore, in a summary of the contents chapter by chapter precisely the most important aspects of the study could easily be lost.

Professor Bognár regards and presents the political and economic, social and

cultural, internal and international problems of the developing countries as well as the problems determined by the natural environment and historical past as a complex and integrated whole. His interest is focused mainly on the economic and political sphere and on their interrelations, on how to achieve in this field *rational human actions*, — which is in the centre of his conceptual system — in order to start and accelerate economic growth, making only sacrifices proportionate to the results and not endangering them.

According to the basic approach of the author, *rational economic and political action* is possible on the national and even on the international level. He does not underestimate the role of power, class, group and other partial interests: to the contrary, the results of these contradictions are analyzed in detail. Rational action in the international sphere seems to present particular problems. According to Mr. Bognár, present international conditions do not lead to a diminishing of the differences between the development levels of rich and poor countries. The result of the present conditions is rather a further polarization, even when the greater part of former colonies gained political independence and even taking into account the greater economic independence achieved mainly as a result of the existence and aid of the socialist countries. (This opinion is close to the theory of "circular causation" of Gunnar Myrdal, according to which the division of labour controlled by the capitalist market will permanently increase the differences between developed and underdeveloped regions, within one country as well as in the international field — at least without politically motivated interventions.) The mechanism of the actual world market, which is — at least partly — the result and heritage of the colonial system; is advantageous to the developed capitalist countries; a change, therefore, would be contrary to their — at least short term — interests. However, in the long term, further polarization could create tensions leading to catastrophy, wars, the destruction of the whole human civilization. There is, therefore, hope that the progressive forces advocating a change could gradually create some elements of a new world market mechanism. Gradual evolution is necessary to the developing countries because they have to maintain and even to develop their economic relations with the developed capitalist countries, needed as a market and as suppliers, as well as to supplement meager internal resources in know-how and savings.

According to the author one of the main elements of the new world market mechanism would be a *new type of international division of labour* in which the developing countries would increasingly supply the developed ones with industrial products (mainly of the light industry), governed, however, not only by (the ex-post type of control of) the world market but based more on assured outlets, with the help of long-term investment and foreign trade agreements. This of course, would require a change in the present protectionistic attitudes of the developed countries. The advantages of such division of labour for the developing countries are evident, because it would help their industrialization. It would present advantages also to the developed countries in decreasing their problems concerning labour supply, by limiting the production of some labour intensive industries. In addition, it would increase the market for investment goods in the developing countries. Mr. Bognár advocates also the international re-distribution of incomes in the sense of the recommendations of the first UNCTAD conference, namely, in channelling one per cent of the national income of the developed countries to development purposes, only in a more selective way — considering the possibilities of the donor countries and other circumstances. He advocates also a change in *the structure of the credits* which should serve not the short-term interests of the developed countries (in solving their market problems), but the

long-term interests of the developing ones. This requires cheap and long-term investment credits instead of export credits; not only more but also more stable resources for aid, it requires the complexity and a just distribution of loans and assistance taking into account the development requirements and the economic situation of the countries concerned.

It is, of course, necessary to use the resources channelled to the developing countries in the most efficient way, but this efficiency is not independent of the structure, complexity and stability of these resources. — As an element of the new international mechanism, the status of the big international corporations should undergo important reforms. These corporations play too great a role in the life of the developing and, particularly, of the small developing countries. The interests of the developing countries should be taken more into account and the larger part of the profits — instead of being transferred to the home country — should be re-invested in the developing countries.

International organizations play an outstanding role in Mr. Bognár's concept. Investment agreements — either bilateral or multilateral — intended to promote industrialization, should be registered, in order to avoid overproduction and the irrational use of credits, with an appropriate international organization having an overall view of current actions and the foreseeable results. Among the proposals to reform the status of international organizations, preference is given to the suggestion according to which the international organizations should be represented in the management of these corporations, together with the representatives of the developed and developing countries. He suggest *to internationalize* the whole system of development aid and technical assistance; to solve such big problems as the food supply of the Far East under international control; to perform world-wide market research and planning in international organizations. — The reader familiar with the present situation would perhaps more easily conceive the gradual change of the behavioural pattern of big corporations or of the developed capitalist countries and their successive approach to the norms outlined in the book than such international organizations which, in the concept of the author, are —without saying it in so many words — the main agents of rational human actions in the international sphere.

It has to be admitted, however, that the author himself has his reservations as to the possibilities of realization and that his argumentation is convincing as to the necessity of his suggestions; that we witness today developments not only in the technical, but also in the economic field — including international economic organizations — which very few experts would have considered likely 20 or 25 years ago; and that the author shows how to use the resources of the world serving the interest of humanity as a whole in a way which seems to be compatible with the present international distribution of forces.

According to the concept of Mr. Bognár, the main agents of rational economic and political actions within the individual countries are the progressive governments of these countries. Actually, the greater part of the book is dealing with this question, that is, with the economic and political actions, role and possibilities of the governments of the developing countries. This question is dealt with directly in *Part III* of the book *(The implementation of rational economic action)* indirectly in *Part I. (Backward economy — great potential energies)* which is an analysis of the characteristics of underdevelopment and of the factors influencing growth, as well as *Part IV (The world-economic conditions of growth)* and *Part II (The role of economic policy in the acceleration of growth)* which is partly the analysis of the main problems of economic growth — savings and investment, the development of industry and of agriculture etc. — and partly a discussion

of how to solve the problems deals both directly and indirectly with the same question.

It is the point of departure of the author, that only progressive governments being in power can solve successfully the problems of economic growth in the long-term and (without thinking, of course, that all governments in the developing countries are progressive) he intends to work out the norms of rational action for such governments. Those governments are considered progressive, which strive to social equality and justice and, therefore, to abolish gradually all monopolies originating in wealth, social situation or education — taking into account, however, real forces and human behaviour determined by traditions. He envisages a transitional situation in the developing countries for the next decades, which cannot be considered either capitalist or socialist in character. As a result of further development, the capitalist alternative — in the present sense of the word — can be precluded and, although the historical and other circumstances of the developing countries as well as the ways they are likely to follow in the next two or three generations are very different from those of the European socialist countries, the socialist elements will probably predominate in their economy and society.

One of the principal merits of the book is no doubt the closely integrated discussion of political and economic problems, which are dealt with as mutually interdependent, pointing out the more active role of politics in the circumstances of the developing countries. The author considers it necessary to have centrally planned and controlled economies in developing countries, even if the majority of the means of production is not socially owned, because economic growth of a satisfactory rate can be ensured only in this way, and he considers it possible, that the government successfully steer the economy in spite of its small economic power and experience. In the centrally directed economy the macroeconomic central (governmental) decisions determine the rate and pattern of economic development, as against capitalism, where microeconomic actions are the most important — notwithstanding the size of the big corporations and the increasing economic role of governments, which certainly increase the importance of the macroeconomic elements.

These central decisions are taken by the bodies responsible for the overall policies of the countries. This circumstance has several advantages, for example the possibility to take into account economic and political consequences at the same time or the better possibility to mobilize the masses for economic goals. But this means also that these decisions are based predominantly on political considerations. From this latter point of view, the character of the problems can be different. To use the author's expression, the decisions belonging to the first sphere are connected with stabilization and consolidation of the régime, with political contacts with the masses, and here it is justified to give priority to political considerations as against narrowly conceived economic rationality. In the second sphere there are problems arising from the fact that the political power is not fully homogeneous, there are differences of opinion and real conflicts of interest. These lead to compromises and possibly to deviation from a social optimum (which should include also economic considerations), for example, if important economic decisions are postponed. Finally, in the third sphere such economically unjustified considerations can influence the decisions, which — although appearing in the gown of the public interest — are motivated by personal ambitions and conflicts. — Mr. Bognár points out also, that central economic decisions determining economic development have disadvantages as well, for example by bringing about some unevenness in the development process. Because of that, and also because of other considerations, it is necessary to decentralize decision-making as far as possible and to

restrict the circle of problems the decisions on which are reserved for the central authorities.

There is an interesting analysis in the book of the political forces in the developing countries; progressive governments, on the one hand, and governments seeking to establish capitalism, on the other hand. New light is thrown in particular on the role of the army and of the executive branch of the government.

The necessity to have a long-term concept of economic policies is — among other causes — a result of the central role of government in economic development. This is necessary in order to coordinate decisions and to avoid, as far as possible, mistakes in this field. The close interrelationship of political and economic problems is pointed out also in this respect, the main benefit of the long-term economic concepts (plans) being, that they make it possible and even unavoidable to review the long-term political and social consequences of economic decisions. It is so-to-say the leitmotiv of the whole book that "The fate of the regime is determined by the economic development, and economic development by rational human actions, and by the dynamism and purpose of the individuals and groups taking part in economic actions." (p. 147)

There is a detailed analysis through several chapters of such pivotal questions of economic growth as investment and finances, foreign trade and international division of labour, the development of agriculture and industrialization, policies in the field of education and sciences, etc. No all-purpose or prefabricated prescriptions are brought forward in these matters, because the author is fully aware of the importance of the individual circumstances, but firm positions are taken concerning the principal problems of development strategies. Space is too limited here to give a detailed critical review of these standpoints; besides, a deeper analysis would require special monetary, agricultural, etc. experts. Perhaps it could be mentioned, that in the particular field where the reviewer feels himself sufficiently well informed, that is, in the field of industrialization, he found the standpoint of the author well founded, justified or at least identical with or very close to his own opinions.

There is an interesting part in the book dealing with the relations between the political leadership and science, between statesmen and men of sciences. Taking as a starting point, that in our time science is able not only to discover and to disseminate knowledge, but also to work out the program of rational social action, the close relationship of politics and science is presented as an imperative requirement. This relationship is far from being simple, because scientists, scholars and politicians have — as a result of the differences in their role, position and task — a different way of thinking, but it is necessary, because science can exert a positive influence on the processes taking place in the political media.

A special part of the book, four chapters, is devoted to the implementation of rational economic action. Here the central theme is to analyse how to implement economic policies in the developing countries, characterized by a general scarcity of resources; by the side by side existence of different economic sectors, with special problems related to the foreign capitalist sector (which wields too much power and whose interests differ from those of the country) and to the traditional sector (which remains outside the modern economy); and by an unstable power equilibrium. The possibility to use economic, administrative, political-social and scientific-organizational methods to control the different sectors is investigated in detail. It is the basic position of the author, that progressive governments should follow — because of the scarcity of the resources for development — skillful, flexible, but consistent policies in order to integrate into development the widest possible strata, and possibly every sector, without

loosing the view of the main development goals.

It is easy to foresee that this book — as practically every important study — will bring about discussions, in particular after the publication of the English version. Some of the individual statements and standpoints — and even perhaps the basic concept of the book — can be debated. It is incontestable, however, that the book is uncommonly rich in ideas, in useful knowledge and analyses. The reader will perhaps sometimes feel, that the author had in view mostly developing Africa and perhaps at the least the Latin American conditions. Some parts of the book, on the other hand (for example those dealing with planning and the long-term concepts of economic development) deserve attention not only under the circumstances of the developing, but also for the more developed countries.

GY. CUKOR

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I. Friss

ECONOMIC RESEARCH IN THE SERVICE OF NATIONAL ECONOMIC PLANNING

The author gives a comprehensive survey of the main problems to be solved by economic science in promoting the scientific foundation for economy-wide planning. Among these he treats questions of the planning mechanism (interconnections between planning and control and especially decision-making), planning methods, and surveys the problems arising in the consecutive stages of the planning procedure: formulation of the fundamental conception and objectives, the relation of the latter to the plan, main internal connections of the plan: consumption, needs, income, manpower, technical progress, external interdependences as international economic environment and relations. Problems of agricultural planning and that of even or cyclical growth are especially emphasized.

Our investigations will deal mainly with the nature and character of the research projects related to the plan and the planning activity which covers the whole of the country's economy, in short, to the national economic plan and economy-wide planning.

National economic plans can be drawn up — as it is well known — for the long term: ten, fifteen or even twenty years; five-year and annual plans are regularly drawn up and sometimes, in some countries, plans are made even for six months or shorter terms. There are features characteristic of all these economy-wide plans which are, therefore, common and, accordingly, these plans have also some problems in common. In addition, however, the plans covering different periods have also their own special problems. In the following mainly the requirements of five-year planning will be kept in view but the majority of my statements holds not only for these plans.

Central planning, covering the whole economy of a country, is going on today in many countries which are on various levels of socio-economic development. National economic planning in our country and in the other *socialist countries* is of a particular nature and importance because the plan serves as a basis for the deliberate central control of socio-economic development and is also an important tool of this control. Thus the question to which we have to seek an answer is not what should a national economic plan cover in general but to the question *what requirements should be met by a plan serving the economic control of society* and this fundamental objective must be kept in view also in the course of research into these problems.

With a certain simplification of the actual situation we may say that in our country the *Hungarian Socialist Worker's Party* (its Congress, or, between

two Congresses, the Central Committee) — as a representative of the whole society and as a central body — takes the decisions on the deliberate control of socio-economic development, and the *National Planning Office*, being the central planning agency, partly prepares the decisions, or rather their economic part, and partly draws up the plan based on the decisions taken. The problems subject to research should be all those which are accessible for research activity and which can strengthen the scientific foundations of planning in connection with either the decisions or the drawing up of the plan itself.

The following few statements can be laid down as more or less self-explanatory and may serve as general starting points in national economic planning:

1. We can and, therefore, must start only from the given potentialities and conditions. Thus, a broad assessment of these must precede planning.

2. The conditions of the tasks to be set must be given or created on the basis of the potentialities before or in the course of carrying out the tasks.

3. The national economic plan can be of varying dimensions, more or less detailed, but it must absolutely comprise the provisions for the most important activities (groups or series of activities) complementing and determining each other and those for the main processes taking place and the major economic proportions coming about under the effect of the former. The national economic plan is, as a matter of fact, the coordinated plan of the economic activities of the social units. However, such activities are carried out every day by millions. Thus, the plan has to *select*, to choose the most important ones and it also has to aggregate the units to be classified into some group on the basis of some important characteristics or criteria. Similarly, a legion of problems can be found which may or must be subject to research. Here, I can draw attention only to the most important research subjects, more exactly, only to directions and groups of research subjects, not to individual research projects.

4. The activities and processes which may be considered as the most important ones since they determine the development of the economy as a whole intersect and mutually influence each other to such an extent that no group can be planned separately, detached from the others and taken out of its context. To avoid misunderstandings, I add that, obviously, one or several important objectives to be attained can be set in any field if the conclusions are subsequently drawn for all other fields concerned and this does not lead to contradictions. But it must be clear that any major group or series of activities will reverberate throughout the economy — whether we start from agriculture, or foreign trade, or investments etc. From this it follows that any attempt to prepare the five-year agricultural (or industrial or foreign trade etc.) plan of a country in any other form than part of the whole national economic plan, will miss its aim. The stressing of some objectives means giving them

preference over others, i.e. that from the resources available under the plan first the attainment of this objective must be secured — and it can be only attained if resources are sufficient for this purpose — other objectives can be set and planned only to the extent made possible by the remaining resources. It should be clear that it is impossible to select in this manner an entire major field — e.g. agriculture — or rather, if we make such an attempt, the following up and analysis of all consequences, all mutual and feedback effects will amount almost to the drawing up of the entire plan of the national economy, thus the complex plan of such a major field will be no longer the plan of a *single* field but will decide that of the others, too.

Connections between the decisions and planning

It follows from the nature of things that decision on the national economic plan cannot, as a rule, be a single act. First, decision must be taken on the main ideas of development, on the basic directions of the plan. This means that the central political body takes a stand in respect of a few most important objectives of economic development, stating that all other objectives of development can be ranked only after these. How can the political body reach such a decision? On a scientific foundation only in case if this first decision has been already preceded by adequate preparation. Generally, it will be thus the planning agency that will make the proposal on the basic conception. This proposal, however, cannot yet be called a plan in the usual sense, i.e. it is not a plan consisting of harmonized parts and covering all important fields of the economy, nor is it a rough picture or outline of such a plan. In the first approximation the basic conception will resemble rather a working hypothesis, a proposal supported by undeniable facts, sober arguments and manysided considerations about the advisable direction of development. If then the political body takes its decision, this will entail many important consequences in the most diverse fields of the economy, among others because it will be necessary to secure certain qualified specialists, a certain development of investments, transport and foreign trade, as — owing to the interdependence of the various branches of production and consumption — it will affect every field of the national economy. At the same time, however, it also leaves open a whole series of questions. These can be solved in several ways and in several combinations.

Thus, on the basis of the first draft of the basic conception, the first decision has been taken. The planning agency must, for the time being, continue to work on this basic conception. Now, however, it has, starting from the basic conception, to work out such drafts as will approach the actual plan in the sense that they cover every important field of the national economy and present variants and alternative solutions for various important problems,

showing the consequences, merits and drawbacks of each. It may, of course, happen that these drafts will bring to the surface such a contradiction or contradictions in the basic conception as will make necessary or justify the choice of another conception. In such cases, the whole work must be started again. But if this does not happen, the central political body will choose, by a new decision, one of the variants submitted. From now on, the basic conception will be the guiding principle of the actual plan. Obviously, it may happen that the political body, before sanctioning the basic conception in this way, puts new questions and orders further drafts to be worked out. Accordingly, before becoming final, the basic conception may several times travel between the central political body and the central planning agency, always in a more concrete and fuller form.

It may be seen from the above that decision-taking is a complicated process. In fact, the technical and the political problems are rather interwoven in the planning process since what and in what form is presented to those called upon to decide already influences the decision to be taken to some extent. Some research is, therefore, needed to work out the problems which really demand a political decision.*

In the past, the connections between decisions and planning did by far not develop as described above. We have, therefore, no practical experiences with the method described. For the time being, it is just an idea. But this idea seems to be reasonable and expedient. The solutions to such problems must, however, be submitted to the test of experience. Our present ideas cannot be really confronted even with the actual practice or with that of the past, for the simple reason that not even this practice is sufficiently known. To be able to introduce a better system, therefore, scientific research is needed which will critically analyse the history of our planning and decision system up to the recent past.

The connection between planning and decision-taking has been pushed to the foreground by the introduction of the new economic mechanism. The fact itself makes it probable that there exists a close connection between decision-taking, planning, the plan and the mechanism. Very likely the old — insufficiently known — system of decision-taking was related to the old mechanism. Surely, the new mechanism imperatively requires that planning and decision-taking be raised to a scientific level. At the same time, it necessarily involves an increased democratization since: *a)* it calls for central control to be based on local autonomy and initiative; *b)* it draws into the work of planning a wider range of organs, specialists and other interested persons; *c)* it renders the decisions clear, accessible, criticizable and controllable as

* Problems of the implications of political decision are discussed in detail in my study "Ideas on the Improvement of National Economic Planning', Acta Oeconomica, Vol 2. 1967. No. 1/2. pp. 3—22.

opposed to earlier practice when decisions were often taken without sufficiently known justification. All these statements are, however, not fully proven. Scientific research is needed to disclose the connections between decisions, planning, the plan and the mechanism. *The plan is, above all, a plan of resource allocation.* Under the new mechanism, the market can be a preliminary basis of this allocation but later on it is, by all means, its tool, its superviser and its correcting medium. It is necessary to investigate, among others, how the market mechanism asserts itself under the conditions of modern monopoly capitalism which are, in a sense, comparable with our conditions, what differences there are from this point of view between the various fields of the economy, what mutual effects prevail between the market and the efforts of the monopolies in respect of economic policy, etc.

The method

In connection with the long-term planning of the national economy there are a great many methodological problems waiting for solution. In most cases, their clarification is possible only on the basis of scientific research of a high standard. At the beginning of this study it has been pointed out that in planning we can and must start only from the existing potentialities and conditions. Their extensive assessment must, therefore, always precede planning. Even the solution of this single task requires research. The field has to be surveyed: what conditions must or should be known to the planners, on which of these is information available, and what other conditions should be taken into account, in what manner can they be recognized or approached. Where are the major white spots, and where are only some minor modifications needed for the sake of accuracy. The problems of market (demand) research, the various information systems should be studied and partly also the problem to what extent it is worth while to examine these. It must also be clarified — with the aid of mathematical-statistical methods — what dangers are inherent in the unknown or uncertain factors, to what extent might they distort the drawing up of a plan. It must be known which circumstances should be given greater than average attention because of the approximative estimations used in planning them.

A highly important and as yet unsatisfactorily solved problem of long-term planning is how to ensure the internal consistency of the plan, to make it free of contradictions. We are not thinking here of the cases — not infrequent in the past — where competent bodies accepted and enacted a plan whose internal contradictions had been known; what we have in mind is the *theoretical problem of ensuring the fullest possible consistency of the plan.* As a matter of fact, the problem is created mainly by the circumstance — mentioned in the

introduction — that any national economic plan can be only a highly simplified reflection of reality. The simpler the model used for representing the whole economy, the easier it will be to ensure — on the basis of this model — full internal consistency and to eliminate the contradictions, but the less can we be sure that there will be no contradictions in reality. We should, therefore, work with such models as will offer the best possible guarantees against any uncomfortable surprise. The method of balances as worked out in the Soviet Union with prolonged efforts solved this problem only in rough outlines. The input—output table raised the solution to a higher level and enabled its handling with the aid of mathematics. Modern computation techniques rendered great help to planners also in this field, they facilitated — among others — the drawing up of variants. Research workers have, however, to face further tasks also in this respect; they have to study, among others, how the possible sources of error can be found, eliminated and prevented.

It is, indeed, part of the problem discussed — but owing to its importance a question separately to be studied — how to secure the mutual harmony and correspondence between the value relations expressed in terms of money and the material (physical) relations. In vain have either the traditional method of balances or the input—output tables been used both for value expressions and for quantities of material goods, the difficulties and problems due to their different natures cannot be fully eliminated. The greatest difficulty will remain concealed, if planning in value terms assumes constant prices or assumes that the value of the goods remains constant, and also if the changes in physical connections (input coefficients) are disregarded in planning. In reality, both do change and, in addition, often not only to different extents but in different directions. Research must disclose whether such possible but uncertain changes can be taken into account at all in planning; if so, in what manner and to what extent can this be done or, rather, where can this be done and where not.

In the various fields of planning and in various connections, *models are of great importance.* It is an important task of research to seek and find models truly representing either the whole of the economy or some major or minor part of it, or some of its processes. Whether a model is adequate or not can, of course, be decided only by confronting it with practice, with experience. Thus, the adequate character of a model must be proven by a number of cases corresponding to the nature of the phenomenon in question. Even if the models are not sufficient to draw up the plan of the economy, or some partial field of it, they are indispensable for working out plan variants, and can do good service in checking the consistency of the plan.

It has been mentioned that the national economic plan must cover the most important series of actions and processes complementing and determining each other. We do not, however, know as yet which they are, which of their details should be covered by the plan, which of them can be neglected

without endangering the reliability of the plan and which can not. To find out, is a separate task of research.

Extremely important are the research activities aimed at finding the most favourable solution of some planning task, that is, some *optimum*. An optimum solution can be sought, of course, only if we know the problem whose optimum solution we are looking for, i.e. if the objective (objective function) can be determined with sufficient accuracy and if the conditions (constraints) are known or can be determined. Up to now we could not yet attain such an unequivocal determination of the objective and the conditions of the national economy as a whole. This does not mean that research aimed at this target should be abandoned. In respect of more modest but still considerably important tasks, optimization has already brought partly satisfactory results and partly pointed to some directions which provide food for thought and deserve further research (e.g. the two-level planning work going on in the Planning Office and aimed at the improvement of partial plans which had been worked out earlier with traditional methods). New research may yield further valuable results.

An important part of research work into planning methodology is constituted by the regular and intensive investigation of the planning methods used in the developed capitalist countries and by the study of the material collected by international organizations. In certain capitalist countries — such as France, Norway, the Netherlands etc. — several methods of measurement, estimation, error finding etc. have been worked out by planners which, with minor or major modifications, may be used also in this country. It may also be instructive to know how planning is related to economic policy in the advanced capitalist countries or how the preparation of decisions on economic policy and their influence figures in the planning methods worked out for the underdeveloped countries.

Research connected with the fundamental direction and basic conceptions of the plan

The elaboration of the national economic plan starts with laying down the basic directions of the plan, more exactly, with the preparation of the proposals to be submitted by the central planning agency to the central political body concerning the basic conceptions of the plan. It follows that the basic conceptions and thus also the preparation of the proposal on the basic directions is of great importance. In popular wording it could be said that this is the first occasion for blunders — though there will be several others later on.

In spite of its high importance, the problem of elaborating the basic conceptions has no scientific past or basis whatever. True, not even the basic directions have been accorded the importance due to them in drawing up the

plan. The causes are rooted in the past, they are mainly historical and may be found in the bad experiences made with "plan conceptions" lacking any scientific foundation. It is unnecessary to deal with them here. But one of the causes is also the fact that a completed plan does no longer show, in general, whether it rests on carefully worked out basic directions or not. (This aspect will be reverted to below.)

The basic directions of the plan can by no means be identified with the main development directions of the national economy, nor with its main objective of securing the most favourable development of society and its members. This is a general and broadly formulated objective which allows hardly any concrete conclusions to be drawn in respect of the national economic plan. In itself, it cannot yield an answer even to the obvious question, when or over what period can this most favourable development be attained? Quite obviously, other conclusions will be drawn if this requirement is interpreted as meaning that society should reach a maximum development level, say, in ten years, independently of the living level of society during the period up till then, and a different answer must be given if it means that society must develop evenly, to the greatest possible extent all over the ten years. It should be also clear that the requirement can be given other interpretations, too.

But let us go further. Nor is it clear what should be understood by development or development level. To take a simplified example: which society is more developed, the one where each member of the society enjoys an average daily 3000 calories of food consumption and two persons share a room, or the society where per capita food consumption is only 2500 calories but every person has a room for himself? Clearly, there are many variations of the question. But let us assume that the competent political body has already decided what should be understood by development and development level and also that by most favourable development an approximatively even and maximum development through some longer period should be meant. But these decisions do not yet say anything about the rate of development to be attained or its level. Nor can they really say anything since the level and rate of development cannot be predetermined magnitudes, independent of the conditions, circumstances and forms of development but will result only from the concrete factors and facts of development itself.

Accordingly, the task of the central planning agency in the field of working out the basic directions consists precisely in submitting to the political body such a basic conception, such an outline of the plan as will yield the most favourable development in the accepted sense of raising the standard of living. But it follows already from the uncertain formulation of the task that no single solution exists. Thus, the planners must submit the outlines of at least two, maybe more, variants which would be approximately of the same

value, that is, which would enable roughly the same rate of growth. But how, on what basis should planners draw up such variants? Neither the practice of planning nor the scientific research work carried out up to now have provided a sufficient basis for working out adequate basic directions. There were, however, several attempts and by improving them there is a hope to approach the problem in a scientific manner.

The first method which offers itself for this purpose is an analysis of the country's natural endowments, economic, historical, etc. conditions. It has been often said that one of the greatest deficiencies of our plans drawn up in the late forties and the early fifties was that they did not duly take into account the potentialities and special conditions of the country. But even apart from the mistakes made, it is obvious that our plans should be based mainly on these characteristics. It has, however, not been clarified as yet how this requirement should be met. In recent years it has often been emphasized that our foreign economic relations have a great and increasing importance for the economy. Does this not reduce the importance of starting from the potentialities? This is by no means the case. The role of foreign economic relations is, indeed, outstanding and it is already a commonplace that the efficiency of our economy can be considerably increased if we do not endeavour to turn out every possible product at home but import part of them in exchange for goods that can be produced in excess of domestic demand. Obviously, this does not reduce the importance of our potentialities and special conditions since it is only on the basis of these that it can be decided what to produce and what to import. There are many goods which do scarcely enter into international trade because of the high transportation costs involved. We possess, however, natural deposits which can be extracted in our country under conditions that are, in general, not worse than in other countries, or, at least, in some countries. Such are e.g. bauxite, manganese ore, oil, natural gas, uranium and even part of our coal deposits. Soil and climatic conditions in this country enable us to work in several branches of plant cultivation and animal husbandry under conditions not worse than the European average, and in some branches even under better conditions. These products are, at the same time, raw materials for the food industry. On hand of the example of foreign countries with more developed raw material extraction or agricultural and food production it can be extensively studied in detail what development and what rentability can be achieved in various branches of production with different investments and current inputs. In this way some points to hold on can be established for working out the basic directions or at least part of them.

Another such approximate method may be an analysis of historically given examples, such as

1. first of all the various stages in our own past, mainly those where development was satisfactory or even outstandingly rapid, with periods of

a proper length (at least five years) to be investigated, to make the lessons worth-while to draw;

2. the economically most advanced countries;

3. the countries which have reached a particularly rapid development over at least one longer period of their history; and

4. the countries which are in a similar position as this country in respect of area, population, natural conditions, and the cultural and economic development level.

Beyond a general analysis of the past, efforts should be directed mainly at obtaining an answer — scientifically as reliable as can be attained — to the questions what was in the given case the source or the main source of the achievement; under what effects did it come about; what were its human, natural and historical conditions or what changes occurred in them; and which of the factors enabling in the given case the most favourable development are available or can be created in this country. A clarification of these problems will also yield some points to rely on for working out some (maybe several) basic directions.

For a third possible method of scientific approach foreign trade may provide some starting points. By starting from the volume of trade that is transacted with some countries or groups of countries and by examining the commodity pattern of this trade, one can select the branches of engineering, light industry or agriculture which should be mainly developed. It is thus not the commodities to be traded abroad under the given conditions that we are looking for. In the latter case we should take into account the comparative advantages to be derived from given conditions. Now a starting basis must be found in foreign trade for working out the conception of the national economic plan. Such a starting basis offers itself in the trade transacted with the Soviet Union, which constitutes a considerable part of our total foreign trade and provides long-term agreements relating to sizable volumes of certain commodities. In two or three industries — as e.g. the vehicle-building industry, the electronics of long-distance networks, some food-producing equipments — and also in some branches of agriculture — certain fruits and vegetables — these agreements can be of a magnitude as to determine the outlines of a basic conception. But in some fields and in respect of certain articles, great possibilities — e.g. of cooperation — may arise with other socialist and also with non-socialist countries. The research task is here to analyse, on hand of foreign and domestic examples, the experiences gained in some of the branches or in connection with products and articles where growth was conspicuous, to investigate the capital, material and labour intensities of their production (inclusive of the requirements in highly qualified manpower and managers), the time necessary for the introduction and the running-in, the consequences due to obsolescence and the requirements of maintaining the technological level, and

relying on all these, to examine the profitability prospects of production to be developed on the basis of the given conception, its expectable contribution to the entire economic development, and the part it may play in the latter.

All these researches may partly provide ideas and food for thought for the planners, and partly support and prove their assumptions and conclusions. They will enable to propose in a well-founded manner two or three development schemes (basic directions) which seem most advantageous, to take into account realistically whether the necessary conditions and possibilities exist for each of the schemes, and what advantages and difficulties are entailed by the acceptance of this or that conception. On the basis of these directions the allocation of all resources can be drawn up in rough outlines. The "skeleton" of the plan must thus be prepared in such detail as will enable the approximate setting of the rate of growth and thus the comparability, the comparative evaluation of several draft plans prepared in the same manner. It is a task of economico-mathematical research to construct and to test a model which satisfies the requirements of such a "skeleton" plan.

Relations between the basic conception and the plan

In view of the complexity and uncertainty of the process outlined, the question arises whether it is really necessary to work out several schemes and let the political body choose one from among them. No historical example can be quoted. But there are several examples for a national economic plan to have been drawn up on the basis of directives considered to be fundamental. Such a basic directive was, e.g., the development of coal mining and of ferrous metallurgy in Hungary at the beginning of the fifties. Of course, there existed some ideas and motivations to justify this directive but they were without any scientific foundation. It can be assumed that whenever and wherever some basic conception provided the basis of a national economic plan, good arguments could be listed in support of the idea even if they could not rely on scientific research. *Scientific foundation of the plan does, however, imperatively require that the submitting and approval of the basic conception should be preceded by scientific examination and weighing.*

Secondly, the question arises: is there any real need for some basic conception? As a matter of fact, even at present we are not starting from some basic conception in the above sense, and seem to be able to manage without any. Besides, — as has been mentioned — a five-year national economic plan, once ready, does no longer show whether scientifically elaborated basic directions did serve as its basis or not. Of course, with some knowledge of the subject, this can be found out by studying the plan. If the plan relies on one or more basic conceptions, this can be read from the plan, it can be established which is the single or which are the major conceptions that dominate, as it

were, the plan, to which the other parts of the plan are subordinated. If, however, such basic ideas cannot be read from the plan, if the plan comprises many correct objectives with the same or almost the same rank, then the plan has no basic conception. In such cases, therefore, if the planners do not have for a compass any basic conception, it is difficult to draw up the plan in any other way than by putting together the ideas which seem the best and trying to fit them into a uniform plan. Some difficulties must, however, be reckoned with in such cases. And these difficulties do not derive from some abstract speculation, they are very real and unavoidable difficulties as have been experienced and paid for dearly in this country. In almost all fields of material production, as well as in other fields requiring economic inputs, there are good, rational, well founded and justified ideas, perhaps worked out in detail, about development. These ideas are, of course, best known by the specialists of the field in question, who are thus most competent to work out and represent these plans and ideas. But, precisely because there are reasonable development requirements in all — or almost all — fields, and the specialists of the respective fields represent them and defend them with conviction, the claims that can be listed on this basis by far surpass in all cases the potentialities.

It should, therefore, be clear that part of the claims cannot be met at all, or only in part, or only in a longer period than desirable. There can be no question of comparing these claims on the ground of the economic advantages their satisfaction would offer. First, part of these claims is of a nature that in meeting them economic view-points play only a secondary role or none whatever. On the other hand, even development requirements of an economic character can be compared only with difficulties if they arise in different fields. Their utility on the national economic level depends, in fact, not only and not even mainly on the time of recovery — which can be easily worked out — nor on some other, equally easily computable, indicator but on the combined final results they are able to bring, through an intricate network of transmissions, to the economy. This fact puts some limitations on economic calculations in general.

In lack of a proper scale of measurement, the planners can do nothing else than try to reduce all claims to some extent until their sum equals the amount that can be satisfied with the aid of the resources available. (Experience has shown, however, that planners do not even go so far, but often leave some claims open in the hope that in the course of the plan period some solution can be found.) Thus, nobody receives as much as would be needed to satisfy his claims in a reasonable way and, in addition, resources become diluted and progress will be slower than should be possible. It is then alleged that the reason lies in the scarcity of capital, since everybody may see that we have not as much as to satisfy all justified claims. But, obviously, as long as we proceed in the manner described we will always remain short of capital. As a matter

of fact, scarcity of capital — if we do not simply mean that capital has to be dealt with in the same manner as all resources in limited supply — is obviously a relative concept, to be compared to capital requirements. With business fluctuations, there may be alternative shortages and abundancy of capital even in the same rich capitalist country. Now, in our country, if we proceed in the way described, there may always come forward more justifiable needs than we are ever able to meet. The method described (which is just a symptom of the harmful disease called, for lack of a better term, "sectoral approach" of the economy) causes not only the fragmentation of productive resources but also that in case of a collision between the interests of the producers and the consumers it is usually the consumers who fare worse since they are the last to announce their needs.

The basic conception is important since with its aid we wish to come nearer to the secret of the most advantageous development and in the course of searching we discovered that we can never attain this objective by putting together the most favourable development of the parts. *The question is, how to allocate the basic factors of production, manpower and the means of production, to achieve an enduring most favourable development?* In other words: man and his natural as well as man-made conditions should be coupled in the production process in a way as to bring about as a result an ever higher degree of satisfaction for society and simultaneously create also the conditions of further advance to a still higher level.

No more can be distributed than is available. This is true for the allocation of both consumer goods and the forces of production. But productive forces can be distributed in many ways and different distributions will lead to highly different results.

All these are obvious truths. Still, there are some who would see, feel and perceive primarily that our freedom of action in directing the economy is a minimum. A given population will — they believe — decide with its given requirements, purchasing power and habits, without our interference, what and how much it should be supplied with; the manpower and the means of production available will, on the other hand, fundamentally determine by their composition and distribution and in view of foreign trading and credit possibilities what and how much can be produced and even in what direction should the economy be expanded and to what extent. Those who see matters in this way, are inclined to exaggerate the importance of the potentialities in delimiting our freedom of action and to be little the weight, role and importance of deliberate control in the formulation of our future. Indeed, even if they are not completely aware of it, the advocates of the undoubtedly still dominant sectoral approach are devoted to the above ideas.

To avoid any misunderstanding, I must add two remarks. First: the potentialities — and I will revert to this question below — must be taken

into account most thoroughly, in a manysided way, and their role must not be neglected or left out of account. Second: what should be meant by deliberate control is a general control of the major outlines, as necessitated by social interest. Not only can this be reconciled with the freedom of decision of individuals in their own personal affairs — in so far as they do not interfere with the freedom of others — but is precisely built upon their freedom of decision.

The grain of truth in the fundamentally fatalistic conception criticized here is that the potentialities and conditions have, indeed, a decisive weight and importance, and we cannot detach ourselves from them, nor jump them over. Every attempt in economic policy or planning which does not fully account for the potentialities is harmful and dangerous voluntarism. But from the point of view of economic policy and planning it is even more important how we utilize our potentialities since this is on what it will depend how we are able to accelerate our progress.

Experience has shown that without any planning or deliberate direction or, if you like, with the minimum of planning and economic control that can be shown to exist to various extents even in the advanced capitalist countries, it was possible to achieve through some longer period — several decades before 1960 — e.g. in Sweden an annual growth rate in national income of nearly 4 per cent, in Great Britain one of about 2 per cent and in the USA one of about 3 per cent.

The results achieved by the socialist countries which are deliberately planning and controlling their economy are much more favourable, but they show great differences and fluctuations. Of ourselves we know that we committed numerous mistakes of several kinds in the planning and control of the economy and thus we may safely venture the statement that the most favourable level of growth rate has not yet been attained in this country. Nor may the other socialist countries be assumed to be completely free of some of the mistakes committed in this country. Therefore, it does not seem to be too bold an assumption that the whole socialist world system, but also each of the socialist countries taken separately, is capable to achieve a growth rate much higher than the actual one of the economy and one by far surpassing that of the capitalist countries. To achieve this, however, the mistakes and deficiencies realized must be gradually corrected or abolished. With the reform of the control and management of the economy in Hungary we have taken the road towards this goal. The next step should be to raise to a higher level the decisions concerning the development of the economy so that they are really scientifically founded and correspond to the interests of the socialist society.

Consumption, needs, incomes

After the decision has been taken on the basic conception, the central planning agency starts the planning work, that is, to draw up the plan in greater detail. It is, of course, not our task to deal with the method of drawing up the plan or with planning itself. Suffice it here to mention that, obviously, it is by no means necessary nor useful to go beyond certain limits as regards details in planning. Where should this limit be drawn is — as I mentioned earlier — a separate problem of research. In general, the tasks should be set in a detail necessary partly to assess the most important effects, links and interrelations as well as the conditions necessary — and, therefore, to be created — of the activities planned, simultaneously with a disclosure of the still hidden contradictions inherent in the basic directions selected and probably needing new political decisions. On the other hand, details are needed in order that the leaders and to some extent the staff in certain fields can see what contribution society expects from them in the interest of economic development. The plan should be worked out to that degree of detail and not further. To what this amounts in practice can be decided only by long experience and considerations as well as on the basis of research results relying on this practice.

As mentioned before, the problem of the basic directions is only the first but by far not the only important one among those necessitating political decisions. With the decision on the basic conception — even if it does not need any revision in the light of further work — only the basic direction of development has been marked out. Its knowledge gives no information as to the concrete methods of realization or about the concrete measures to be taken. There are further important political and technical problems waiting for decisions to be thus taken partly by the political bodies and partly by the planning agency. A major part of both requires, however, a scientifically supported decision and thus necessitates in most cases scientific investigations and research. The most important research projects that may be thought of will now be treated — noting, however, that no attempt is made at completeness — for the sake of easier survey, i.e. for practical reasons and not on the basis of a classification of scientific standards, in two groups. First the problems related with the level of living (needs) and then those connected with the forces of production will be dealt with. It should be mentioned that these two groups are linked to each other and even overlapping to some extent.

In connection with the *level of living* the problem of the time horizon should be mentioned in the first place, mainly to clarify some aspects of the problem. In a socialist economy it is, as has been mentioned, natural that planning and central control should be directed at the most favourable development of the economy and of its individual members. But as regards the

concrete contents of all this, no conclusions can be drawn from the general statement above. To be able to plan, further political decisions are, necessary, first of all to decide to what period should the most favourable development be related.

As an example the possibility has already been mentioned to provide for an approximately even favourable development over some longer period. This assumption may be justified by certain considerations. Let us start from the assumption — generally in agreement with reality — that extended reproduction takes place in society, that is, in any definite period the global social product is somewhat higher than in the preceding one. In the next period the volume of production will be between two theoretically possible extremes. The first extreme is where society puts an end to extended reproduction, consumes the quantity produced in excess of the level of the preceding period, and does not produce more in the next. In this case economic development, the growth of national wealth ceases. In the given period the consumption of society — identified here, for the sake of simplicity, with the level of living — has grown to the possible greatest extent but in the subsequent period it cannot rise at all since production is not expanding. Thus we have come into contradiction with our objective declared to be fundamental.

In case of the theoretically possible other extreme, society will use for the expansion of production the total increment or surplus of the global social product in the given period. In this case the wealth of society would increase to the possible greatest extent, but the level of living would not rise at all. This would also contradict our basic objective. The correct solution must, obviously, be between the two extremes. In an abstract sense, in general terms — which can be modified in reality by various factors — development can be accelerated by increasing accumulation. From that it also follows that a higher future level of living (consumption) will compensate for the lower level of living (consumption) of the present.

It is conceivable to reach a social decision according to which consumption is to be kept low through five, ten or even twenty years while maintaining simultaneously a high rate of accumulation and then the proportion will be modified in favour of consumption. Obviously, the general rate of growth will differ according to whether the relatively low rate of growth in consumption and the accompanying high rate of accumulation is provided for five, ten or twenty years. But it is equally obvious that the members of society pay in the first case with five, in the second with ten and in the third in twenty years of low living standards for a later rapid rise in the level of living. In the meantime, however, people are born and die and society changes partly. With some simplification: the present generation pays with its lower level of living for a more rapidly rising level of the next generation. There are some scientists who propose on some grounds a time horizon of twenty years (Strumilin)

or one of 12 and a half years (Minc) or one of 8—9 years (Notkin), but neither of them can be convincingly supported. This proves that *under normal conditions* the political authority should make the choice from among variants each of which would assure reproduction on an increasing scale to such an extent that an approximately steady year to year rise in living standards could be warranted for some longer period. As has also been pointed out, even development refers to the measurable, quantifiable development — on the national level to total utilization and total inputs — and even to these only under certain conditions, assumptions and with some simplifications. In connection with the problem of the time horizon, research should be aimed at disclosing — taking at least 15 years but possibly 20 years and even longer periods — to what extent and for what reasons has development in the socialist countries with the most rapid progress within the similar periods deviated from an approximatively even one and what positive or negative effects had these deviations on development itself.

In connection with the level of living the research projects should be mentioned which are aimed at one of the major problems of economic control and planning, that is, the assessment of social needs. A particularly important field of research is that of the expected, probable, plannable development of consumption. It is a remarkable feature of these researches that — apart from their general interrelations with socialist planning — they do not much differ from research with a similar purpose in the advanced capitalist countries. The essential difference lies in the fact that with us the plan is the major means of the deliberate control of social development while in the non-socialist countries these projects are — even in their most developed form — at best a means to orientate the economic policies of a narrower or broader ruling class.

In our country the planning and forecasting of consumption needs can serve — if it can be raised to a level considerably higher than at present — among others the central influencing of consumption as far as this is possible and desirable at all. In non-socialist countries this influence is exerted — in a direction considerably deviating from public interests — by the advertising and propaganda machinery, mainly by that of the great monopolies. Of course, this difference will affect the results of research in different ways. But the methods themselves are — as has been mentioned — identical in substance. These researches are aimed partly at carefully studying the consumption pattern in the most advanced countries and how these patterns have come about, and partly consist — with the application of modern mathematical methods and computation techniques — in establishing income distributions, demand functions, longer time series, consumption cross-sections, etc. The same difficulty arises in all countries of whatever social system in connection with the examination of expectable consumption, due to the factor of uncer-

tainty, i.e. to the fact that there is little chance to foresee the emergence of new products and new consumption habits.

Another wide field of investigation is constituted by the other social (public) needs. Part of them, namely those connected with education will be dealt with in the next section, when treating the questions related to the forces of production. But beyond these, there are the problems of social supply, social care, the special problems related to children and old people as well as those emerging in various cultural fields. All these need also highly diversified and intensive research of a non-economic character. But all of them have economic effects and relations as well, material requirements which have to be reckoned with in the various aspects of planning. It should be mentioned that in this field the deliberate control by society is much more marked than in connection with the consumption problems treated before. The allocation of the available means to the various useful and necessary objectives demands social decisions to be taken. Since these decisions are to affect different strata of society from important material and cultural points of view, they are of necessity, not technical but political in character. Thus, the research mentioned above will serve not only the drawing up of the plan but also the preparation of the political decisions.

Similarly, research connected with income distribution serves not only planning but the preparation of political decisions, too. In this field the number of problems requiring a political decision is extremely high. To mention but a few: how much of the increment of national income in five or more years and in the individual years should be spent on accumulation and how much on consumption; of the increment falling to consumption, how much should be given out in the form of wages and pensions, how much should be spent on child welfare institutions, etc. What part of wages should be paid out to those engaged in production and how much to those employed in other fields. Should the earlier lower and/or upper limit of wage rates be changed and if so, should the ratio of the two also change and in what sense.

The research necessary for the preparation of decisions is partly of historical character, investigating how these problems have been practically solved in our country or in the other — socialist and non-socialist — countries in the course of development, and what conclusions can be drawn from history in this respect, what rules could be established. Another part of the research work is theoretical, partly statistical and even speculative in character. These deal with such questions as the relations between income distribution and the level of living, between income distribution and technological development, the conclusions that can be drawn regarding income distribution from the modern directions of technological development and, particularly, from automation; the conclusions that follow from the socialist ownership of the means of production and its two forms; the implications of socialist ethics, etc.

The forces of production

Among the research tasks connected with planning, those related to the development of productive forces and, particularly, to *labour* and *manpower planning* play a highly important role. Their importance is due partly to the fact that manpower is the most important of productive forces, whose quantitative and qualitative development decisively influences the possible rate of growth of the economy. On the other hand, part of the related problems requires the longest horizon of planning. In society, and particularly in the productive fields, an ever greater number — both in absolute and relative terms — of highly qualified manpower is needed; technicians, engineers, specialists and scientists whose training requires 4, 8, 10 or even more years beyond the basic education. But even the basic education has to be organized according to the type and requirements of further training. Besides the claims that are raised by the material and intellectual needs of society on manpower (in the broadest sense), also the fact should be taken into account that an overall development of the capacities of every individual member of society is an important social objective in itself. Here, scientific research has to employ, in addition to the comparative and historical methods, also mathematical ones: modelling, efficiency computations, etc.

In connection with research relating to the planning of the development of productive forces, there are also comprehensive projects embracing the whole of the economy. An outstanding place is occupied by those aimed at comparing the development and the development levels of socialist and non-socialist countries. This group of research projects includes the investigations aimed at establishing indicators for gauging the economic development level by selecting some indicators of production and consumption and intended to analyse the problems involved. They include the deduction of various possible main or major development trends from historical examples, the comparison of the economic patterns of advanced and less developed, socialist and non-socialist countries, their classification according to types and other characteristics as well as the study and analysis of the relationship between the various development types and their changes on the one hand and the natural endowments, the development of productive forces, the international division of labour, etc. on the other.

Similar comparative and analytical studies can and should be performed separately for each of the main branches of the economy, particularly for the most important ones but even for smaller fields. It is absolutely worth while to investigate — from the point of view of conclusions to be drawn for planning — for example the development of steel production in the countries leading in this field, its material basis, technological directions, productivity, equipment and choice of products; or the development of car production,

or that of machine tools; the place of plastics in the production pattern of advanced countries, the changes in their ratio to natural materials, the trends of development, etc.

Particularly intensive studies are needed in the fields connected with *technological development*, research, designing and constructing. The fields of analysis should be: technological development in the most advanced countries, their material and intellectual basis, methods and mechanism, the length and duration of research from the basic research to implementation, the relative proportion of the various stages, distribution and concentration of research, its organizational forms, the methods of production and product development, the purchase of production processes and licences from abroad, cooperation possibilities with socialist and non-socialist countries, etc. Of course, here we are thinking only of economic research projects connected with the planning of technical development. These can say only very little or nothing about the concrete aims of technical development, about the immediate tasks to be solved. The uncertainties arising here — caused by the fact that the rate and contents of technical development are controlled by the world powers richest in intellectual and material wealth, which carefully guard their secrets while we have still to aim at world standards — belong to the gravest problems of national economic planning. Economic research cannot solve these problems but, by disclosing the economic aspects of technical work, it can yield useful information on what is worthwhile to investigate with our own forces; on the economic ramifications and reverberations of certain developments; on the allocation of the available material resources to various purposes, etc.

Another important research task connected with these problems is to trace the causes that have retarded and hindered technical progress or rendered it difficult up to the present; to establish the connections between these phenomena and the mistakes or deficiencies of planning; to find out what can and should be done to attain the most favourable technical development in reality and how, in what manner can this be promoted from the aspect of planning. Similarly to the subject mentioned earlier, here, too, part of the studies is historical in character, relating to the development of Hungary and the foreign countries most interesting from the point of view of this comparison, while another part is connected with economic efficiency calculations. Some of these projects cannot be carried out without the construction of a model, etc.

A further important subject of research into the planning of the allocation of productive forces is the *territorial location of the forces of production*. It requires a political decision, since it affects broad masses of the population in their most important interests, to determine where, what and to what extent should be developed. Economic research is needed to establish the economic advantages or drawbacks of some solution, and to work out the total economic costs, taking into account the "consequential" investments, manpower supply

and transport. On the basis of the political decision it is a further research task to find the optimum proportions of the territorial distribution of the branches of production.

International relations

The problem of the external, international relations of the economy has an important role in long-term national economic planning. As mentioned in connection with the question of main directions, the desirable, possible and expectable development of our international relations has to be weighed up when setting the direction of production. From this task derive the research projects connected with the development of international relations. In this field, too, comparative, historical and mathematical research is equally needed. The latter is aimed mainly at the efficiency problems of foreign trade, at the optimization of trade under certain conditions. These questions can, however, not be separated from the problems of the production pattern, that is, neither from investment problems nor from those of technical development. For the preparation of political decisions, a combined and complex investigation of these problems is needed, based, in turn, also on such decisions.

It has been repeatedly mentioned that it is necessary to analyse progress in the other socialist as well as in the advanced capitalist countries from some points of view — e.g. from that of consumption or technological progress. But these countries have also to be studied in themselves, in their historical development and so will have to be studied the developing countries with which we maintain trading connections or will enter into trade in the future — from the point of view of our international, foreign trade relations.

It is a characteristic feature of the planning of our international relations that they involve greater than average uncertainties since the development of these relations depends not only on ourselves but also on our partners. In this field it is, therefore, particularly justified to reckon with various possibilities, to draw up different plan variants. These relations can be influenced to a greater extent than is usual by political and even defence points of view. And conversely, these connections can greatly influence the development of our policies and even our defence. All this will affect planning and the research work connected with planning.

Some further problems

Up to now we have spoken about the economic research tasks connected with national economic planning which are related either to the planning methods or the basic conceptions of the plan, or some major, important groups of the planning problems (social needs, productive forces, etc.). There may arise innumerable other research problems, connected in concrete form with the

immediate tasks facing the economy. As a matter of fact, if the plan is actually the basis of central economic control and an important means to this end, it is obvious that the major objectives to be realized in the course of economic development deserve special attention and demand special solutions in planning as well. Other special research problems may arise in connection with the planning of these objectives. As an example, let me quote only two problems of this type.

It is a fact that not only in Hungary but also in the USSR and other European socialist countries, the development of agriculture usually falls behind both the plan and the general growth of the economy. In the majority of the countries the plans — also the five-year plans of Hungary — have provided for an essentially quicker development of agriculture, which would have been more in harmony with the overall growth of the economy. However, while in the other branches of the economy it was possible in most cases to fulfil and even overfulfil the plan, the actual development of agriculture always lagged behind to some extent, sometimes even considerably. The research workers should be given the task to investigate and to disclose the causes of the occurrence, the mistakes committed and the ways to avoid them in the future; to work out the highest attainable growth rate in agricultural production and the conditions to achieve it; to ascertain what rate of agricultural production should be aimed at in order to ensure the most favourable development of the economy as a whole, and what kind of plan should be drawn up to serve the realization of this development most effectively.

The even, fluctuating or cyclical character of economic growth constitutes a special problem of planning. It is only in recent years that greater attention has been paid to this aspect of the question. On the basis of general considerations it was, of course, known that even in the best case development can be only approximatively even. This follows, among others, from the strong effect of fluctuating weather conditions on agriculture and through that on the economy as a whole. It also follows, among others, from the variations in the rate of return on investments. Even if the accumulation and, particularly, the investment inputs rose evenly year by year, because of differences in the period of completion and the rate of return, capacities with a different output volume and value will enter the production process each year. We know that in Hungary economic progress has been far from even; it has shown great fluctuations ever since the introduction of a planned economy, throughout the period of laying the foundations of socialism and in the latter stage of efforts aimed at accomplishing the construction of a socialist economy. We also know that the situation is similar in the majority of the socialist countries. We were, however, generally inclined to consider this an abnormal situation, the result of the voluntarism that had dominated the economy at the earlier period and of the counter-revolution later on.

However, since it has been established that this uneven development is characteristic of all European socialist countries, the research workers should be set to the task to work out the origins of the major fluctuations in various fields of the economy or in general, and to clarify the question whether they were due to the mistakes or, rather, only to the mistakes made. If so, to what extent can these deficiencies be shown also in planning and to what extent were they the consequences which could not, or only partly, be accounted for in planning; what are the chances that development should be more even in the future and what implications has this for planning, etc. It goes without saying that in this field, too, historical, comparative, mathematical and speculative methods of research should equally be employed.

Some practical suggestions

Although at the beginning of this paper it has been emphasized that no attempt will be made — and cannot be made — at completeness, and that directions and groups of research rather than individual tasks will be outlined, the above considerations mark out an impressive volume of research tasks. Taken in their entirety, these research tasks exceed the possibilities now existing in Hungary. This makes it necessary that a competent forum, e.g. Committee for Economic Studies of the Hungarian Academy of Sciences should

1. sort out the tasks and select those on which investigations must start in the next years;

2. work out a project for the development of these research activities, their framework and designate the institutions that should realize them;

3. work out, in collaboration with other competent bodies, a plan to join planning research in other countries, especially how to utilize the possibilities offered by the Standing Economic Committee of CMEA (and, within its framework, by the conference of the directors of the economic institutes in CMEA countries), further, by the Centre Européen de Coordination en Sciences Sociales in Vienna, working under the auspices of UNESCO.

ЭКОНОМИЧЕСКИЕ НАУЧНЫЕ ИССЛЕДОВАНИЯ НА СЛУЖБЕ НАРОДНОХОЗЯЙСТВЕННОГО ПЛАНИРОВАНИЯ

И. ФРИШ

Автор в своей статье занимается, в первую очередь, природой, характером научных исследований, их тематической группировкой. В статье говорится о взаимосвязи между, принятием экономических решений и планированием, о необходимости научного обоснования принимаемых решений и проведения научных исследований, направляемых на разработку альтернативных вариантов по осуществлению основной концепции, а также критически анализирующих историю планирования и системы принятия экономических решений.

В связи с перспективным планированием развития народного хозяйства необходимо еще выяснить ряд методических вопросов. Особенно важный и пока еще не решенный полностью вопрос состоит в том, как достичь отсутствия противоречий в плане. Проблема в этом отношении заключается, в первую очередь, в том, что любой народнохозяйственный план как модель может представлять о действительности лишь весьма упрощенную картину. Важной областью методических исследований является в частности разработка критериев оптимальных решений.

Составление народнохозяйственного плана начинается с разработки его основных направлений. Охарактеризовав проблемы, возникающие при исследованиях, связанных с определением основных направлений плана, его основной концепции, автор детально рассматривает взаимоотношение между основной концепцией и планом, а также вопросы, связанные с научными исследованиями по планированию потребления, потребностей и доходов. В числе научно-исследовательских задач, связанных с планированием и касающихся проблематики развития производительных сил, особенно важное место занимают исследования по планированию рабочей силы и научно-технического развития. В заключение автор коротко излагает научно-исследовательские задачи, вытекающие из международных сношений, технического развития, обеспечения равномерности развития и т. д.

Ф. ЭРДЕИ

ТЕОРЕТИЧЕСКИЕ ВОПРОСЫ КООПЕРАТИВНОГО ДВИЖЕНИЯ

В своей дискуссионной статье автор рассматривает следующие вопросы: место и роль кооперативов при социализме; типы кооперативов; характер производственных кооперативов как организаций; демократия в кооперативах.

Кооперативы играют немаловажную роль при закладке основ социализма, а также при построенном социализме. Тем не менее оценка их во многих отношениях неопределена, а целый ряд связанных с ними принципиальных вопросов недостаточно ясен. Кроме того, в своей практической деятельности кооперативы встречаются с различного рода сдерживающими факторами. Говоря немного проще, положение кооперативов при соцализме можно характеризовать следующим образом:

Они являются признанным фактором социалистического общества, однако с момента социалистического преобразования сельского хозяйства и до наших дней они живут с ощущением своей определенной второстепенности и неясности своего положения в принципиальном смысле. В переходный период это и понятно, поскольку отсутствие необходимого опыта не позволяло в теоретическом плане со всей решительносью занять позицию в отношении сущности, места, роли, внутренних отношений и перспектив развития кооперативов. Это было невозможно несмотря на то, что В. И. Ленин заложил основы установок относительно кооперативов, которые совершенно недвусмысленны.

В настоящее время, однако, уже созрели условия для более решительного подхода к кооперативам. Сейчас уже имеется исторический опыт развития кооперативов при социализме и мы продвинулись вперед также в раскрытии закономерностей общественного и экономического развития. Все это дает основание для более точного и объективного познания кооперативов.

Решающий шаг сделала практика. Центральный Комитет Венгерской Социалистической Рабочей партии в своем решении о реформе системы хозяйственного управления в мае 1966 г. записал следующее относительно кооперативов:

«В нашем обществе кооперативы играют в равной мере важную роль в экономической, политической и общественной областях. Целесообразно и необходимо повысить роль кооперативов, еще более расширить сферу их деятельности. Основой деятельности кооперативов и отношением между

ними и государством служит признание и осуществление самоуправления кооперативов, а также их равноправия во взаимоотношениях с государственными предприятиями. Социалистическое государство поддерживает разностороннюю деятельность кооперативов и считает особо важным дальнейшее развитие трех крупных отраслей кооперации — сельскохозяйственных производственных кооперативов, сельской потребительской кооперации и промысловой кооперации. Оно расчитывает на то, что кооперативы будут развивать все более плодотворную деятельность и с еще большей пользой будут работать над расширением и качественным развитием сельскохозяйственного и промышленного производства, обслуживания торговли и снабжения» [1].

Это положение и ряд других принципиально-важных высказываний, а также уже осуществленные практические мероприятия позволяют нам занять более ясную и решительно-принципиальную позицию по всем важнейшим принципиальным вопросам кооперативного движения. Однако, у нас не должно быть иллюзий относительно того, что все теоретические вопросы кооперативного движения мы целиком и полностью решим за короткое время. Настало время лишь поставить их на повестку дня и постараться сформулировать и решить самые главные из них.

Кооперативы при социализме

Самые общие вопросы положения кооперативов при социализме следующие: характер кооперативной собственности, социалистический характер кооперативов и постепенное усиление его и, наконец, вопрос о том, какова роль кооперативов при социализме, переходная или нет.

1. *Социалистический характер кооперативной собственности* признан с самого начала и недвусмысленно, но с ограничениями двоякого рода. Первое заключается в том, что коллективная кооперативная собственность может иметь социалистический характер только при условии существования социалистического государства рабоче-крестьянской власти, второе же состоит в том, что даже и при этом условии, кооперативная собственность является низшей формой социалистической собственности. Это последнее ограничение нашло выражение и в том общераспространенном мнении, что по сравнению с общенародно-общественной собственностью кооперативная собственность является не *последовательно социалистической формой собственности*, а групповой, и земля, как важнейшее средство производства, не может быть кооперативной собственностью.

Это теоретическое положение было общепринятым, непреклонно осуществлялось на практике. Между прочим, оно проявлялось и в том, что находившаяся в пользовании кооперативов земля была собственностью либо

государства, либо отдельных членов кооперативов, либо просто собственностью частных лиц, но никак не могла быть кооперативной. Изменения принципального значения внес в это положение IX-ый съезд Венгерской Социалистической Рабочей партии, заявивший в своем решении о необходимости такого упорядочения земельной собственности, «в результате которого будет создана кооперативная собственность и таким образом осуществлено единство крупнопроизводственного землепользования и собственности на землю» [2]. Эта принципиальная установка нашла свое воплощение в законе № 4 1967 года о дальнейшем развитии земельной собственности и землепользования. В вводной части его говорится: «Создание единства земельной собственности и землепользования, постепенное установление кооперативной земельной собственности представляют собой важное предварительное условие для дальнейшего подъема социалистического сельского хозяйства, и особенно для укрепления экономической самостоятельности сельскохозяйственных производственных кооперативов. Это создает основу для упорядочения личной земельной собственности и личного землепользования, а также упорядочения собственности на закрытые огородные участки и земли, не поддающиеся машинной обработке, и пользования этими землями. Все это позволяет на основе единых принципов обеспечить соответствие между общественными и личными интересами.» [3]

Закон решительно отменяет ограничение на кооперативную собственность, которая не могла быть распространена на землю как на средство производства. Остается, однако, не ясным, меняет ли это принципальное решение подход к кооперативной собственности как к собственности низшего типа, собственности непоследовательно социалистического характера. Да, иначе и нельзя понимать отношение к земельной собственности. Это ясно и с теоретической точки зрения: если отменяется ограничение на землю как на важнейшее средство сельскохозяйственного производства, то принципиально кооперативную собственность вообще дальше нельзя рассматривать как собственность низшего типа, не последовательно социалистического характера. Этот вывод подтверждается как принципиальной установкой, так и рядом заявлений компетентных комментаторов нового закона (Я. Кадара, Л. Фехера и Р. Ньерша).

Таким образом теоретическая оценка характера кооперативной собственности предстает в новом свете: кооперативная собственность наряду с общенародной государственной собственностью представляет собой вторую форму социалистической собственности и не менее низкого уровня, равно как не менее последовательно-социалистического характера, хотя она, несомненно, имеет меньшую сферу распространения. В то же время остается неизменным положение о том, что кооперативная собственность только при условии существования социалистического государства и рабоче-крестьянской власти может считаться социалистической собственностью.

2. *Вопрос о социалистическом характере кооперативов и постепенности усиления его* частично совпадает с вопросом кооперативной собственности, а частично идет дальше его.

В теоретическом и в практическом плане бесспорно то, что кооперативы только при условии существования социалистического государства и социалистических общественных отношений могут считаться социалистическими институтами, в таких условиях как сельскохозяйственные и промышленные, так и прочие кооперативы являются общественными организациями, т. е. предприятиями социалистического характера. Однако, вопрос заключается в том, возможны ли принциниальные различия между отдельными типами кооперативов и как надо понимать постепенность усиления их социалистического характера.

Относительно различий в социалистическом характере кооперативов существует широко распространенное утверждение, что с этой точки зрения производственные кооперативы по сравнению с другими кооперативами являются организациями более высокого типа. Такое утверждение отнюдь не является бесспорным, вернее обоснованным.

Когда речь идет о производственных кооперативах, то следует иметь в виду, что они действительно являются социалистическими институтами, однако они существуют также и в условиях капитализма. Как форма кооператива они становятся социалистическими не только благодаря тому, что они производственные кооперативы, но также и тому, что они созданы и действуют в условиях социалистического общества. С этой точки зрения заслуживает внимания заявление А. Дьенеша, который сказал: «Следовательно, производственные кооперативы при капитализме не являются социалистическими экономическими укладами но мы не можем сказать, что они капиталистические, поскольку внутренние отношения в кооперативах во многом находятся в антагонистическом противоречии с общественной средой. Члены кооперативов воплощают в одном лице собственников и работников, и отношения между ними не являются капиталистическими отношениями. Производственные кооперативы — это не какие-то «переходные» уклады между капиталистическими и социалистическими организациями, это — половинчатые уклады, которые именно в силу своей половинчатости постоянно подвергаются опасностям со стороны капиталистического окружения, *вытесняются* им, и как показывает исторический опыт (Англии, Франции), они, если не проходят социалистических преобразований, «в конечном счете *уничтожаются*» [4].

Кооперативы иного типа (не производственные кооперативы) — как это легко понять — в условиях капиталистического общества не могут носить социалистического характера. Однако ни коим образом не может быть, как бы само собой разумеющимся, что в условиях социалистического общества социалистический характер этих кооперативов безусловно менее выражен, чем у

производственных кооперативов. Веские аргументы против этого приводит Р. Ньерш. Он говорит: «Форма собственности потребительских кооперативов — какими являются и наши потребительские кооперативы — это групповая собственность, более широкая, чем собственность производственных кооперативов. Она ближе стоит к общенародной собственности, потому что:

1. на территории деятельности того или иного кооператива занято большинство проживающего на ней взрослого населения, т. е. здесь почти все это население составляют собственники;

2. в кооперативах, носящих потребительский характер, даже если они действуют исключительно в провинции — всегда представлены различные слои населения, в то время как в производственных кооперативах представлены либо только крестьяне, либо только кустари.

3. в потребительских кооперативах 94 процента всей их собственности относится к неделимому фонду, т. е. по существу уже является общественной собственностью» [5].

Учитывая все это, следует более точно сформулировать и вопрос о постепенности усиления социалистического характера кооперативов. Трактуя ленинские указания о постепенности, иногда утверждают, будто они означают, что путем организации различного типа кооперативов мы достигнем такого положения, когда при социализме займут место только кооперативы «высшего типа». Правильно уточняет эти взгляды Золтан Гергё, когда он говорит: «Снабженческо-сбытовые кооперативы мелких товаропроизводителей-крестьян в своем развитии могут дойти до коллективных производственных кооперативов, однако снабженческо-сбытовые кооперативы, служащие целям товарообмена, т. е. потребительские кооперативы, никогда не смогут достигнуть такого уровня, т. к. по своему составу они и не пригодны для этого.» И далее: «Нельзя, значит, согласиться с такой точкой зрения, что от кооператива потребительского типа можно перейти к производственным кооперативам. Эти кооперативы и потому не могут перерасти в производственные кооперативы, что вся сеть их работников и весь состав их активных членов занимаются торговлей и подавляющее большинство их не является занимающимися производством крестьянами. Сущность постепенности усиления социалистического характера кооперативов заключается как раз в том, что все больше и больше фаз производства постепенно становятся общимь» [6].

В рамках производственных кооперативов, однако, мы несомненно можем говорить о постепенности усиления их социалистического характера, а именно в зависимости от того, какая часть хозяйственной деятельности их членов и в каком размере становится достоянием общего хозяйства и

«Если мы рассмотрим в целом нынешние производственные отношения наших производственных кооперативов и более простых объединений, то мы заметим многообразные изменения в соотношении производства индивидуальных приусадебных и крупных кооперативных хозяйств, а также в их

взаимоотношениях. В этом смысле мы можем составить целую шкалу постепенности, и здесь уже речь идет не столько о постепенности изменения различных форм кооперативов, сколько о постепенности достижения совместного кооперативного хозяйствования в правовых и общественных рамках производственных кооперативов или, как мы обычно выражаемся, в рамках производственно-кооперативного сектора» [7].

Следовательно и теоретически мы недвусмысленно можем сформулировать точку зрения по вопросу о характере и постепенности развития кооперативов следующим образом:

В условиях социалистического общества как сельскохозяйственные и промысловые производственные кооперативы, так и кооперативы иного типа (потребительские, сбытовые, сберегательные, жилищные и прочие) по своему характеру являются социалистическими, однако производственные кооперативы особенно могут считаться кооперативами социалистического типа. Среди них выдающуюся роль играют сельскохозяйственные производственные кооперативы, являющиеся господствующей формой организации этой отрасли народного хозяйства, и в процессе их создания исключительное значение имеет постепенность организации.

3. *Является ли роль кооперативов при социализме только переходной или она имеет длительную перспективу?* В этом вопросе суммируется основная оценка кооперативов. В ответах на этот вопрос теоретические позиции довольно разнообразны, однако ответ, данный практикой, является совсем одинаковым. На XX-ом и XXII-ом съездах КПСС, а также и на VIII-ом и IX-ом съездах Венгерской Социалистической Рабочей партии в различных формах было сказано, что кооперативы, а среди них особенно сельскохозяйственные производственные кооперативы, в обозримой перспективе являются необходимыми элементами строительства социализма и что общественно-экономические организации обладают еще такими богатыми ресурсами, которые необходимо использовать в интересах социалистического развития.

Центральный Комитет Венгерской Социалистической Рабочей партии по этому вопросу, в своих директивах о реформе системы хозяйственного управления занял в этом вопросе совершенно конкретную и решительную позицию: «В нашем обществе кооперативы играют важную роль как в хозяйственной, так и политической и общественной областях. Однако мы до сих пор не использовали в полной мере все скрытые в кооперативах возможности для согласования личных и групповых интересов с общими интересами всего общества, для того, чтобы поставить инициативу отдельных лиц, кооперативов и предприятий на службу интересам развития народного хозяйста. Вот почему целесообразно расширить роль и сферу деятельности кооперативов. Важно также лучше использовать в кооперативах возможности, заложенные в особенностях их формы собственности, в их самоуправлении» [8].

Следовательно, кооперативы в перспективе имеют свое место в строи-

тельстве социализма, причины и размеры которого точно определяет Р. Ньерш в интервью, опубликованном в журнале Таршадалми Семле:

«— Кооперативы, как *очень подвижная* форма социалистического хозяйствования с точки зрения общества полезны там, где *хозяйственная деятельность по своей природе децентрализована, там, где концентрация и централизация производительных сил незначительны.* Кооперативы, ведущие небольшого и среднего размера хозяйственную деятельность, имеют преимущества, состоящие в небольшом управленческом аппарате, более простой администрации, в возможности более быстрой перегруппировки в процессе деятельности и немедленной реакции на изменения рыночной конъюнктуры. В таких областях кооператив может стать наиболее рациональной или — выражаясь языком народа — самым дешевым экономическим образованием.

— В случае такой хозяйственной деятельности, когда *экономической целью является служение непосредственным интересам сравнительно небольшого коллектива*, наиболее целесообразно организовать и осуществить эту деятельность в виде *совместного предприятия заинтересованной* группы людей, то есть в форме кооператива. Такой экономической целью может быть, например, снабжение людей, группирующихся на какой-нибудь одной определенной территории, создание общими усилиями возможностей для трудовой деятельности. Кооператив, как объединение, потому имеет преимущества в этом отношении, что интересы своих членов он всегда может поставить на первое место, придать им решающее значение, а также потому, что в коллективном хозяйстве могут осуществиться служащие интересам его членов цели увеличения доходности и повышения производительности труда.

Там, где в хозяйственной деятельности живая рабочая сила играет *гораздо более значительную роль, чем машины* и машинная техника, там многие преимущества проистекают из того, что заинтересованные работники, из членов кооператива, сами выступают как коллективный предприниматель и берут на себя хозяйственный риск, сопряженный с такой деятельностью.

Если взять эти факторы вместе, то можно прийти к выводу, что естественными и преимущественными областями деятельности кооперативов являются главным образом сельское хосяйство, кустарный промысел, мелкая торговля, сфера обслуживания и сбыта сельскохозяйственной продукции» [9].

Эти факты и точки зрения дают основу для теоретического вывода о том, что кооперативы необходимы не только в период социалистических преобразований, но и при консолидированных отношениях социализма; они и в длительной перспективе будут незаменимыми институтами социализма во многих областях производства, торговли и обслуживания.

Типы кооперативов и их распространение

Разного рода кооперативы имеют столько общих черт, что мы можем говорить о кооперативах вообще, но в то же время между ними имеются такие существенные различия, что мы в принципе должны разграничивать определенные типы кооперативов. Только так мы можем точнее ответить и на вопрос о том, какое место занимают кооперативы в хозяйственном механизме социализма, или другими словами, на какие отрасли хозяйственной жизни они распространяют свою деятельность.

1. *По вопросу определения типов кооперативов* велись горячие споры как в социалистической, так и в буржуазной теории кооперативного движения.

В капиталистических странах сущность теории кооперативного движения сводится к тому, что кооперативы представляют собой ничто иное, как общие предприятия мелких собственников, и производственные кооперативы оно исключает из понятия кооперативов, по крайней мере производственные кооперативы социалистических стран. В рамках определенных таким образом границ устанавливаются различные группы кооперативов, но все они воспринимаются настолько однородными, что кооперативное предприятие выглядит каким-то придатком к хозяйственной деятельности его членов.

Социалистическая теория кооперативного движения в то же время во всех случаях относит сельскохозяйственные производственные кооперативы к разряду кооперативов. Учитывая это, мы и говорим о различных типах кооперативов.

Согласно наиболее распространенной точке зрения, мы должны различать три типа кооперативов. Такого мнения придерживается А. Дьенеш, который в уже цитированной нами работе исходит из того, что «в соответствии с тем, что кооперативное движение делится на три ветви, что точнее говоря, мы можем говорить о трех кооперативных движениях, мы в действительности встречаем три конкретных кооперативных института, *существенными чертами отличающиеся друг от друга*» [4]. Это — потребительские кооперативы, кооперативы единоличных товаропроизводителей и сельскохозяйственные производственные кооперативы.

С другой стороны, имеются веские аргументы о том, что мы должны различать два основных типа кооперативов: производственные кооперативы и прочие кооперативы (с общим названием торговые кооперативы) [10].

Видораздел между ними я вижу в критерии организации предприятий: организуют ли члены кооперативов кооперативное предприятие для дополнения своей деятельности, или же в рамках кооперативной организации они создают коллективное предприятие, где объединяют свою рабочую силу и свои средства производства. Из этого различия следует, что и производственные кооперативы (либо промысловые, сельскохозяйственные) безус-

ловно нужно считать кооперативами, однако становится очевидным также их существенное отличие от остальных кооперативов.

Действительное развитие политики в области кооперативного движения, равно как и формирование взглядов в отношении кооперативов, приведут, по-моему к выводу о том, что укрепляется и очищается кооперативный характер производственных кооперативов и в связи с этим становятся более ясными как их черты общие с другими кооперативными формами, так и их существенные различия, а это укрепляет ту точку зрения, что мы должны решительно различать два типа кооперативов: производственные и иные кооперативы.

Таким образом мы можем сформировать приемлемую теоретическую позицию, согласно которой возможно и необходимо определить единое и общепринятое понятие кооперативов, действие которого распространяется на все кооперативные формы буржуазного и социалистического кооперативного движения. В рамках этого понятия мы должны различать два основных типа кооперативов: производственные и остальные кооперативы (независимо от того, приемлемо ли или нет предложенное мною общее название последних «торговые кооперативы»). Эти два типа кооперативов отличаются друг от друга и тем, что производственные кооперативы могут производить только в условиях социалистического общества, другие же кооперативные формы могут широко действовать при обеих общественных системах (их характер, однако, видоизменяется в зависимости от того, в какой экономическо-общественной среде они существуют).

2. *Какое место занимают в нашем социалистическом народном хозяйстве кооперативы вообще и наиболее главные их типы в отдельности?* Ответ, который можем дать на этот вопрос, проливает свет не только на то, какие действительно области охватывают у нас кооперативы, но и на то, в каких областях и какие типы кооперативов укоренились в социалистическом хозяйственном механизме.

Мы располагаем такими статистическими данными за 1961—1965 годы, которые в цифрах показывают распространение кооперативного сектора в нашем социалистическом народном хозяйстве. По этим данным примерно треть (33,7 процента) населения, живущего на собственные заработки, работает в кооперативном секторе, а доход кооперативов составляет 22,2 процента национального дохода, то есть примерно пятую часть его. Если же взять число всех действующих социалистических производственных организаций, независимо от их размера, то приблизительно три четверти их (74,3 процента) составляют кооперативы. Эта последняя цифра интересна потому, что она показывает, какую большую часть всех действующих и принимающих самостоятельные по хозяйственным вопросам решения организаций составляют кооперативы.

Если же мы посмотрим эти соотношения по отдельным отраслям народ-

ного хозяйства, то картина предстанет в следующем виде: из всего живущего на заработки населения в соответсвующей отрасли к кооперативам относится в сельском хозяйстве 74,7 процента, в торговле — 26,1 процента, в промышленности — 9,6 процента, в строительной промышленности — 11,5 процента, а в различных сферах обслуживания — 8,3 процента. А в создании национального дохода участие кооперативов распределяется так: сельское хозяйство — 63,7 процента, торговля — 41,0 процент, промышленность — 6,2 процента, строительная промышленность — 8,6 процента.

Эти данные показывают, что кооперативы занимают поразительно большое место в нашем народном хозяйстве, и такое же положение по существу в других социалистических странах. Эти данные показывают также, что главные области кооперативной деятельности: сельское хозяйство, торговля и строительная промышленность. Надо, однако, поставить вопрос и таким образом, в какой отрасли народного хозяйтсва, как определялась и какова в действительности роль государственного и кооперативного секторов?

Прямо и решительно этот вопрос был поставлен на повестку дня в сельском хозяйстве и здесь был дан недвусмысленный ответ на него: главная форма—кооперативная. Эта позиция обосновывалась тем, что производственные силы в данной отрасли народного хозяйства были наиболее разрозненными и что здесь в техническом развитии было самое большое отсавание. В родственной сельскому хозяйству отрасли — лесном хозяйстве — однако уже бесспорно господствующим стало государственное хозяйствование. Но и в сельском хозяйстве положение не везде одинаково. Об этом свидетельствуют хотя бы следующие некоторые данные: в Советском Союзе в настоящее время совхозам принадлежит гораздо больше земель, чем колхозам; в овощеводстве в СССР совхозы играют решающую роль, у нас же эта область в основном является областью деятельности кооперативов.

Другая отрасль народного хозяйства, где также более или менее решительно была поставлена альтернатива государственной или кооперативной организации — это торговля. А именно таким образом внешняя торговля и торговля средствами производства были целиком отнесены к государственному сектору, а торговля потребительскими товарами распределена между государственным и кооперативным секторам. Но и здесь можно найти интересные различия. Торговля овощами у нас попеременно была государственной, затем кооперативной, а, например, в Болгарии она и теперь принадлежит государству.

В промышленности кооперативный сектор с самого начала играл подчиненную или подсобную роль, примечательно, однако, то, что его удельный вес не имеет тенденции к снижению.

После такого развития Центральный Комитет Венгерской Социалистической Рабочей партии высказался за необходимость расширения кооперативного сектора, точнее, заявил о том, что социалистическое государство

«расчитывает на то, что кооперативы будут все более плодотворно и с еще большей пользой работать над расширением и качественным развитием сельскохозяйственного и промышленного производства, обслуживания, торговли и снабжения» [1].

С учетом всего этого, мы в принципе так можем определить роль и место кооперативов в социалистическом народном хозяйстве в отдельных областях народного хозяйства: кооперативный сектор вообще является дополнением к господствующему государственному сектору, однако, роль его не малозначительная. В других же областях — главным образом в сельском хозяйстве — они (кооперативы) представляют главную форму хозяйственной деятельности, а в области торговли и обслуживания в зависимости от сферы деятельности, роль распределяется между государственным и кооперативным секторам.

Характер организации производственных кооперативов

Кооперативный характер производственных кооперативов оспаривается только весьма субъективными буржуазными теоретиками. Но для нас тоже является проблемой: какое место занимают они в системе общественных и хозяйственных организаций, каков их характер, как общественных организаций. Это вполне понятно, поскольку речь идет о новом институте, не имеющем своих истинных предшественников в буржуазном кооперативном движении и перед нами только теперь раскрывается природа этого института. Но уже имеется исторический опыт образования и развития производственных кооперативов, и стало быть уже теперь мы можем попытаться сделать некоторые теоретические выводы об организационном характере производственных кооперативов.

Двойственную природу производственных кооперативов мы можем установить во всяком случае. Правда, подобным образом двойственную природу имеют и другие типы кооперативов, но существенное различие их заключается в том, что у последних двойственный характер организационно разграничивается: кооператив является обществом, объединением частных лиц. Это, означает то, что члены их вносят определенный материальный вклад, участвуют в голосовании на общих собраниях, но в то же время это кооперативное товарищество содержит предприятие, ведущее торговлю, обслуживание и другую хозяйственную деятельность, которую по мере необходимости осуществляют работники, по договору большей частью своей не являющиеся членами кооперативов, но состоящие членами соответствующего профессионального союза. В производственных кооперативах такого разделения нет: те же люди голосуют на общем собрании, которые по праву членства работают в коллективном хозяйстве производственного кооператива. Таким образом

сказывается положение, когда одна и та же кооперативная организация, с одной стороны, является общественной организацией, а с другой — выступает как предприятие.

Однако, в ходе исторического развития эти две стороны производственных кооперативов, не в одинаковой мере выходили на передний план. В период преобразования сельского хозяйства ударение делалось на их общественный, массовоорганизационный характер, а само преобразование, собственно говоря, было общественно-политическим движением, направленным на организацию кооперативных обществ. В этот период в движении производственных кооперативов организационные элементы их деятельности как предприятия, то есть проблемы производственных кооперативов как хозяйственных организаций неизбежно отошли на задний план.

Развитие этого двойственного характера производственных кооперативов, сознательное определение их такого характера влекут за собой важные последствия в обоих направлениях. Признание и развитие их кооперативного характера приближает их к остальным кооперативам и тем самым к традициям кооперативного движения, имеющего большое прошлое, признание же за ними характера предприятий и развитие хозяйственной деятельности по образцу предприятий переводит их в сферу современных крупных предприятий, где должны применяться современные принципы рационального ведения хозяйства.

1. *Производственный кооператив как общественная организация*, несомненно, относится к категории кооперативов и если смотреть на них с этой стороны, то между ними и другими кооперативами существенных различий нет. (Существенная разница заключается во внутренней связи кооператива как общественной организации и кооператива как предприятия и в том, что он имеет характер кооперативного предприятия.)

Ленин всегда принципиального говорил о кооперативах, и эту форму объединения производственных кооперативов всегда связывал с традиционными кооперативными формами буржуазного кооперативного движения. Позднее, однако, (в период организации колхозов) в качестве общественных организаций, отличаясь по своему характеру от всех других, выступили колхозы. В этот период возникла такая специфическая система понятий в отношении коллективных хозяйств, в которой не было места таким основным экономическим категориям как трудовые отношения, заработная плата, прибыль. В очень измененной форме были внедрены в производственные кооперативы также такие основные понятия классического кооперативного движения, как общее собрание, дирекция, контрольная комиссия, председатель кооператива, пай, вступительные взносы, дивиденды, возврат взноса и т.д., не намного отличается круг понятий производственных кооперативов и от понятий общественных организаций, не носящих экономического характера. Из всех них отдельные элементы перешли в движение производственных кооперати-

вов и кроме того, в производственных кооперативах выработались собственные, отличающиеся от всех других элементов. Это — руководство, трудодень, участие в прибылях, бригада, звено, приусадебное хозяйство и т. д.

В ходе дальнейшего развития, однако, эти своеобразные, отличающиеся от всех других «колхозные черты» постепенно сужались, а одновременно с этим в производственных кооперативах внедрялись категории кооперативов и предприятий. Несомненно, однако, что производственные кооперативы и как общественные организации представляют собой особый тип кооперативов.

В процессе развития стало очевидным, что сущность коллективного хозяйства — это кооперативное объединение, и что в производственных кооперативах можно применить значительную часть кооперативных принципов традиционного кооперативного движения. Речь идет главным образом о принципах, относящихся к членству, правам и обязанностям членов, а также о принципах, касающихся кооперативного имущества и органов кооператива; равным образом это касается кооперативной демократии и самоуправления, а также и формам ответственности. На практике все это уже довольно безусловно принято и нашло воплощение в нашем новом законе в производственных кооперативах. Задача людей науки заключается в том, чтобы уточнить вопрос о кооперативном характере производственных кооперативов и об их отношении к остальным типам кооперативов.

Основной принципиальный вопрос, требующий еще длительного обсуждения, состоит в том, *определяет ли само по себе членство кооператива трудовые отношения их членов в общем кооперативном хозяйстве или же участие в совместной работе требует установления особых трудовых отношений?*

Небезынтересно, что в начальный период советские учебники по трудовому праву говорили еще о трудовых отношениях также и в колхозах, отношениях, которые основывались на членстве, но не полностью с ним совпадают. Позже, однако, это понятие было вытеснуто как из теории, так и из практики. Стало обязательным положение, что в производственных кооперативах нельзя говорить отдельно о трудовых отношениях и, что как с точки зрения кооперативной общественной организации членов, так и с точки зрения работы, выполненной ими в коллективном хозяйстве, за основу надо брать вытекающие из членства отношения.

В последние годы практика сильно угрожает этому положению, под влиянием чего и в науке шли дискуссии о возможности его сохранения. У нас Ласло Надь в своей большой книге [11] о социалистических кооперативных принципах, и в небольшой книге о трудовых соглашениях с членами производственных кооперативов [12] пришел к достойному внимания заключению. Он в сущности занимает ту позицию, что в производственных кооперативах наряду с отношениями, основывающимися на членстве, безусловно надо признать *право на существование и за трудовыми отношениями* и что уже вошедшие в

практику трудовые соглашения между руководством коллективного хозяйства и его членами являются выразителями и регуляторами этих трудовых отношений. Эта позиция бесспорно обоснована, хотя многие еще оспаривают ее. К этому можно добавить, что растущее в производственных кооперативах число работников привлекается со стороны, а в особенности тот факт, что члены производственных кооперативов на основе отношений членства часто меняют свою работу, на работу, привлекаются со стороны, то есть на работу, осуществленную на основе трудовых отношений, то станет также ясно, что в производственных кооперативах наряду с отношениями членства безусловно надо, как и на предприятиях, принять трудовые отношения.

Что касается производственных кооперативов как общественных организаций членства в них, то более или менее бесспорно можно сформулировать следующее теоретическое положение: производственный кооператив как общественная организация относится не к числу массовых общественных организаций, но и как таковой является кооперативом, с этой точки зрения его, как и других типов кооператива, надо считать кооперативным объединением и сообществом индивидуумов, однако, в производственных кооперативах одного членства недостаточно для регулирования работы, выполняемой в общем кооперативном хозяйстве. Для этого необходимо признать и трудовые отношения членов кооператива.

2. *Характер производственных кооперативов как предприятий* в ходе развития также постепенно прояснился. Правда, в Советском Союзе на VI-ом съезде Советов в 1931 году сущность колхозов была определена еще следующим образом: «Они являются предприятиями, созданными крестьянами, которые добровольно социализировали собственные средства производства, руководимыми ими самими.» Позже, однако, их характер как предприятий потускнел, и прошли десятилетия, пока эта их сторона не вышла на передний план.

Производственные кооперативы, во всяком случае, занимают особое место среди предприятий, точнее, социалистических предприятий. Главной характерной чертой хозяйства производственных кооперативов является кооперативная собственность на средства производства, т. е. хозяйство производственных кооперативов не является ни государственным, ни частным предприятием, а представляет собой кооперативное предприятие. А как предприятие кооперативное, оно обладает совершенно специфическими особенностями, которые обусловлены отношениями собственности, на которые решающим образом воздействовало историческое развитие всего сельского хозяйства, его производственный и технический уровень, ограниченность материальных средств и все вытекающие отсюда последствия.

Своеобразие кооперативной собственности в производственных кооперативах заключается в том, что члены их являются одновременно собственниками и работниками своего хозяйства. Вытекающие из этого следствия

директивы о реформе системы хозяйственного управления определяют следующим образом:

— *как собственники, они сами решают* вопросы производства и хозяйствования, сами определяют методы распределения доходов и сами избирают своих руководителей;

— как работникам, членам кооперативов, должна быть обеспечена возможность для постоянной работы в кооперативе, а за свою работу — как и остальные трудящиеся – они должны получать *регулярное вознаграждение и социальное обеспечение.*

При таких сложных отношениях между коллективным хозяйством кооператива и его членами правильно организовать предприятие и труд помогает практика. Остается, однако, открытым один принципиальный вопрос, все более остро дающий о себе знать, а именно, вопрос о том, как при отсутствии *профессиональных союзов обеспечить защиту интересов членов производственных кооперативов как работников и как решить связанные с этим задачи охраны труда.* «Профессиональный союз членов производственных кооперативов», повидимому, в принципе невозможен, ведь они являются также и собственниками и их представители входят в руководящие органы производственного кооператива. Но они все-таки трудящиеся, которые перед лицом руководителей местного предприятия, выступающих в качестве «работодателей», оказываются в положении «нанимающихся на работу».

Существуют две точки опоры для решения этого вопроса: первая заключается в том, что члены производственных кооперативов не могут образовать профессионального союза, вторая же сводится к тому, что для решения действительно возникающих дел трудящихся — нанимающихся на работу — необходим какой-то орган.

Из действительной природы производственного кооператива вытекает, что мы должны искать его в рамках самого кооператива. Общее собрание, несомненно, выполняет роль и такого органа, но оно все же не способно стать и «профессиональным союзом» членов кооператива. Правление, именуемое во многих местах дирекцией, тоже не может выполнять такой роли, поскольку оно является, в первую очередь, органом управления предприятием и, когда заключает трудовое соглашение, находится на стороне «работодателя» против «нанимающегося» члена кооператива. Ревизионная комиссия в этом отношении может играть некоторую роль, но поскольку она является органом неоперативным, не может полностью представлять интересы трудящихся, в данном случае членов кооперативов.

Следовательно, не может быть иного решения, чем создание в организационных рамках производственных кооперативов такого специального органа, который избирали бы сами члены кооператива как трудящиеся и который в качестве представительства интересов трудящихся, т. е. органа по делам труда, стал бы партнером руководства предприятия — его правления.

Это может быть своего рода комиссия по труду, к мнению которой прислушиваются также, как прислушиваются к мнению профсоюзных комитетов директоров государственных предприятий и в определенных случаях достигают договоренности с ней. Естественно, нельзя сказать, что из-за отсутствия такой комиссии в настоящее время нет согласования интересов. Есть, но поскольку оно организуется не на двусторонней основе и столкновение интересов и их согласование происходит внутри тех же кооперативных органов, очень легко можно нанести ущерб двустороннему взвешиванию обстоятельств.

Кооперативная демократия

В кооперативном движении выработались организационные принципы, в одинаковой мере признанные как в буржуазных, так и в социалистических странах: это принцип *самостоятельности* кооперативов как коллективных предприятий и одновременно как общественных организаций, принцип *самоуправления* кооперативов, а также принцип *коллективного руководства* как отдельными кооперативами, так и более высокого уровня кооперативными объединениями. Все это вместе означает *кооперативную демократию*, основанную на кооперативной собственности. Поэтому при капитализме кооперативы являются организациями, отличающимися от общих буржуазных отношений, а при социализме в силу таких своих черт их последовательно можно вместить в систему социализма.

История показывает, что было отнюдь не просто внедрить кооперативы в систему социалистического планового хозяйства и осуществить вместе с этим в принципе признанные демократические принципы кооперативов, несмотря на то, что в этом отношении никогда не оспаривались теоретические положения и практические действия В. И. Ленина. В настоящее время объяснение этому уже очевидно: кооперативы и их объединения должны были врасти в польностью централизованную и основанную на плановых директивах систему планового хозяйства, что же касается сельскохозяйственных производственных кооперативов, то особые политические и экономические условия мешали также принципиальному признанию их кооперативного самоуправления.

Реформа системы хозяйственного управления и осуществление в ее рамках принципа самостоятельности предприятий создали такие условия, которые дают действительную возможность осуществить и принципы кооперативной демократии. Именно в связи с их реализацией возникают два принципиальных вопроса развития кооперативной демократии: вопрос о демократическом централизме и вопрос о правильном понимании принципа колективного руководства в социалистическом кооперативном движении.

1. *Принцип демократического централизма* является общим общест-

венно-политическим организационным принципом социализма, развившимся в практике рабочего движения, и первоначальной областью осуществления его была коммунистическая партия ленинского типа. Применение, т. е. действие этого принципа, однако, распространяется также и на социалистическое государство и на систему общественных организаций. Все это говорит за то, что он стал общим организационным принципом.

Однако в хозяйственном механизме имеются и другие принципы организации: в нем воплощаются два вида организующих сил: с одной стороны, экономические законы, влияние которых чувствуется в рыночном обращении, а с другой — государственные правовые нормы, которые вместе с экономическими регуляторами и нормативами воздействуют на практическое осуществление экономических законов. Очевидно, что в этой хозяйственной сфере нет области для внедрения принципа демократического централизма: здесь господствуют экономические и государственные законы.

Хозяйственная жизнь, однако, имеет свою организационную структуру: в рамках правовых норм создаются и действуют хозяйственные единицы, которые в нашей социалистической общественной системе имеют три вида: государственные предприятия, кооперативные предприятия и мелкие частные товаропроизводители. Эти хозяйственные единицы могут и дальше укрупняться, создавать тресты, общества, кооперативные объединения. *Разве в организации этих хозяйственных обьединений не осуществляется принцип демократического централизма?* Нет, ни в государственном секторе, ни в секторе мелкого товарного производства. Он может осуществлятся только в кооперативном секторе, где и в хозяйственном отношении может ставиться вопрос о применении принципа демократического централизма во взаимоотношениях кооперативов и их высших объединений. Решения по хозяйственным вопросам, однако, на всех уровнях принимаются ответственными руководящими органами, значит, решения высших инстанций по этим вопросам не могут быть обязательными для низших инстанций. При новой системе хозяйственного управления мы все больше и больше приходим к выводу, что в отношении хозяйствования принцип демократического централизма не имеет силы даже во взаимоотношениях кооперативов и их центральных органов.

Это отнюдь не лишает союзов кооперативов возможности регулировать хозяйственную деятельность своих членов—кооперативов и влиять на нее, но, они не должны осуществлять это в форме подмены кооперативов в решении хозяйственных вопросов. Последние должны решаться только на основе постановлений органов коллективного руководства и получения от них полномочий или в соответствии с уставом, то есть в форме поручения в каждом отдельном случае. Точно также на таких основах строится представительство кооперативов — членов этих союзов, значит, кооператив, в конце концов, опирается на свои собственные решения.

Кооперативы, однако, — это не только предприятия, но и массовые общественные организации, значит и на их деятельность в качестве таковых распространяются общие организационные принципы такой деятельности, следовательно, и принципы демократического централизма. Мы должны это признать, но не в той же форме, как в отношении массовых политических организаций. Кооперативы — это организации с экономической направленностью и таким образом их политическо-общественная деятельность сосредотачивается в решающей степени на осуществлении хозяйственных целей. В соответствии с этим сужается и круг тех вопросов кооперативной политики и кооперативного движения, по которым союзы кооперативов могут принимать обязательные для своих членов решения.

Значит, по вопросу демократического централизма можно принять ту принципиальную точку зрения, что он является типичным организационным принципом общественно-политического характера и как таковой, общим принципом, входящим в систему идей социализма. Экономическая же жизнь подчиняется дургим организационным принципам; в таком смысле в отношении кооперативов и их центров принцип демократического централизма можно считать действительным только в деятельности их как общественных организаций и движений.

2. *Коллективное руководство* — это основной элемент кооперативной демократии и в такой форме также представляет собой организационный принцип, источником и областью наиболее полного осуществления которого является марксистская рабочая партия. В буржуазном кооперативном движении демократическое управление — это одно из семи рочдейльских принципов, включающих в себя и элементы коллективного руководства. Можно считать принципиальным вопрос о том, можем ли мы в социалистическом кооперативном движении довольствоваться общим требованием демократического кооперативного управления или же принципы коллективного руководства мы должны необходимо применять и в кооперативах.

Закон о производственных кооперативах следующим образом определяет ответственность председателя как руководителя кооператива: «он лично отвечает за руководство хозяйственной деятельностью и управление делами кооператива в соответствии с правовыми нормами, уставом кооператива и решениями правления общего собрания. В то же время правление «с полной ответственностью, самостоятельно организует и направляет деятельность и хозяйствование производственного кооператива.» «Высшим коллективным органом» является общее собрание. Из этих определений ясно вытекает, что производственными кооперативами управляют их руководящие органы и личная ответственность председателя в этих органах ограничена. В то же время в оперативном руководстве хозяйством кооператива его ведущие специалисты несут уже ответственность. Подобно этому по существу ведется коллективное руководство и в промысловой кооперации.

Руководящие органы потребительских и снабженческо-сбытовых кооперативов такие же — здесь последовательно пользуются термином «дирекция» — но разница заключается в том, что в таких кооперативах работают облеченные полнотой власти и ответственности управляющие, являющиеся, как правило, одновременно и председателем дирекции.

Учитывая это, на поставленный выше принципиальный вопрос мы можем ответить так: Непременным условием демократического управления кооперативами является существование и деятельность ответственных руководящих органов; этим условием служит также и выборность председателя, управляющего деятельностью руководящих органов кооператива: нельзя, однако, считать обязательным наличие директора, управляющего или руководящего специалиста, несущих личную ответственность, хотя в принципе нельзя исключить такую функцию руководящего работника из системы управления производственных кооперативов.

Я перечислил предельно точно все принципиальные вопросы кооперативов, требующих при наших социалистических достижениях теоретического разъяснения. Но мне хотелось бы сделать три ограничивающих оговорки к постановке вопроса и разработанной теоретической позиции.

Во-первых, намеченная мною проблематика кооперативного движения не включает в себя тех более широких политических и идеологических вопросов кооперативов, касающихся классового содержания и общих идеологических соотношений отдельных кооперативных категорий. Поэтому я не входил в полемику и по идеологическим вопросам. Моим единственным стремлением было поставить самые специфические теоретические проблемы кооперативного движения, причем в форме, легче всего обозреваемой, в изложении, исключающем кривотолки.

Во-вторых, круг поставленных вопросов не включает в себя проблемы более высоких соединений кооперативов — их союзов и центров. Это диктуется практическими соображениями: о них теперь идет специальная дискуссия, в результате которой эти вопросы мы сможем поставить более обоснованно.

Наконец, я хочу особо подчеркнуть, что мою позицию по разбираемым теоретическим вопросам нужно считать моей личной попыткой решить эти вопросы, хотя я старался всячески избегать субъективной односторонности. Это означает также и то, что прежде всего я сам считаю, что моя позиция по всем поставленным вопросам нуждается в обсуждении, в ходе которого некоторые из них могут быть отвергнуты. Но вместе с тем следует добавить, что личные мои взгляды вполне обоснованы в том отношении, что в них суммируется опыт исследовательской работы четырех десятилетий, практический опыт и итог многих дискуссий по этому вопросу.

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THEORETICAL QUESTIONS REGARDING COOPERATIVES

F. Erdei

The author's starting point is that although the cooperatives have been recognized from the beginning as factors of the socialist society, they have been weighed down with a certain second class rating, and a number of theoretical ambiguities from the socialist reorganization up to the most recent times. Now, however, the time is ripe for a more definite judgement of the cooperatives.

The most general questions regarding the role of the cooperatives in socialism are: the character of cooperative ownership, the socialist character of the cooperatives and its graduality and, finally, whether or not the role of the cooperatives is a temporary one.

The theoretical evaluation of the character of cooperative property is shown in a new light. Cooperative ownership as a form of socialist ownership, though different from state ownership, which is the property of all, is by no means a lower type. It is no less consequently socialist in character, though it is obviously a narrower form of ownership. At the same time, the thesis, that cooperative ownership qualifies as socialist ownership only under the conditions of a socialist state and worker-peasant rule, remains valid.

Under the conditions of a socialist society, agricultural and industrial producers' cooperatives and the other types of cooperatives (consumers' selling, savings, housing etc. cooperatives) are all institutions of a socialist character. The producers' cooperatives should be considered particularly socialist in character. Among these the agricultural producers' cooperatives have an outstanding role as the dominant organizational form of this branch of the national economy, and in the process of their establishment, the graduality of organization has a particularly important role.

Not only have the cooperatives an indispensible role in socialist reorganization but, under consolidated socialist relations, they are indispensable institutions in many fields of production, commerce and the services in long-range perspectives, too.

A unified and general conception of the cooperative, which holds for all forms of the bourgeois and socialist cooperative movement is both possible and necessary. Within this conception two basic types of cooperatives would be recognized, producers' cooperatives, and other cooperatives. These two types of cooperatives differ from one another in that the producers' cooperatives can truly develop only under the conditions of a socialist form of society, while the other cooperative forms can operate extensively under both social systems (though their character varies depending on the socio-economic surrounding they are in).

In a socialist economy the cooperative sector is generally complementary to the dominant state sector in certain branches of the national economy, though its role should not be underestimated. However, in some cases, particularly in agriculture, it is the chief form of management, while in the fields of commerce and the services, the role of the state and cooperative sectors are divided, according to the sphere of operations.

The producers' cooperative has a dual character. On one side it is a social organization, and on the other an enterprise. As a social organization it undoubtedly belongs in the category of cooperatives, and from this point of view there is no substantial difference between it and other cooperatives. The real difference is in the relation between the cooperative as a social organization and as an enterprise, and in the cooperative's enterprise character.

The producers' cooperative cannot be included among the social mass organizations, but similarly to the other cooperatives it must be considered a private association. However, in the producers' cooperatives the relation of cooperative membership is not sufficient to regulate the work of a joint cooperative economy. For this, the recognition of the members' employment relation is also necessary.

The theoretical problem involved by all this is: how can the ownership and worker nature of the cooperative members be reconciled in a way to the organized consistency and harmony between the interests of the independent cooperative enterprise management and those of the member-workers?

Democratic centralism, as a socio-political theory of organization can be accepted as valid only in the social movement activities of the cooperatives and their headquarters.

Collective management of the cooperatives is a basic principle, and the existence and operation of responsible leading bodies is an essential requirement for the democratic management of the cooperatives. Another condition is an elected chairman who directs the activities of the leading bodies. However, the requirement of a director, manager or specialist manager with personal responsibility is not a general one though, theoretically, a managing function of this sort cannot be excluded from the management of the producers' cooperatives.

A. Csernok

HUNGARY'S NATIONAL INCOME ESTABLISHED ON THE BASIS OF THE SYSTEM OF NATIONAL ACCOUNTS

The paper intends to offer a reliable basis for the comparison of the Hungarian national income data with those of the non-socialist countries. To this end it tries to settle a twofold problem: it calculates the Hungarian national income data in conformity with the System of National Accounts, then it converts the data thus obtained into dollars by means of foreign exchange rates approximating the actual purchasing power parity.

As a result of the calculations the paper reviews the 1959—1965 data (in dollars) of per capita national income and per capita gross national product.

It is with some justification that the ranking of countries by economic development level has always held a distinguished place among economic research problems. The extension of economic relations between countries with different economic systems and peaceful economic competition did, if possible, only enhance the interest in each other's economic achievements. Neither can an exchange and utilization of experiences between countries with different economic development levels dispense with an international comparison of economic processes. All this is gaining even greater importance in our days, in the era of economic integrations when, in addition to comparison between individual countries, also the economic comparisons between various economic communities and groups of countries — such as CMEA, EEC and EFTA — may claim particular attention.

Economic development of the countries is best characterized by the level of their national income and thus it is only understandable that in the last decade the works aiming at an international comparison of national income came to the foreground. From among these the best known are the calculations carried out by Gilbert and Associates for eight Western European countries and the United States as well as the detailed computations covering seven CMEA countries [1], [2].

Experience shows that a detailed re-pricing of national incomes — being both circumstancial and costly — is undertaken in practice only rarely. Therefore, also the methods and solutions deserve attention which propose simpler ways for international comparisons.*

* In Hungary, F. Jánossy worked out a method for the international comparison of national income which is simpler than that based on re-pricing. His method and the results of the calculations were published in [3]. — A study by É. Ehrlich [4] gives an account of calculations performed with the same method for 1960.

No calculation has been made as yet to compare the national income of Hungary with that of non-socialist countries on the basis of detailed re-pricing computations. It is obvious, on the other hand, that we cannot renounce comparing the level of our national income also with that of non-socialist countries. If we wished to perform this comparison by relying on full-scope national income calculations but neglecting, for obvious reasons, the re-pricing by items, this will become possible only by converting the data expressed in terms of national currency at some rate of exchange to common terms.

In order to compare Hungarian national income with that of non-socialist countries, a duoble task must be solved. On the one hand, the *conceptual and methodological* comparability of different national incomes must be ensured and on the other, a *rate of exchange* must be computed which corresponds to the actual purchasing power parity between dollar and forint.

1. Conceptual and methodological comparability of different national incomes

With a few exceptions the non-socialist countries calculate their national income according to the System of National Accounts. This system differs in some essential points from the Material Product System used in the socialist countries. (See. [5].)

The main differences are well known; they derive from the differing definition of services. The SNA considers all socially organized activities as productive ones and includes them in national income, while in socialist countries the production of material goods and the services of material character are considered as productive and their net value is taken into account in national income. The numerical difference arising from the above deviation in the interpretation of services presents itself as the balance of two factors. On the one hand, owing to the exclusion of services, our national income is lower by the net value of services than the national income concept based on SNA. On the other hand, the national income of the socialist countries — and thus also that of Hungary — is *higher* than the corresponding SNA concept by the total amount of the services used by the branches of material production since the SNA handles the services used as material costs and deduces them together with the other passive items. In this country, according to the material concept, the use of services must be paid for by the productive sectors out of the new value, out of national income.

The effects of the above double deviation can best be illustrated on hand of a simplified input–output table which covers the flows between the sectors and the economic functions of the economy.*

* This table has been compiled by F. Seton (Nuffield College, Oxford) who had been commissioned by the UN to work out the differences between the various systems of national accounts. The results are contained in [6].

Origin \ Destination	Production of material goods	Services	Consumption	Net accumulation	Difference of exports and imports	Total
	A	S	J	F	K	
A. Branches of material production						
. Services						
J. Incomes						
Total						

Two pairs of lines may be seen in the table. The part delimited by the broken line (- - -) is the national income as interpreted in the socialist countries, applying the principles of the Material Product System. A/A* is the so-called inner matrix, the material cost of production. The part A/SJFK is the material composition of national income by consumption and investment goods, complemented by the export or import surplus. A/S is the material consumption of services which, in the material concept, is part of the utilization of national income. A/J is personal consumption and A/F is the net increase in fixed capital and inventories. The national income of socialist countries, as a sum of incomes, is composed as follows: The total of national income is SJ/A, where J/A is the combined sum of personal incomes and net social income and S/A is the value of services utilized by the branches of material production which must be paid for out of national income, in accordance with the MPS concept.

According to the interpretation used in the non-socialist countries, national income is the part delimited by the dotted line (. . . .). The part AS/AS is the material cost of production while AS/JFK is the national income. By the income approach, national income is the part J/AS. The difference between the two concepts should now be obvious.

A) National income as the sum total of consumption, net accumulation and the external balance:

a) according to the MPS concept: A/SJFK

b) according to the SNA concept: AS/JFK

Thus, according to the material concept (MPS), national income is *higher* by A/S, the material cost of the services and *lower* by S/JFK than national income as interpreted in the SNA concept (practically only by S/JK, since we cannot speak of an accumulation as a result of services).

B) National income under the income aspect:

* In these "fractions", the letter(s) in the numerator indicate the row(s) in question and those in the denominator the column(s).

a) according to the MPS: SJ/A

b) according to the SNA: J/AS

Thus, national income according to the MPS is *higher* by S/A (the value of services used by the productive branches) and *lower* by J/S (the incomes generated in the servicing branches) than national income as interpreted according to the SNA concept.

However, by accounting for the contentual differences outlined above* we still do not arrive at the national income of the SNA concept since, in addition to the differences *in contents*, there is a further one in respect of *valuation*, the price level applied in the two different systems. In the MPS concept of the socialist countries production and, therefore, also national income is valued at market prices inclusive of the indirect taxes. The SNA national income concept has valued up to now production at factor cost — that is, inclusive of subsidies but net of indirect taxes — thus, it has been lower (by the difference between indirect taxes and subsidies) than the corresponding notion of the MPS concept.

It is somewhat more difficult to trace the latter difference than the former one. A suitable rearrangement of the data in the statistical sense could be easily performed but — as regards their economic content — the data obtained would be incomparable. The case in point is that the sum of indirect (turnover and consumption) taxes, their proportion to production, bears no relation whatever to the economic development level of a country. This ratio is to a great extent a problem of financing and income distribution, a function of financial and taxation policies and, thus, a neglection of indirect taxes would cause economically unjustifiable differences between the individual countries. This deficiency of the notion "at factor cost" emerged also in the course of the recent revision of the SNA and, as a consequence, in the new SNA the concept of national income valued at market prices came to prevail.

As a characteristic feature, it should be mentioned that the amount of indirect taxes less subsidies varies greatly in comparison to production or national income in the capitalist countries. Their ratio is e.g. about 15 to 17 per cent in France and the Federal Republic of Germany while it appears to be some 9 per cent in the USA and 5 to 7 per cent in Switzerland. (See Table 1.)

This fact makes a comparison of national incomes between capitalist countries at factor cost, i.e. without indirect taxes rather doubtful. Let us take for example three countries where considerable differences are found in respect of the extent of indirect taxation. Let these three countries be Switzer-

* There is a further difference of lesser importance between the two national income concepts. In MPS, the allocation of working clothes and food for health protection is an individual income in the actual practice, while in the SNA it is deducted as material cost. This should be also observed in the calculations.

Table 1

Ratio of indirect taxes to the net national product in European capitalist countries

Country	Balance of indirect taxes and subsidies as percentage of net national product at market prices	
	1959	1964
Austria	14	15
Belgium	9	12
Denmark	13	15
Federal Republic of Germany	15	15
Finland	13	11
France	18	17
Greece	12	13
Ireland	15	13
Italy	14	13
Netherlands	9	10
Norway	12	11
Portugal	8	10
Spain	10	7
Sweden	9	11
Switzerland	5	7
United Kingdom	13	13
Average of European capitalist countries	14	14

Source: Yearbook of National Accounts Statistics, 1964. New York, 1965. United Nations.

land, the United Kingdom and France. If we compare the per capital gross national products of these three countries first inclusive of and then without indirect taxes, at market prices, it will be seen that the price level chosen considerably influences the results. (See Table 2.)

Thus, a comparison at two different price levels yields significantly differing results. As has been shown, the system of taxation depends on financial policies and it would thus not be correct to look for any economic contents indicative of the development levels underlying the different ratios of direct and indirect taxes to each other and to production. Thus, from these differing results it may be concluded that the concept "at factor cost" is wrong in principle. For international comparisons it is expedient to use indicators computed at market prices since these do not reflect the effect of financial policies and the results do not become distorted.

Table 2

Per capita gross national product in some capitalist countries in 1964

Country	Balance of indirect taxes and subsidies as percentage of net national product at market prices	Per capita GNP at	
		factor cost	market prices
		on the basis of dollar data, accounting for discounts or premiums on exchange markets	
		Index: France = 100	
France	17	100	100
United Kingdom	13	108	99
Switzerland	7	131	118

Source: Yearbook of National Accounts Statistics, 1964. New York, 1965. United Nations.

From what has been said it should be clear that we cannot rest satisfied with simply deducing from national income the balance of turnover taxes and subsidies, since it is by far not certain that we arrive with this method at an indicator of comparable contents.

In my opinion, the problem of how to deduct the turnover taxes cannot be unequivocally solved in a satisfactory way. One conceivable solution of recalculating Hungarian national income on the basis of SNA at a factor-cost price level could be to deduct some average for the balance of turnover taxes and subsidies from the national income at market value — e.g. a part corresponding to the average level of the European capitalist countries. In recent years this ratio moved around 14 per cent in the European capitalist countries. For lack of a better solution, I chose to deduct in the course of the calculation, uniformly, in all seven years examined, 14 per cent of national income at market prices as the part corresponding to the balance of turnover taxes and subsidies. It should, however, be added that I used this method only for the sake of comparability with the *national income* in countries using the SNA concept, and that I still hold the notion "at factor cost" to be wrong in principle. As mentioned, in future also the SNA will value national income at market prices and thus the above "operation" will be no longer needed.

As can be seen, the SNA concept of national income, as applied up to now, is not particularly suited for various international comparisons of development levels. The comparison can, however, not always be avoided since, as the single really net concept, national income reflects the value newly created. In such cases it seems most expedient to use for the elimination of turnover taxes the approximation method mentioned above.

In the knowledge of the differences, we can now proceed to recalculate Hungarian national income according to the SNA concept. For the sake of

simplicity, this has been carried out only on the basis of the income approach. (See Tables 3 and 4.)

Table 3

Recalculation of Hungarian national income on the basis of the SNA concept

Transformation of national income data	1959	1960	1961	1962	1963	1964	1965
	at current prices, thousand million Forints						
1. National income according to the MPS concept	128.2	141.6	147.9	155.2	162.9	171.7	166.8
Plus: net value of services*	+15.1	+16.7	+18.2	+19.7	+20.8	+22.3	+22.9
Minus:							
a) total value of services used by the productive branches	— 4.9	— 5.2	— 5.7	— 6.3	— 6.9	— 7.4	— 7.8
b) total value of work clothing allocated	— 1.0	— 1.0	— 0.9	— 1.0	— 1.1	— 1.0	— 1.1
2. National income according to the SNA concept, at market prices	137.4	152.1	159.5	167.6	175.7	185.6	180.8
Minus: for the balance of indirect taxes and subsidies, 14 per cent of the national income according to the SNA concept at market prices	—19.2	—21.3	—22.3	—23.5	—24.6	—26.0	—25.3
3. National income according to the SNA concept, at factor cost	118.2	130.8	137.2	144.1	151.1	159.6	155.5

The computation yields an interesting result: according to the SNA concept, Hungarian national income is by 7 to 8 per cent lower than according to our own system. This is a remarkable fact, since it was a common belief advocated also in literature — which either does not know of the difference in valuation or neglects it — that our national income as computed according to the SNA concept may be estimated to be by 10 to 20 per cent higher than as based on the material concept. The computation presented proves, however, the contrary.

* Individual income and social benefits of those working in social, cultural, health services, public utilities, financial institutions, administration, defence, plus the turnover taxes and profits realized in the prices of these services.

Table 4

Gross national product of Hungary according to the SNA concept

Year	National income according to SNA at market prices	Plus amortization of fixed assets	Gross National Product according to SNA, at market prices
	at current prices, thousand million Forints		
1959	137.4	+10.1	147.5
1960	152.1	+10.4	162.5
1961	159.5	+13.2	172.7
1962	167.6	+12.8	180.4
1963	175.7	+15.1	190.8
1964	185.6	+15.7	201.3
1965	180.8	+17.3	198.1

Also the Gross National Product notion of the SNA is used for the purposes of international comparison, differing from national income by comprising the total value added (national income + amortization). It is a production value net of materials, that is, among the passive items the depreciation allowance of fixed assets is not deducted. In a sense, this is a deficiency of this indicator, since it does not take into account the differences in the capital supply of the individual countries. In comparisons with capitalist countries, however, it has the advantage over the national income indicator that the SNA valuates it at market prices, and thus the distorting effect of turnover taxes does not assert itself here.

Using the transformed data of national income, the gross national product may now be computed. (As is known, the gross national product is higher than national income by the amortization of fixed assets.) In consideration of the fact that the national income according to MPS includes the amortization of fixed assets in the non-productive field, as a difference only the amortization of fixed assets in the productive field must be added to the national income data.

2. Determination of a foreign-exchange coefficient approximating an actual purchasing power parity

It must be noted in advance that by converting the national income of Hungary into dollars we do not intend to compare Hungary with the United States. In these computations the dollar plays only the role of a common standard and serves to compare with its aid the level of national income in this country with all capitalist countries, with the USA also among them.

It is common knowledge that the officially quoted exchange rate of the forint in dollar terms considerably differs from the actual proportions between the purchasing power of the two currencies; therefore, a Ft/$ coefficient must be computed for the purpose of converting the national income which would approximatively reflect the real purchasing power relations.

The problem of the actual purchasing power parity between the dollar and the forint has been engaging the attention of experts and an ever growing part of public opinion for several years now. It is well known that the most varied currency coefficients have been in use. It is not necessary to prove that, owing to the nature of the problem, there is no unequivocal, exact solution. Even with the application of the detailed re-pricing method two, more or less different results will be obtained, depending on the weighting used in the conversion. The result will be necessarily considerably less certain with approximate calculations.

The method chosen is, as a matter of fact, a simplified version of the re-pricing method in so far as, instead of several thousand products the groups of consumption and investment goods have been represented by a small number of commodities. The problem consists in the scope to be covered by the conversion. In my opinion, the computations should be related to the full range of final products, that is, gross national product should play here the role of a "consumer's basket". (This method, i.e. the application of gross national product or global social product as a "basket" has been advocated also by other authors [7].)

In approximating a realistic parity between the purchasing power of the forint and the dollar I have drawn to a large extent on the results of the calculations made by dr. *E. Arányi* and dr. *M. Zafir*, who determined the purchasing power parity between the forint and the (West German) Mark on the basis of personal consumption in the two countries. In view of the fact that personal consumption represents more than 50 per cent of gross national product, their calculations considerably facilitated further work.

The substance of the method can be briefly outlined as follows. Consumption was divided by the authors into eight groups, then, by using the individual coefficients of the representative commodities, the ratio Ft/DM valid for each group was determined. Depending on its nature, each group was characterized by 4 to 30 commodities. The coefficient valid for consumption as a whole was worked out as a weighted average, using first the Hungarian and then the West-German consumption pattern as weights. The two results obtained with the two system of weights are very close to each other (with Hungarian weights one DM = 5.63 Ft, with the German consumption pattern 6.41 Ft) their average being one DM = 6 Ft.

Knowing now the proportion Ft/DM prevailing in the consumption by the population, the next task is to make a step forward and convert the

West-German Mark into Dollars. As is known, the real purchasing parity of the currencies is not reflected by the official rates of exchange even in the case of advanced capitalist countries. If we now disregard the discount in the dollar rate of certain western currencies and calculate with the official rate of exchange of 1 $ = 4 DM, then one dollar will be worth in the consumption of the population 6 times 4, i.e. 24 Forints. In my opinion, however, the real situation may be better approached if the discounted dollar rate of the West German Mark is taken into account.

The competent UN agencies regularly perform calculations of the discount to be applied to the dollar rate of various currencies. According to these calculation [8], in 1963 the coefficient reflecting real purchasing parity was DM 3.44 to the dollar. If the coefficients used in the computations by Arányi-Zafir are re-calculated by major groups with this coefficient and the result again weighted, we obtain that on the basis of personal *consumption* one dollar equals 22.30 forints.

As regards the other groups, I used the proportions prevailing in foreign trade.

Computation of the average exchange coefficient to be used for the conversion of national income was carried out with the aid of the 1963 Hungarian GNP data (according to the SNA concept) as follows (see Table 5):

According to my approximate calculations, in the consumption of material goods one dollar is equal to 28—30 forints and in accumulation to 40—50. The considerable difference is due to the characteristics of the Hungarian price system, where relatively more social net income is realized in the prices of investment goods than in those of consumer goods, that is, in Hungary — as opposed to the USA or the West European countries — consumption is relatively "cheaper" and investment relatively "more expensive".*

The result of the calculations is that *in 1963 one dollar was equal to 28 forints*. And if, partly because of the inaccuracy of the calculations, partly owing to the nature of the matter, this result may be considered as only approximate, it may be established even from these calculations that the foreign exchange coefficient we are looking for lies between the values of 24—32 Ft/$ — taking into account an error limit of ±15—20 per cent.

The foreign exchange coefficient obtained from the calculations *approximately* indicates the general purchasing power parity between the two currencies for the year 1963; it seems expedient to use this ratio for the conversion of national income. By comparing the price index numbers for the national incomes of Hungary and the USA, the foreign exchange coefficients for other years can be also derived. (See Table 6.)

* This tendency has been affirmed also by other calculations. See [9].

Table 5

The Ft/$ exchange coefficient calculated according to the weights of Hungarian GNP in 1963

Utilization of GNP	Hungarian GNP in 1963, based on SNA		
	Thousand million Ft	Percentage distribution	Ft/$
Consumption, personal	100	52.4	22.3
Consumption of which:			
Public	29		
Material costs	14	7.3	50
Wage costs	15	7.8	22.3
Total consumption	*129*	*67.5*	
Investment	52	27.2	
Of which:			
Construction	27	14.1	40
Machinery	17	8.9	50
Other	8	4.2	30
Increase in circulating funds	13	6.8	
Of which:			
Industrial non-consumer goods	11	5.8	50
Other	2	1.0	60
Total accumulation	*65*	*34.0*	
Import surplus	*—3*	*—1.5*	*50*
GNP	*191*	*100.0*	*27.7*

Table 6

Foreign exchange coefficient for the recalculation of national income and GNP

Year	Price index, Hungarian national income	Price index, US GNP	Ratio Hungary/US	Foreign exchange coefficient, Ft/$
	1963 = 100			
1959	101.9	94.8	1.07	30
1960	102.1	96.4	1.06	30
1961	100.6	97.5	1.03	29
1962	100.8	98.7	1.02	29
1963	100.0	100.0	1.00	28
1964	100.6	101.5	0.99	28
1965	96.6	103.3	0.94	26

In connection with the results of this calculation, I should like to draw attention to two facts.

According to the experiences gained in course of the calculations carried out under CMEA and aimed at the comparison of national incomes, owing to the nature of things, the result of international comparisons based on value indicators can be established — even with highly detailed and accurate computations — only within certain, often considerably broad, limits, indicating merely orders of magnitude. The comparison is particularly uncertain because: " . . .in certain cases it is material reality itself which cannot, or hardly be, compared. Such was the situation e.g. in respect of part of industrial production, as engineering, or with the accumulation fund of national income. As a matter of fact, the pattern of production and accumulation, respectively, are so different in the individual countries as will make the results of the calculations highly questionable." [10]

It should also be stressed that the foreign exchange coefficient obtained cannot be conceived of as a general Ft/$ ratio, to be used for all purposes. This coefficient *serves only for the conversion of national income*, comprising in addition to consumer goods, the coefficients for services and investment goods. Obviously, it cannot be used e.g. as a "tourist" rate of exchange or for some other special purpose. "Therefore, the general conclusion should be drawn that it is more advisable to construct special price indices for specific purposes, always corresponding to the pecularities of the task in question. E.g. for the "tourist rate of exchange" an index number weighted by the consumption of tourists, for establishing the salaries to be paid abroad to the diplomatic staff and other foreign representatives another one weighted by a "diplomatic basket", etc. The differences between the various index numbers thus computed are often not negligible", writes dr. *L. Drechsler* in his book on international comparisons [11].

3. Conversion of national income into dollars

Having made Hungary's national income comparable as regards contents, i.e. having computed it according to the SNA concept, and having worked out the Ft/$ coefficient suited for the conversion, it becomes possible to convert the forint data of national income and gross national product into dollars. (Table 7.)

To check the results, I confronted them with the data obtained by the Jánossy-method. The comparison could be performed for 1960 since the data calculated by both methods were available only for that year. For 1960 *E. Ehrlich* performed calculations based on the Jánossy-method and found that per capita national income may be estimated at 380—410 dollars [12]. This is very close to the 437 dollars per head as computed by myself. In my

Table 7

Hungary's national income, based on SNA

Year	National income at current prices, billion Forints, at factor cost	Foreign exchange coefficient Ft/$	Total national income	Per capita national income
			million $	$
			at current prices	
1959	118	30	3933	396
1960	131	30	4367	437
1961	137	29	4724	471
1962	144	29	4966	494
1963	151	28	5393	535
1964	160	28	5700	564
1965	156	26	6000	591

opinion, the closeness of the data as regards orders of magnitude may be considered as a positive asset in respect of both kinds of calculations; they seem to verify the results of both computations in respect of national income level.

After the necessary conversions, the gross national product is as follows:

Table 8

Gross national product of Hungary based on SNA

Year	GNP at current prices, billion Ft	Conversion coefficient, Ft/$	Total GNP at current prices		Per capita National income at factor cost, $
			million $	$	
			at current prices		
1959	148	30	4930	496	400
1960	163	30	5430	544	440
1961	173	29	5965	595	470
1962	180	29	6207	617	490
1963	191	28	6821	676	540
1964	201	28	7178	709	560
1965	198	26	7615	750	590

To sum up: in the years 1959—1965 Hungarian per capita national income and gross national product, calculated by a method comparable to that applied in the non-socialist countries (according to the SNA concept) and expressed in dollar terms, developed according to the data in Table 8.

To give an idea of the orders of magnitude, let us compare the results of the computation with similar data of some capitalist countries.

Table 9

Per capita national income and GNP in 1964

Country	Per capita			
	national income		gross national product	
	$*	Hungary = 1.0	$*	Hungary = 1.0
Hungary	560	1.0	710	1.0
Greece	440	0.8	540	0.7
Finland	820	1.5	1020	1.4
Austria	910	1.6	1200	1.6
Italy	930	1.7	1180	1.6
Netherlands	1300	2.3	1600	2.2
Belgium	1310	2.3	1650	2.3
France	1410	2.5	1870	2.6
United Kingdom	1510	2.7	1880	2.6
Denmark	1530	2.7	1930	2.6
Federal Republic of Germany	1550	2,8	2030	2.8
Norway	1600	2.9	2070	2.8
Switzerland	1880	3.4	2240	3.1
Sweden	2100	3.8	2370	3.3
USA	2700	4.8	3330	4.6

Source: Yearbook of National Accounts Statistics, 1964. New York, 1965. United Nations.

* Eliminating the discount or premium of various currencies on the dollar.

When evaluating the final results, it should be remembered that the method reviewed is not suited for a detailed comparison of national incomes. It has not been the aim of this study to solve the complicated philosophical, economic and mathematical problems of comparability or the statistical ones related to international comparisons, nor to propose some new "panacea" to be applied to the international comparison of national incomes. With this paper I intended to serve the purpose of providing a reliable starting point for the international comparison of the Hungarian national income by recalculating it to suit to the SNA concept.

The conversion of the forint data into dollar terms and the determination of a currency coefficient suited for the conversion is, indeed, *an experiment with approximate calculations*. It presents one way of a possible simple conversion and the results thus obtained, as well as the assumptions used in the calculations. It is, however, my belief that even with the hypothetical character stressed, the data give an orientation as regards orders of magnitude and — since no detailed re-pricing calculation has been performed as yet to compare the Hungarian data with those of the capitalist countries — they meet a real demand.

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НАЦИОНАЛЬНЫЙ ДОХОД ВЕНГРИИ НА ОСНОВЕ «СИСТЕМЫ НАЦИОНАЛЬНЫХ СЧЕТОВ»

А. ЧЕРНОК

Автор настоящей статьи стремится создать достоверную основу для сравнения венгерских данных по национальному доходу с данными несоциалистических стран. В интересах выполнения этой задачи он решает двойную задачу: исчисляет венгерские данные по национальному доходу в соответствии с содержанием Системы национальных счетов и затем пересчитанные данные переводит на доллары при помощи валютных коэффициентов, приближающих паритет фактической покупательной силы.

При пересчете национального дохода последний, интерпретируемый согласно системе материальных продуктов в ы ш е национального дохода интерпретируемого согласно системе национальных счетов, на сумму материальных издержек чаще но н и ж е последнего на полную стоимость потребленных услуг. Ввиду этого по этим позициям надо производить соответсвующую коррекцию данных.

При исчислении валютного коэффициента форинт/доллар автор произвел эксперимент при помощи упрощенного метода. Пересчет осуществляется при метод т. н. метода) «корзины», причем роль корзины в расчете исполняет валовой национальных продукт.

В результате проведенных расчетов автор излагает в расчете на душу населения Венгрии, выраженные в долларах, данные за 1959—1965 годы по национальному доходу и валовому национальному продукту (см. таблицу 8.)

И. ЖУКОВА — А. МИКЛОШ

ОБ ЭКОНОМИЧЕСКОМ РАЗВИТИИ НЕКОТОРЫХ СТРАН СЭВ*

В Институте Экономики ВАН в группе под руководство *Дьюлы Ковснаи* исследуются проблемы экономического роста стран СЭВ. В настоящее время окончены работы, анализирующие народные хозяйства Болгарии, Чехословакии, ГДР и СоветскогоСоюза. В статье дается краткое обобщение результатов этих работ.

Предметом нашего исследования является экономическое положение европейских стран-членов СЭВ в 1957—65 гг. В соответствии с этим исследуются вопросы экономического роста в пределах среднего по продолжительности отрезка времени. Мы стремились из сложной проблематики развития отдельных народных хозяйств выделить несколько таких явлений и взаимосвязей, которые, согласно нашим предварительным гипотезам, оказывают существенное влияние на ход процесса воспроизводства, на изменение главных народнохозяйственных пропорций, на возможности накопления и потребления. Исследование исходило из того, что все еще очень мало таких работ, которые дают систематизированное изложение наиболее общих факторов экономического роста. Нашим исследованием мы стремимся несколько восполнить этот пробел и тем самым приблизиться к пониманию общих причинных связей развития и к обоснованию некоторых обобщений.

Темпы роста

Исследуемый отрезок времени — 1957—1965 гг. — заключает в себе 2 подпериода: до 1960 года развитие экономики во всех странах шло ускоренными темпами, после этого же произошло заметное замедление развития. Почти во всех исследуемых странах в 1959 году был достигнут самый высокий рост экономики, а в 1961—63 годах развитие происходило наиболее медленно. Второй общей чертой развития до 1960 года была незначительная разница в темпах между отдельными странами: среднегодовой темп роста произведенного валового национального дохода (в дальнейшем: конечный продукт) составлял 7—9%. С замедлением развития разрыв в темпах увели-

* Кроме авторов статьи в исследованиях принимали участие *Дьюла Ковснаи* и *Людвик Макарук*. В ходе анализа были использованы статистические публикации исследуемых стран, а также оценки по данному кругу вопросов из экономической литературы. В статье отдельно указываются случаи, когда данные первоисточников даются в модифицированном виде.

чился, так как в Болгарии и СССР это замедление было меньшее, чем в ГДР и Чехословакии — где в 1963 году произошло даже абсолютное снижение объема национального дохода.

Темпы роста конечного продукта
(в процентах к предыдущему году)

	1958	1959	1960	1961	1962	1963	1964	1965
СССР	11,4	9,2	7,2	7,3	4,5	3,7	10,1	8,2
ГДР	9,3	9,7	5,6	4,1	1,8	3,4	4,7	4,6
ЧССР	7,9	6,4	7,9	6,9	2,1	—1,3	1,3	3,7
НРБ	5,2	20,0	5,8	2,4	6,2	7,9	9,9	7,6

Анализируя источники благоприятного развития экономики в 1957—60 годах, можно выделить прежде всего те факторы, которые временно играли большую роль в ускорении хозяйственной деятельности, а позднее уже утратили свою особенную роль или оказывали только умеренное влияние на ход воспроизводства. Решающее значение в этот период имела перегруппировка рабочей силы из сельского хозяйства в другие отрасли материального производства. Важным временным источником был также ввод в действие в этот период производственных мощностей, строительство которых было начато в первой половине пятидесятых годов, что привело к изменениям структуры производства в сторону повышения ее комплексности. Более быстрый рост объема капиталовложений, чем национального дохода, в большинстве стран также стимулировал ускоренное развитие экономики. Кроме всего этого, в результате большего или меньшего совпадения периодов ускоренного роста в странах СЭВ и со стороны внешней торговли, прежде всего со стороны спроса на средства производства, имелись благоприятные условия для роста производства.

В исследуемых странах в 1957—60 гг. наиболее динамично развивались отрасли, непосредственно обслуживающие капитальное строительство, а также сырьевые отрасли (за исключением топливной и деревообрабатывающей промышленности).* Заслуживает внимания, что отрасли легкой и пищевой промышленности развивались почти такими же быстрыми темпами, как сырьевые отрасли промышленности в целом. Исключение составляла Чехословакия, где сырьевые отрасли промышленности развивались быстрее, чем сырьевые отрасли в других странах при подобных темпах роста машиностроения.

* К отраслям, непосредственно обслуживающим капитальное строительство, мы относим машиностроение и строительство, а к сырьевым отраслям промышленности — энергетику, топливную промышленность, металлургию, химическую промышленность, промышленность стройматериалов, а также деревообрабатывающую промышленность.

Сельскохозяйственное производство в этот период развивалось относительно быстрыми темпами (4—6% ежегодного прироста за исключением Чехословакии, где он равнялся 2,5). Это, наряду с относительным отставанием легкой и пищевой промышленности свидетельствует о том, что структура роста производства в Чехословакии была несколько иной, чем в других странах. В СССР специфическим источником быстрого роста до 1960 года было ускоренное развитие сельского хозяйства (6% ежегодного прироста) в результате освоения целинных и залежных земель и повышения материальной заинтересованности работников сельского хозяйства.

Во второй период — 1961—65 гг. — темпы роста сократились во всех странах. Одной из основных причин этого было значительное сокращение, а в некоторых странах — временное прекращение перегруппировки рабочей силы из сельского хозяйства в другие отрасли производства. Сокращение притока рабочей силы в промышленность и в строительство отрицательно сказалось на экстенсивном использовании основных фондов. Это наглядно проявлялось в ухудшении эффективности производства.

Одновременно с замедлением роста производства значительно замедлился рост объема капиталовложений, который в СССР и в Болгарии приблизился к темпам роста национального дохода, а в ГДР и ЧССР капиталовложения в отдельные годы оставались на том же уровне и даже абсолютно сокращались. К анализу причин этого явления мы вернемся при рассмотрении капиталовложений.

В поотраслевом разрезе сокращение темпов роста производства произошло в большей мере в отраслях обрабатывающей промышленности, в то время как в сырьевых отраслях снижение темпов роста было или незначительным (СССР и Болгария), или меньшим, чем в обрабатывающей промышленности. Нужно подчеркнуть, что темпы роста отраслей, непосредственно обслуживающих капитальное строительство в ЧССР и СССР сократились в большей мере, а в ГДР и НРБ — в несколько меньшей степени, чем темпы роста легкой и пищевой промышленности. Сокращение темпов роста промышленного производства и строительства совпадало с неблагоприятной динамикой сельскохозяйственного производства, уровень которого в отдельные годы абсолютно сокращался в ряде стран. Положение в сельском хозяйстве, вызывая временами трудности в снабжении населения продовольствием, отрицательно влияло также и на внешнеторговые балансы стран СЭВ.

Количественные факторы роста

Рассматривая народное хозяйство в целом, нельзя установить непосредственной связи между динамикой числа занятых в производстве и ростом конечного общественного продукта. Однако *темп роста конечного продукта промышленности и строительства* — от динамики которых в решающей мере зависела динамика конечного продукта — *находится уже в довольно*

тесной связи с динамикой занятых в этих отраслях. Так, быстрый рост конечного продукта происходил при быстром увеличении числа занятых в этих отраслях; одновременно с замедлением роста конечного продукта во всех странах произошло и значительное замедление роста числа занятых.

Замедление роста численности занятых в ГДР и СССР, связанное в основном с внеэкономическими причинами (в СССР вступление в работоспособный возраст поколения, рожденного во время войны, в ГДР, кроме этого, и эмиграция на запад) было одной из причин снижения темпов экономического развития. Изменение положения с рабочей силой в Болгарии, хотя и вызванное совсем другими причинами, также тормозило экономическое развитие. В период 1957—60 годов в болгарском сельском хозяйстве почти на 1 миллион сократилось число трудоспособных работников, которым раньше могли обеспечить только частичную занятость. В последующие годы, вместо продолжения перегруппировки рабочей силы нужно было позаботиться в первую очередь о создании и повышении фондовооруженности рабочих мест вне сельского хозяйства. Обратная картина наблюдается в Чехословакии, где снижение темпов роста производства произошло раньше, чем замедление роста занятости, и последнее было не причиной, а скорее результатом первого.

Можно было бы по праву предполагать, что в индустриально менее развитых странах отвлечение рабочей силы из сельского хозяйства достигло больших размеров. В действительности, однако, это лишь частично имело место. В 1957—61 гг. удельный вес занятых в сельском хозяйстве в общем количестве занятых в материальном производстве сократился в Болгарии на 15,6%, а в СССР — на 8,2%. Однако и в Чехословакии удельный вес сельского хозяйства в общей занятости изменился в такой же пропорции как в СССР. Учитывая значительную разницу резервов рабочей силы в сельском хозяйстве эту перегруппировку в Чехословакии следует признать явно напряженной. В ГДР этот сдвиг составлял всего 2,5%. *После 1961 года во всех странах отвлечение рабочей силы из сельского хозяйства не достигло даже половины прежних размеров.*

Самый быстрый рост занятых имел место в машиностроении во всех без исключения странах. Другой крупной отраслью быстрого роста рабочей силы было строительство. Помимо этого значительное увеличение числа занятых наблюдается и в тех отраслях, развитие которых особенно стимулировалось: в СССР — в отраслях материального обслуживания, в ЧССР и ГДР — в сырьевых отраслях промышленности, в Болгарии — в отраслях легкой и пищевой промышленности.

Во второй период, когда замедлилось отвлечение рабочей силы из сельского хозяйства, произошла некоторая внутренняя перегруппировка рабочей силы в промышленности. Она выразилась в абсолютном сокращении числа занятых в легкой и пищевой промышленности ГДР, в сокращении

числа занятых в некоторых отраслях легкой промышленности ЧССР. Изменяется также и направление использования имеющихся резервов рабочей силы. После 1960 года при снабжении рабочей силой попрежнему давалось предпочтение, во-первых, машиностроению и, во-вторых — чего не было в первый период — отраслям материального обслуживания. Третьей предпочитаемой областью было производство промышленного сырья, главным образом химия и металлургия. В Болгарии, в отличие от других стран, пищевая промышленность и строительство также пользовались предпочтением с точки зрения обеспечения рабочей силой.

Обобщая сказанное о динамике рабочей силы в связи с ростом производства можно сделать вывод, что в первый период в приросте конечного общественного продукта (без сельского хозяйства) наибольшую роль фактор рабочей силы играл в Болгарии — около 60%, приблизительно 40% прироста давал этот фактор в СССР и ЧССР, и незначительную роль он играл в росте производства в ГДР. Во второй период роль этого фактора уменьшилась в Болгарии почти во всех отраслях, в других странах — в легкой и пищевой промышленности и в строительстве. А в ГДР сокращение числа занятых уже играло отрицательную роль в производстве этих отраслей.

Рассмотрим теперь динамику второго фактора производства — *основных фондов*. В материальном производстве в целом темп роста основных фондов в исследуемый период был довольно равномерным (в СССР и Болгарии — 10—11% ежегодно, в ГДР и ЧССР — около 6,0%). В ГДР и в Болгарии (за исключением сельского хозяйства и некоторых отраслей легкой и пищевой промышленности) рост основных фондов во второй период даже ускорился. Учитывая это обстоятельство, можно заключить, что *замедление темпов роста конечного общественного продукта или вообще не объяснимо или только в самой незначительной мере объяснимо обеспеченностью основными фондами.*

В большинстве стран самыми быстрыми темпами основные фонды росли в сырьевых отраслях промышленности. В 60-х годах эта тенденция даже усиливается. Вслед за этими отраслями (в отношении роста основных фондов) следуют отрасли, непосредственно обслуживающие капитальное строительство. С другой стороны, рост основных фондов отставал в отраслях материального обслуживания, а также легкой и пищевой промышленности. Во второй период и сельское хозяйство относилось к разряду отраслей, где темп расширения основных фондов был ниже среднего. В результате этого еще более усилилось отставание фондовооруженности отраслей, непосредственно обслуживающих потребление населения. Эти тенденции усиленно проявлялись в Чехословакии, а позже и в Болгарии.

Имеются и некоторые отклонения от выше указанных общих тенденций. Прежде всего нужно указать, что в *СССР* основные фонды в отраслях, непосредственно обслуживающих капитальное строительство, росли медленнее, чем в среднем по народному хозяйству. Это связано с тем, что в эти годы

относительно много основных фондов было введено в отраслях материального обслуживания. Кроме того, несколько быстрее росли основные фонды и в ранее отставáвших отраслях легкой и пищевой промышленности. В *ГДР* и *ЧССР* в период ускоренного развития основные фонды сельского хозяйства росли опережающим темпом. Позднее и в этих странах рост основных фондов в сельском хозяйстве замедлился.

В 1957—60 гг. относительно бóльшая часть прироста основных фондов предназначалась на *создание новых рабочих мест*. Прежде всего это характерно для отраслей с низким органическим строением капитала (легкая и пищевая промышленность, строительство). В отдельных случаях повышенное привлечение рабочей силы сопровождалось даже снижением фондовооруженности труда, например, в перерабатывающей промышленности Болгарии и частично в легкой промышленности Чехословакии.

Во второй период изменение положения с рабочей силой повело к сокращению роли создания новых рабочих мест в общем объеме прироста основных фондов. Это особенно коснулось отраслей с низким органическим строением капитала.

Следовательно, пропорции разделения прироста основных фондов на создание рабочих мест и на повышение фондовооруженности труда в разных отраслях материального производства значительно приблизились друг к другу. В сырьевых отраслях с высоким органическим строением капитала технологические связи относительно сильно определяли распределение прироста основных фондов на создание новых рабочих мест и на повышение фондовооруженности труда. В первый период это препятствовало большему вовлечению рабочей силы в эти отрасли. Позже, когда источники рабочей силы сократились, технологические связи этих отраслей не позволили настолько сократить приток рабочей силы в эти отрасли, как в отрасли обрабатывающей промышленности.

Возникает вопрос, насколько изменение в положении с рабочей силой сопровождалось изменениями в технике и в технологии производства. В порядке приближения для ответа на этот вопрос в области промышленности был использован показатель размера используемой электроэнергии на единицу основных фондов. Во всех исследуемых странах (за исключением Болгарии) по промышленности в целом и по укрупненным группам промышленности этот показатель в продолжении всего исследуемого периода оставался практически на одном уровне. В годы ускоренного роста использование электроэнергии на единицу основных фондов несколько повышалось, а в период сокращения роста производства наблюдалось некоторое сокращение этого показателя, что повидимому было связано с сокращением степени использования производственных мощностей. Позже использование энергии на единицу основных фондов снова повышается. Относительная стабильность этого показателя позволяет сделать вывод, что *несмотря на изменение поло-*

жения с рабочей силой в технике и в технологии производства не произошло существенных изменений.

В некоторых отраслях динамика использования энергии на единицу основных фондов несколько отличалась от общей тенденции. В тех отраслях, где в капиталовложениях размеры реконструкции были выше среднего уровня (топливная промышленность в СССР, металлургия в ГДР, легкая и пищевая промышленность в ЧССР), там использование энергии на единицу основных фондов или повышалось, или — в период замедления роста производства — сокращалось в меньшей мере, чем в других отраслях.

В связи с характеристикой качественного состояния основных фондов нужно остановиться на проблеме замены устаревших основных фондов, так как это оказывает влияние на их общий технический уровень и эффективность. Размер годичного возмещения (текущий и генеральный ремонт) основных фондов в СССР и НРБ по отношению ко всему объему основных фондов составлял 3—4%, а в ГДР и ЧССР 2—2,5%. Из вновь введенных основных фондов в СССР и НРБ 25—30% шло на замену выбывших основных фондов, а в ГДР и ЧССР — только 10—15%.

Не только по сравнению с развитыми капиталистическими странами, но и по сравнению с СССР и Болгарией размер возмещения в ГДР и ЧССР нужно признать низким. Так, в ГДР во втором периоде при напряженном положении с рабочей силой сохранение низкого процента замены устаревших основных фондов препятствовало использованию вновь вступивших производственных мощностей. Лишь с середины 60-х годов наблюдается некоторое повышение размера замены основных фондов. Относительно высок был размер замены основных фондов во всех странах в сельском хозяйстве, в строительстве и в добывающих отраслях промышленности. В машиностроении же во всех странах в оба периода размер замены основных фондов был самым низким.

Затраты и эффективность производства*

Совокупная динамика двух основных факторов производства — рабочей силы и основных фондов — выражает в нашем исследовании динамику затрат. Во второй период, по сравнению с первым, во всех странах, за исключением Чехословакии (где темп роста остался прежний), рост затрат ускорился. Следовательно, расчеты показывают, *что сокращение темпов роста конечного общественного продукта в начале 60-х годов нельзя объяснить количественным сокращением затрат.* В отношении отдельных отраслей можно

* Народнохозяйственная, а также отраслевая эффективность производства исследуется нами только в динамическом аспекте. Наши расчеты показывают размеры улучшения или ухудшения эффективности в исследуемый период по сравнению с базисным годом. Изменение эффективности (в узком смысле) характеризуется нами темпом роста или сокращения производства на единицу совокупных затрат (затраты на зарплату и на основные фонды).

установить, что в первый период быстрее всего росли затраты в сырьевых отраслях и в отраслях непосредственно связанных с капитальным строительством. В СССР и в Болгарии сюда относились также отрасли легкой и пищевой промышленности. Затраты в сельском хозяйстве во всех странах в это время абсолютно сокращались.

Во второй период основное изменение в динамике затрат произошло в сельском хозяйстве, где сокращение затрат сменилось их незначительным повышением. Характерно, что рост затрат в сырьевых отраслях промышленности и в отраслях материального обслуживания остался на уровне первого периода и даже несколько повысился. Это означает, что в этих отраслях замедление роста рабочей силы было количественно уравновешено ростом затрат основных фондов. В наибольшей мере снизились темпы роста затрат во второй период в легкой и пищевой промышленности, а также в строительстве. Менее значительным было сокращение роста затрат в машиностроении.

Обобщая, можно сказать, что в конце 50-х годов в ущерб сельскому хозяйству и за счет пренебрежения развитием отраслей материального обслуживания было достигнуто сравнительно равномерное развитие всех главных отраслей промышленности и строительства. Во втором периоде же при истощении этих источников *прежнее форсированное развитие сырьевых отраслей промышленности было достигнуто в основном за счет сокращения затрат в легкую, пищевую промышленность и отчасти в строительство.* Рост затрат в народном хозяйстве отдельных стран произошел главным образом за счет увеличения затрат основных фондов. И в тех отраслях, где рост совокупных затрат во второй период замедлился, имел место рост затрат основных фондов, который, однако, не уравновесил сокращения притока рабочей силы в эти отрасли. В результате этого во всех отраслях народного хозяйства произошли значительные изменения в структуре затрат в сторону повышения удельного веса затрат основных фондов. В связи с изменением структуры затрат *особенно остро встал вопрос об эффективности замены живого труда основными фондами.* Эта замена была количественно осуществлена, качественное же влияние ее следует проследить на показателях эффективности производства.

Этот показатель заключает в себе следующее: $T = з + бФ + Эф$

где T — среднегодовой темп роста продукции,
$з$ — среднегодовой темп роста числа занятых в материальном производстве,
$Ф$ — среднегодовой темп роста фондовооруженности (размер основных фондов на 1 занятого),
$б$ — удельный вес затрат на основные фонды в совокупных затратах,
$з + бФ$ — среднегодовой темп роста совокупных затрат,
$Эф$ — среднегодовой темп роста продукции на единицу совокупных затрат.

Показатель не учитывает удельных затрат материальных элементов оборотных средств, а также их изменения. В дальнейшем, когда в тексте говорится об эффективности, под этим всегда понимается рассчитанный вышеуказанным способом показатель изменения эффективности.

Самые большие успехи в повышении эффективности производства были достигнуты в народном хозяйстве Болгарии (7,3% среднегодовой темп роста в первый период и 4,3% — во второй) и ГДР (соответственно 6,9% и 3,2%). Отставали от них темпы повышения эффективности в СССР (4,5% и 1,9%) и Чехословакии (5,3% и 0,4%).

Самой эффективной отраслью во всех без исключения странах в оба периода было машиностроение, за которым следовали некоторые сырьевые отрасли промышленности, различные по странам и по периодам. Кроме этих отраслей в СССР и в Болгарии относительно эффективной отраслью было сельское хозяйство, а в ГДР и в ЧССР — легкая и пищевая промышленность. К группе отраслей с самой низкой эффективностью во всех странах относилась черная металлургия. В ЧССР и ГДР к этой группе можно отнести также и топливную промышленность. Во второй период к этой группе присоединилось и несколько других отраслей, так в СССР и Болгарии — химическая промышленность, а в ГДР и Чехословакии — сельское хозяйство.

Эффективность, как показывают наши расчеты, находится в связи с известной пропорциональностью в составе затрат. Исследование доказало, что *в тех отраслях, в которых в одностороннем порядке чрезмерно увеличился один из производственных факторов (или рабочая сила или основные фонды), там, как правило, неблагоприятно складывалась эффективность.* Так, во всех странах в тех сырьевых отраслях, где затраты основных средств росли намного быстрее, чем в среднем по промышленности, наблюдались и самые низкие показатели роста эффективности. К отраслям с низкими показателями эффективности относились в первый период и отрасли легкой и пищевой промышленности Болгарии. Здесь имело место чрезмерное вовлечение рабочей силы, что проявилось также и в резком сокращении фондовооруженности труда. В СССР к отраслям с низкой эффективностью относились отрасли с высоким органическим строением капитала, где при средних темпах роста фондовооруженности имел место относительно быстрый темп роста рабочей силы (энергетика, химия, черная металлургия).

Что касается эффективности во второй период, по сравнению с первым, то *на уровне всего народного хозяйства можно установить, что исключительной причиной замедления роста конечного продукта было замедление темпов роста ефффективности,* поскольку темпы роста затрат даже ускорились. Не только на уровне всего народного хозяйства, но и в отношении отдельных укрупненных отраслей можно установить, что динамика эффективности находится в обратном отношении с динамикой затрат. *В отраслях с ускоренным ростом затрат во второй период* (сырьевые отрасли, сельское хозяйство, отрасли материального обслуживани) *сильнее всего снизились темны роста эффективности.* Наоборот, в отраслях перерабатывающей промышленности, где рост затрат замедлился, эффективность ухудшилась в меньшей степени. В легкой промышленности СССР и пищевой промышленности Болгарии даже

сильное ограничение затрат сопровождалось повышением роста эффективности.

Каковы же причины этой обратной связи? Остановимся сначала на группе отраслей с ускоренным ростом затрат. Во второй половине 50-х годов в рамках программ индустриализации в большинстве стран снова выдвинулась на передний план задача расширения производственных мощностей сырьевых отраслей промышленности. Несколько лет спустя в этих отраслях вступили в действие большие производственные мощности. Поскольку в росте эффективности в этих отраслях стали наблюдаться неблагоприятные тенденции, постольку можно предполагать, что общий уровень вновь введенной техники был неудовлетворителен. По своему характеру эта техника все еще была направлена в основном на создание новых рабочих мест, а не на замену живого труда.

Во вновь создаваемых (черная металлургия и химия Болгарии) или особенно форсируемых отраслях (химическая промышленность СССР) одной из причин снижения эффективности была и недостаточная комплексность их развития и затяжной период освоения новых мощностей. В некоторых добывающих отраслях сокращению эффективности способствовало также и ухудшение природных условий добычи (топливная промышленность ГДР, ЧССР, добыча цветной руды в НРБ и т. д.).

Как уже отмечалось раньше, совокупные затраты в сельском хозяйстве до конца 50-х годов сокращались, позднее же несколько возрастали. В противоположном направлении изменялась динамика эффективности: происходившее ранее повышение эффективности сельскохозяйственного производства приостановилось, и даже в ЧССР и ГДР сельское хозяйство стало убыточным. Ухудшение эффективности сельского хозяйства объясняется, по-видимому, целой совокупностью причин, подробный анализ которых выходит за рамки этого исследования. Все-таки целесообразно обратить внимание на некоторые из них: временные трудности в связи с окончанием коллективизации в ЧССР и ГДР; форсированное отвлечение рабочей силы из сельского хозяйства ЧССР; нарушение принципа материальной заинтересованности в некоторых странах; исчерпание некоторых специфических источников роста, как вовлечение в обработку целинных и залежных земель в СССР, ликвидация скрытой безработицы в сельском хозяйстве Болгарии и т. д.

К другой группе отраслей относятся отрасли с низким органическим строением капитала: отрасли, непосредственно обслуживающие капитальное строительство, легкая и пищевая промышленность. Здесь сокращение темпов роста эффективности происходило при замедлении роста затрат и было меньших размеров, чем в вышеперечисленных отраслях. В этих отраслях, ближе стоящих к конечному потреблению, на соотношение затрат и эффективности факторы спроса оказывали большее влияние, чем в отраслях первой группы.

Темпы роста эффективности машиностроения в СССР и Болгарии сократились почти пропорционально сокращению темпов роста затрат, в ЧССР сокращение эффективности было намного большим, чем сокращение темпов роста затрат, а в ГДР сокращение темпов роста эффективности произошло даже при увеличении темпа роста затрат. Следовательно, развитие машиностроения в первую очередь в этих двух странах можно считать проблематичным. К более подробному анализу причин мы вернемся при рассмотрении вопросов, связанных с политикой капиталовложений. Здесь только заметим, что в ГДР начало процесса перестройки машиностроения, а в ЧССР недоиспользование производственных мощностей в результате стагнации капиталовложений модифицировали соотношение затрат и эффективности.

Говоря об эффективности машиностроения, необходимо обратить внимание на то, что основная проблема заключается не в эффективности производства в самом машиностроении (поскольку как в первом, так и во втором периоде машиностроение было самой эффективной отраслью народного хозяйства во всех странах). *Основная проблема заключается в низком техническом уровне производимых машин и оборудования*, что проявляется в низкой эффективности деятельности отраслей, использующих эту технику. Это подтверждается тем, что быстрый рост фондовооруженности труда, как правило, сопровождался ухудшением эффективности.

Сравнительно благоприятный рост эффективности производства (и сравнительно меньшее ее снижение во второй период) в отраслях легкой и пищевой промышленности в значительной мере был связан с непрерывным использованием мощностей, вызванным сильным спросом на внутренних и внешних рынках. Кроме этого, в отдельных случаях благоприятное влияние на эффективность оказала и реконструкция пищевой и легкой промышленности.

Анализу изменений отраслевой эффективности потому было уделено такое большое внимание, что изменение эффективности по отраслям было решающей причиной изменения народнохозяйственной эффективности. По сравнению с этим, структурные изменения в распределении затрат оказали незначительное влияние на народнохозяйственную эффективность. В ЧССР изменение структуры в оба периода влияло скорее в направлении повышения народнохозяйственной эффективности; в других странах — скорее в сторону ее снижения. В Болгарии отрицательное влияние структурных сдвигов было самым большим (около 10%) из-за сокращения доли сельского хозяйства.

Использование конечного продукта

Весь исследуемый период характеризуется более быстрыми темпами роста капиталовложений по сравнению с конечным продуктом. В первый период темпы роста капитальных вложений в 1,5—2 раза превышали темпы роста конечного продукта. Во второй период, при общем снижении темпов капиталовложений, происходит сильное приближение их к темпам роста

конечного продукта. В ГДР и ЧССР снижение роста капиталовложений было более значительным, чем в СССР и Болгарии; в отдельные годы имела место их стагнация или даже абсолютное сокращение. К концу первого периода, по нашим расчетам,* доля капиталовложений в использованном национальном доходе исследуемых стран достигла приблизительно 30% (в ЧССР — 35%), и более или менее осталась на этом уровне, с некоторым понижением в начале и повышением к концу второго периода.

В первый период имеется много общих черт в отраслевой структуре капиталовложений исследуемых стран. Основная часть производственных капиталовложений (по крайней мере 1/3) направлялась в сырьевые отрасли промышленности. Из этого половина или больше шло на развитие энергетической и топливной базы. Другой крупной отраслью капиталовложений было сельское хозяйство (ГДР и НРБ — свыше 30%, СССР и ЧССР — 22%). 5—10% производственных капиталовложений направлялось на развитие машиностроения. Относительно мало капиталовложений (по сравнению с долей в основных фондах) вкладывали в отрасли материального обслуживания и в отрасли легкой и пищевой промышленности.

Видно, что в конце 50-х годов основные направления капиталовложений были связаны не с показателями эффективности отдельных отраслей, а с определенными требованиями обеспечения технико-материальных пропорций в соответствии с общей линией хозяйственной политики стран.

Форсирование на широком фронте капиталовложений, осуществляемое во всех странах, привело к началу 60-х годов к использованию резервов мощностей в отраслях, обслуживающих капитальное строительство. Возникли узкие места и некоторые отрасли машиностроения все менее были способны удовлетворить инвестиционный спрос на производственное оборудование, отвечающее современным требованиям. В это время во всех странах произошло повышение доли незавершенного строительства и тем самым затянулись сроки ввода в действие производственных мощностей. Вступление с опозданием в строй ожидаемых производственных мощностей и возникновение в результате этого некоторых диспропорций в материально-технических связях производства все более затрудняло или делало невозможным дальнейший быстрый рост капиталовложений. Это обстоятельство явилось отправным пунктом снижения темпов роста капиталовложений.

Перенапряженная деятельность в области капиталовложений, по нашему мнению, послужила материальной основой циклического движения всего производства в отдельных народных хозяйствах.

Замедление роста капитальных вложений происходило одновременно с сокращением источников новой рабочей силы. Эти процессы обратили вни-

* В наших расчетах официально опубликованные данные были модифицированы таким образом, что реализованный в ценах промышленных изделий налог с оборота был пропорционально распределен между частями конечного продукта, идущими на капиталовложения, на другие виды накопления и на потребление.

мание руководящих органов на роль интенсивных факторов экономического развития — на общий уровень и характер техники, на необходимость ликвидации отставания в этих областях. Требование повышения уровня и изменение характера техники особенно сильно выступало в ГДР и ЧССР по двум причинам: меньшая обеспеченность рабочей силой в повышенной мере принуждала к введению техники, экономящей живой труд; общее повышение требований к техническому уровню изделий машиностроения со стороны спроса как на внутреннем, так и на внешних рынках. Свидетельством того, что эта потребность существовала во всех странах СЭВ и что машиностроение этих стран не могло в достаточной мере удовлетворить это требование, является то, что в 60-х годах постепенно возрастает доля импорта машин из капиталистических стран во всем импорте машин.

Изменения общих условий развития вызвали пересмотр в отдельных странах объемов и направлений капиталовложений. Сокращение темпов роста капиталовложений во всех странах сопровождалось повышением их концентрации. Об этом свидетельствует значительное улучшение отношения объема вступивших в действие основных фондов к объему текущих капиталовложений. В отраслевой структуре капиталовложений во всех странах в большей или меньшей мере сократился удельный вес сельского хозяйства, повысился удельный вес сырьевых отраслей и машиностроения. Внутри сырьевых отраслей наблюдались прогрессивные сдвиги в сторону сокращения вложения в каменноугольную промышленность и повышения значения нефтяной промышленности; во всех странах увеличились вложения в химическую промышленность и начался ее перевод на нефтехимическую базу. Изменение структуры капиталовложений в ЧССР до середины 60-х годов было меньшим, чем в других странах.

Структура капиталовложений во второй период находится уже в относительно большей связи с показателями эффективности производства отдельных отраслей, хотя нужно указать, что и изменение структуры материальнотехнических потребностей народных хозяйств действовало в том же направлении.

Что касается изменения структуры машиностроения, то эта проблема, как было указано, особенно остро стояла в ГДР и в ЧССР. На основе данных о структуре капиталовложений, о структуре производства и экспорта в машиностроении можно сделать вывод, что в ГДР во второй период было начато изменение структуры и сужение профиля продукции машиностроения в сторону большего приспособления к внутренним потребностям и сокращения материалоёмкости продукции, особенно идущей на экспорт. Продолжение этой структурной перестройки намечается и в новом пятилетнем плане. В ЧССР, в связи со стагнацией капиталовложений основные усилия были направлены не на изменение структуры машиностроения, а на повышение степени использования мощностей путем количественного повышения экспорта традиционной продукции машиностроения. Повышение использования

мощностей происходило без особой модернизации, которая отвечала бы прогрессивным сдвигам спроса на внешних рынках.

К середине 60-х годов в результате вступления в действие новых производственных мощностей и некоторого смягчения в результате этого возникших ранее материально-технических диспропорций, открылась возможность дальнейшего привлечения рабочей силы. Это повело к выходу из стагнации и повышению темпа роста производства и капиталовложений. Хотя подробный анализ развития в самые последние годы выходит за рамки настоящего исследования, все же, исходя из агрегатных величин, можно установить, что это оживление во многих отношениях началось опять на основе использования экстенсивных факторов роста. Хотя кажется, что самый важный вывод, который можно сделать на основе изучения предыдущего периода развития, состоит в том, что *на уже достигнутом уровне развития ускорение роста за счет экстенсивных факторов объективно выталкивает народное хозяйство за пределы уравновешенного развития, поглощает резервы повышения эффективности* и тем самым снижает темп роста, по сравнению с тем темпом, который можно было бы прочно обеспечить в случае интенсивного развития.

По существу тот же самый вывод подтверждает и анализ фонда потребления. В первый период во всех странах *доля фонда потребления в конечном продукте* снижается в основном в связи с повышением доли капиталовложений. Во второй период в целом тоже продолжается, хотя и в меньших размерах, снижение доли фонда потребления (за исключением Чехословакии), но в начале этого периода имеет место некоторое повышение удельного веса фонда потребления, который в последующие годы снова снижается. В отличие от первого периода, в снижении доли фонда потребления большую роль играет не рост фонда капиталовложений, а рост запасов. (В ЧССР рост фонда потребления достигнут как за счет сокращения доли капиталовложений, так и доли запасов.)

В первый период быстрый рост конечного продукта позволил обеспечить и быстрое повышение *фонда потребления в расчете на душу населения.* В ГДР и НРБ среднегодовой прирост фонда потребления на душу населения составлял около 90% среднегодового прироста конечного продукта, а в СССР и ЧССР — 65—55%. Во второй период во всех странах снижается рост потребления на душу населения, причем в больших размерах, чем рост конечного продукта. В ГДР и в 1962 и 1963 годах фонд потребления на душу населения был абсолютно ниже, чем в 1961 году. Кроме этого — за исключением Болгарии — в некоторые годы имело место и абсолютное сокращение непроизводственных капиталовложений в расчете на душу населения. Из этого вытекает, что оживление экономики к концу второго периода было достигнуто и за счет некоторого ущемления роста жизненного уровня (особенно в ГДР).

Возникает вопрос: не является ли некоторый рост доли фонда потребления в конечном продукте, наблюдаемый на границе двух периодов, причиной

относительного сокращения капиталовложений? Учитывая ранее сказанное о причинах сокращения капиталовложений, нет оснований говорить о непосредственном ограничивающем влиянии роста потребления на рост капиталовложений, поскольку *никакой перегруппировки капиталовложений и затрат в отрасли, производящие предметы потребления, не произошло в ходе второго периода.* Некоторое тормозящее влияние потребления — наряду с положением сельского хозяйства — косвенно ощущается, однако, со стороны внешней торговли, что проявлялось в замедлении экспорта потребительских и сельскохозяйственных товаров или в повышении их импорта. Это в свою очередь несколько сужало возможности импорта современной техники и технологии.

В ходе исследования мы не занимались изменением жизненных условий населения. Поэтому здесь ограничимся только краткой характеристикой некоторых черт политики в области заработной платы. В исследуемых странах рост реальной зарплаты в материальном производстве в первый период был намного выше, чем во второй. Притом *наблюдалась сильная тенденция к выравниванию уровней зарплаты между отраслями в отдельных странах.* Это значит, что в отраслях с относительно низким уровнем зарплаты — прежде всего в сельском хозяйстве, а также в легкой и пищевой промышленности и в отраслях материального обслуживания — повышение заработной платы (личных доходов в сельском хозяйстве) было выше, чем в других отраслях. В тех странах (СССР и НРБ), где в начале периода была большая дифференция в уровнях зарплат между отраслями, сближение этих уровней происходило более быстро. В ЧССР же сдвиги в отраслевых пропорциях зарплат в течение всего периода были минимальными, при известном отставании сельского хозяйства.

В середине 60-х годов во всех странах отраслевые пропорции зарплат значительно приблизились друг к другу: сократилось преимущество сырьевых отраслей и отраслей, обслуживающих капиталовложения. Но все же уровень зарплаты в сырьевых отраслях на 30—40%, в машиностроении и в строительстве — на 20—30% превышает средний уровень зарплаты по народному хозяйству. С другой стороны, уровень личных доходов в сельском хозяйстве приблизился к народнохозяйственному уровню (70%—80%). В СССР и НРБ личные доходы в сельском хозяйстве достигли среднего уровня зарплаты в легкой и пищевой промышленности. Зарплата в отраслях материального обслуживания в целом колебалась вокруг среднего по народному хозяйству уровня.

Анализируя связь динамики зарплаты с динамикой производительности труда или эффективности производства, можно установить, что только на уровне народного хозяйства имеется общая связь между динамикой этих показателей. В отношении же отдельных отраслей народного хозяйства между динамикой зарплаты и динамикой производительности труда (эффек-

тивности) имеется очень слабая связь. Основная линия политики в области зарплаты характеризовалась стремлением к выравниванию отраслевых уровней зарплаты, что особенно ярко проявлялось в период быстрого роста. Внутри этой общей линии, можно проследить, что в соответствии с целями хозяйственной политики тем или иным отраслям временно обеспечивалось предпочтение в области повышения заработной платы.

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Внешняя торговля

На протяжении всего исследуемого периода внешнеторговый оборот рос быстрее конечного продукта и поэтому в количественном отношении был активным фактором экономического роста. Размеры этого опережения несколько увеличились в пользу внешнеторгового оборота во втором периоде. По степени включения в международное разделение труда (размер экспорта по отношению к величине конечного продукта в сопоставимых ценах) в 1965 году на первом месте стояла Болгария — 34%, почти на одном уровне находились ГДР и ЧССР — около 30%, в несравнимо меньшей мере был включен в разделение труда СССР.

Годовые колебания экспорта и импорта, имевшие место в различных странах, находились в тесной связи с изменениями в производстве, в политике капиталовложений. Внешнеторговые связи в то же время служили важным средством разрешения возникших внутри стран напряженностей и диспропорций. Ввиду различий в условиях развития отдельных стран изменения в производстве и в капиталовложениях по-разному отражались на динамике экспорта и импорта и привели к наличию больших разнообразий в сфере внешней торговли, чем в сфере производства.

Так, *в Болгарии* при относительно быстром и довольно равномерном росте экспорта форсированная политика капиталовложений привела к более быстрому и в отдельные годы скачкообразному росту импорта машин и сырья, что проявилось в возникновении (с 1959 года) и усилении внешнеторговой задолженности капиталистическим странам и СССР.

В *ГДР* в конце первого и в начале второго периода наблюдалась стагнация экспортных возможностей, поскольку замедление экспорта продукции машиностроения и химической промышленности только частично уравновешивались увеличением экспорта продукции легкой промышленности. На протяжении ряда лет доля экспорта в конечном продукте оставалась на одном уровне. Эта стагнация, даже при ограниченном росте импорта, привела к возникновению пассивного сальдо внешнеторгового баланса, в первую очередь в торговле с СССР.

ЧССР в годы абсолютного сокращения капиталовложений (1962, 1963 гг.) стремилась путем усиления экспорта уменьшить степень недоиспользования производственных мощностей, особенно в машиностроении и неко-

торых сырьевых отраслях. Возникшие в результате этого экспортные активы были использованы как дополнительный источник в ходе оживления экономики в 1964, 1965 годах, когда импорт рос быстрее экспорта.

В *СССР* в исследуемый период рост импорта был довольно равномерным и несколько опережал рост экспорта, что повело к сокращению возникшего ранее актива торгового баланса (со странами СЭВ). В динамике экспорта имеются большие колебания, которые связаны с изменениями спроса стран СЭВ, а также с тем, что увеличение вывоза сырья промышленного происхождения только частично уравновесило временные спады экспорта продовольствия и стагнацию экспорта машин в 1959—62 годах.

Рассмотрим подробнее степень и основные направления участия отдельных стран в международном разделении труда. Размер и направление отраслевого включения стран в международное разделение труда характеризуется нами на основе двух показателей: отношение экспорта к продукции и импорта к народнохозяйственному потреблению.*

В ГДР и ЧССР в течение всего периода самое интенсивное участие в разделении труда принимает машиностроение (доля экспорта в производстве свыше 20%). При этом в ЧССР доля экспорта в продукции машиностроения повышается (во второй период), а в ГДР стабилизировалась на одном уровне. В такой же мере участвует в разделении труда легкая промышленность ЧССР и в несколько меньшей степени легкая промышленность ГДР. В обеих странах эта доля с начала 60-х годов сильно повышается. Среди сырьевых отраслей промышленности в ГДР химическая и топливная, а в ЧССР черная металлургия и деревообработка участвуют в разделении труда почти в такой же мере, как вышеперечисленные отрасли.

В Болгарии в исследуемый период сильные изменения произошли в направлениях включения в международное разделение труда. В начале исследуемого периода основными экспортными отраслями была пищевая промышленность (доля экспорта в продукции = 15%), цветная металлургия (35%) и сельское хозяйство. К концу периода при некотором повышении доли экспорта в продукции пищевой промышленности и сельского хозяйства резко возросла доля экспорта в продукции машиностроения, достигнув, как и в развитых странах, 20%.

В СССР размеры участия отраслей в разделении труда несравнимо меньшие, чем в вышеперечисленных странах. Относительно высок удельный вес экспорта в продукции черной металлургии, нефтяной и деревообрабатывающей промышленности. Причем в течение рассматриваемого периода прослеживается тенденция к росту доли экспортируемой продукции в этих отраслях. В отличие от других стран доля экспорта в продукции машиностроения незначительна и даже сокращается.

* Под продукцией понимается валовая продукция отраслей по внутренним ценам, а под народнохозяйственным потреблением: производство + импорт — экспорт.

Сопоставляя изменения отраслевого включения стран в международное разделение труда с показателями эффективности производства этих отраслей, можно установить, что *изменения идут в основном в направлении повышения доли экспортной продукции в производстве тех отраслей, ефффективность которых средняя или выше среднего.* Это проявляется в повышении доли экспорта в продукции машиностроения и легкой промышленности (за исключением СССР). В Советском Союзе усиливается участие в разделении труда сырьевых отраслей промышленности, эффективность которых достигает среднего народнохозяйственного уровня. Наблюдаемое во всех странах во второй период повышение доли экспортной продукции в производстве черной металлургии (в ГДР и НРБ это изменение имеет меньше значение, чем в ЧССР и СССР) не согласуется с низкой эффективностью этой отрасли, но здесь речь идет о повышении внутриотраслевого разделения труда, что нужно оценить как положительное явление.

Другую сторону включения в международное разделение труда характеризует показатель доли импорта в народнохозяйственном потреблении, который отвечает на вопрос о том, в каких областях развитие народного хозяйства в большей мере зависит от импорта. Как уже упоминалось в начале раздела, в исследуемый период во всех странах повышается доля импорта в народнохозяйственном потреблении.

Во всех странах, кроме Советского Союза, самая большая зависимость от импорта имела место в черной металлургии и в топливной промышленности. Доля импорта в потреблении продукции обеих отраслей составляла в ЧССР 20%, в ГДР — 30%, в Болгарии — соответственно 50 и 60%. Данные показывают, что степень зависимости от импорта в ЧССР и ГДР в обеих отраслях, а в Болгарии в топливной промышленности возрастает. В ЧССР, в отличие от ГДР, высока доля импорта в потреблении изделий химической промышленности (25—30%).

Имеющаяся разница между странами в уровне индустриального развития наиболее ярко проявляется в доле импорта в удовлетворении внутреннего спроса на машины оборудование. Болгария, несмотря на очень высокие темпы роста машиностроения, почти половину потребностей в машинах и оборудовании покрывает за счет импорта. Обратная картина наблюдается в ГДР, где машиностроение активно включается в разделение труда лишь со стороны экспорта. В то же время импорт — хотя и возрастает в последние годы — пока не играет существенной роли. Доля импорта в покрытии потребностей в машинах в ЧССР в начале исследуемого периода была почти такая же, как в ГДР. В последующие годы она удвоилась, и в 1965 году уже 17% потребности страны в машинах покрывалось за счет импорта.

В соответствии с низким удельным весом внешней торговли в народном хозяйстве Советского Союза и со стороны импорта основное значение имеет не доля импорта в потреблении, а прежде всего разница между удельными

весами импорта в потреблении продукции отдельных отраслей. Зависимость от импорта росла быстрее всего и к концу периода достигла наибольшего уровня в пищевой промышленности. На таком же уровне находился этот показатель и в текстильной и швейной промышленности. Противоположная тенденция имела место в снабжении сырьем тяжелой промышленности, где ярко выразилась политика замены импорта внутренним производством (прежде всего в цветной металлургии).

В области импорта сельскохозяйственных продуктов нужно отметить, что их доля в народнохозяйственном потреблении ГДР и ЧССР составляла 10—15% и в Чехословакии из года в год повышалась. В значительно меньшей мере участвовал импорт сельскохозяйственных продуктов в покрытии потребностей в СССР и НРБ, но и в этих странах во второй период возрастает роль импорта в удовлетворении потребностей в продуктах сельского хозяйства и пищевой промышленности.

Из вышесказанного следует, что в ГДР, ЧССР и НРБ в потреблении *повысилась доля импорта тех товаров, которые замещают или дополняют производство менее эффективных отраслей.* В то же время изменения в импорте СССР лишь частично совпадают с благоприятными, с точки зрения эффективности, тенденциями.

Выяснив связь производства и потребления с экспортом и импортом, остановимся несколько подробнее на анализе изменений внутри самого внешнеторгового оборота.

Во внешнеторговом обороте ЧССР и Болгарии доля взаимно уравновешенного оборота по отдельным отраслям (выражающего степень внутриотраслевого разделения труда) на протяжении всего исследуемого периода постоянно возрастала: в НРБ — с 30 до 50%, а в ЧССР — с 60 до 70%. В ГДР этот процент оставался на неизменном и довольно низком уровне (40%), хотя по отдельным отраслям имелись некоторые изменения. В ЧССР и НРБ в повышении доли уравновешенного оборота главную роль играло машиностроение; в этой отрасли и в ГДР также повысилась доля уравновешенного оборота. Следовательно, *внутриотраслевое разделение труда развивается в первую очередь в машиностроении* и, как упоминалось выше, в последние годы в черной металлургии. В СССР, наоборот, доля уравновешенного оборота сократилась с 62 до 53%. Сокращение вызвано в основном снижением экспорта и повышением импорта сельскохозяйственных и пищевых продуктов.

О направлении включения стран в межотраслевое разделение труда дает представление структура актива и пассива неуравновешенного по отраслям торгового оборота.

ЧССР и ГДР имеют схожую структуру актива и пассива: доля машин и оборудования в активе в обеих странах равна 65%, оставшаяся часть актива в ЧССР состоит из товаров легкой промышленности, а в ГДР из

продуктов легкой и химической промышленности. (Доля продукции легкой промышленности в ГДР сильно растет в последний период главным образом в ущерб продукции химии.) С другой стороны, около 60% пассива составляют продукты сельского хозяйства и пищевой промышленности, оставшуюся часть дает сырье промышленного происхождения, доля которого возрастает (в ГДР в эту группу не включены продукты химии).

60% актива неуравновешенного торгового оборота *Болгарии* дает пищевая промышленность, 20% — сельское хозяйство, а остальную часть — легкая промышленность, доля которой в активе сокращается в пользу пищевой промышленности. В пассиве 60% дает продукция машиностроения, эта доля несколько понижается в последнее время. Оставшуюся часть пассива составляет промышленное сырье, доля которого, как и в ГДР и ЧССР, все в возрастающей мере отягощает торговый баланс.

В активе *Советского Союза* доля сырья промышленного происхождения (без продукции химической промышленности) составляла в среднем 60% и все время сильно возрастала. В первый период около 20% актива еще давали продукты сельского хозяйства, с 1963 года этот актив сельскохозяйственных продуктов перешел в пассив. Самой значительной статьей пассива были изделия легкой промышленности (50%) и машиностроения (35%). Возникновение пассива сельскохозяйственных продуктов произошло за счет сокращения удельного веса обеих вышеуказанных статей.

В заключение сделаем лишь несколько замечаний относительно того, в каком направлении влияли вышеизложенные структурные особенности внешнеторгового оборота на эффективность народного хозяйства исследуемых стран.*

Исходя из вышеуказанных структур актива и пассива неуравновешенного оборота стран и направления их изменений, можно сделать следующие выводы: *в ЧССР и ГДР неуравновешенный оборот улучшает народнохозяйственную эффективность*, поскольку высокоэффективные отрасли давали решающую часть актива. (Хотя легкая промышленность ЧССР в первый период не была особенно эффективной отраслью, во второй период ее эффективность сравнялась с эффективностью машиностроения.) Пассив же состоял из продукции низкоэффективных отраслей. Наличие в пассиве ЧССР продукции высокоэффективной химической промышленности (15% пассива) ставило ее в менее выгодное положение, по сравнению с ГДР.

Неуравновешенный оборот Болгарии не улучшает народнохозяйственной эффективности, так как подавляющую часть актива дает малоэффективная пищевая промышленность, а пассива — высокоэффективное машиностроение.

* Относящиеся сюда расчеты нужно рассматривать как приближения информационного характера, могущие дать ответ на вопрос о том, какую роль играли в чистом товарообороте отрасли с различной эффективностью. Эффективность экспорта и импорта продукции тождественных отраслей мы считаем одинаковой, и поэтому уравновешенный оборот был изключён из расчётов.

Изменение структуры пассива и повышение эффективности пищевой промышленности (со стороны актива) действует в направлении повышения эффективности неуравновешенного оборота.

В СССР неуравновешенный оборот по существу не затрагивал уровня народнохозяйственной эффективности, Поскольку с одной стороны актив давали среднеэффективные отрасли народного хозяйства, а также больше половины пассива составляли продукты низкоэффективных или даже убыточных (во второй период) отраслей. Однако с другой стороны остальную часть пассива давала продукция высокоэффективного машиностроения, что уравновешивало положительное влияние импорта продуктов неэффективных отраслей.

EXPERIENCES IN ECONOMIC GROWTH IN CERTAIN CMEA COUNTRIES

I. Zhukova—Á. Miklós

A working-panel at the Economic Institute of the Hungarian Academy of Sciences has been carrying out research on the problems in economic growth between 1957—65 in the CMEA countries. So far studies have been made of the Bulgarian, Czechoslovak, GDR, and Soviet economies. The article deals with their results.

The authors examine economic growth, through the development of material processes: the supply of labour and fixed assets, the combined utilization of the two factors, the directions of the utilization of the global social product and the changes experienced in the field of foreign trade turnover.

Since development in the listed countries in the period under examination includes a period of rapid, followed by one of slow, development, research was primarily aimed at finding the factors which led to a change in the rate of economic growth. By analyzing the above questions the authors came to the conclusion that the slowing down in increase of the final output in the early '60's cannot simply be explained by the quantitative changes in inputs. In the economy as a whole, the decisive factor in the slowing down of the growth of production was a deterioration in the effectiveness of production. This was primarily in connection with the fact that changes in the structure of inputs took place, and the substitution of live labour with fixed assets was a particularly important question which came to the forefront. The effectiveness of substitution had a great effect on the entire growth. A basic problem was that newly introduced techniques, and applied technology could not be suitably adapted to the changes in the labour situation.

The acceleration or deceleration of investment activities was in close connection with the rate of production growth. In the authors' opinion the speeded-up investment policy — of the late '50's was exaggerated and this formed the material basis for the cyclical movement of the entire reproduction process. The article also deals with the extent to which the different countries considered the branch differences in the effectiveness of production, in the allocation of investment goods by branches.

Regarding foreign trade, the article was primarily directed toward the relationship between import—export activities and production, and how supply on the national economic level was assured. Finally, the authors attempted to answer the question of the relationships which can be established between the effectiveness of production in the individual branches, and the development of the commodity pattern of foreign trade turnover.

REVIEWS

B. Gervai

THE ROLE AND SITUATION OF PRIVATE ARTISANS IN HUNGARY

In the last ten years the policies of the Hungarian Socialist Workers' Party created a suitable atmosphere for the broad scale recognition of the useful activities of private artisans.

A decision of the 8th Congress of the HSWP marked out the place of private artisans after the foundations of socialism have been laid down. "In the development of our society, the interests of the population will continue for quite some time to demand that we provide opportunities for private artisans to operate within the framework of our laws. Small private industry . . . will continue to exist until state and cooperative industry . . . can supply the increasing demands of the population better than the individually working artisans in all respects. The artisans' . . . honest labour is an aid to the development of our society. However, the capitalist tendencies appearing within their sphere must be limited. The Party's aim is that private artisans . . . take an active role in the socialist cooperation of the working people, and gradually — of their own free will, take the road to socialism." [1] This decision provides a long perspective for the undisturbed operation of the private artisans. It ended a number of discriminatory measures detrimental to them, and brought the artisans closer to socialist ideas.

The 9th Party Congress strengthened this policy towards artisans: "Those epsmall ple, even petit bourgeois, who work as artisans or private tradesmen are respected members of our society. Without ending the struggle against the spirit or actual cases of parasitism—everyone must understand that in the period of building socialism, we are in need of the socially useful work of a certain number of independent artisans and small tradesmen, and since they meet a social demand, they will be necessary in the future as well." [2]

The rise in living standards cannot be expressed any more today by the per capita quantity of goods only, but by the increase in services as well. The first coordinated plan of local industrial policy (for the capital and the counties) to meet these demands was prepared during the period of the second five-year plan. The Economic Committee of the government prescribed in its decision on the subject: where the creation of local socialist industry is not profitable, new forces of production must be created with the smallest inputs, — by issuing trade licences to private artisans. When judging such situation, the assertion of erroneously interpreted ministerial or sectoral interests must be avoided. [3] In the services, the degree of mechanization is low, possibilities for the division of labour are less, so there is a broad scope for small-scale, useful, private industry. This can be proved by the fact that in 1967 almost half of these activities were performed by private craftsmen to a value of 3.5 billion forints·

The number of people working in private small-scale industries

Despite the economic steps to aid the operation of small industry, the number of independent private craftsmen has decreased. Demands of the population, on the other hand, have grown, and the socialist sector's service activities are developing at a slow rate. The increase in demand, and the drop in numbers has created a monopolistic situation in certain trades and fields, for some private craftsmen. From January 1st, 1958 to January 1st, 1964, 84,239 private artisans ended their operation, while in the same period, 27,439 new licences were issued. Therefore, the actual drop was 56,800 (of these 34,976 in the villages).

In order to achieve undisturbed supply for the population, certain paragraphs of the Law on Artisans had to be modified to suit practical requirements. The government increased the authority of the councils, speeded up administration in issuing new licences, and eased the operation of private artisans in the villages. With these steps the road to get the necessary number of people was opened.

Table 1

*The number of private artisans, 1961—1967**

Year	Independent	Employed	Apprentices	Total
	(annual averages)			
1961	78,852	14,486	12,773	106,111
1962	70,736	15,371	11,467	97,574
1963	66,579	14,577	10,948	92,104
1964	65,928	14,242	10,872	91,042
1965	68,685	15,599	11,510	95,794
1966	70,892	13,572	13,266	97,730
1967	71,649	12,466	14,929	99,044

* Source: Data of the Ministry of Light Industry.

Thus, the annual average number of independents dropped a further 16.4 percent between 1961 and 1964, so despite the subsequent increase in 1967 there were still 7 thousand less than in 1961. The number of employees were 2,000 less in the final year, than in the period used as a basis. The drop was caused by the special income tax based on the number of employees, initiated in 1966. This was equalized by an increase of a similar rate, in the number of apprentices, which aids replacement and helped to place young people upon leaving school. If we examine the fluctuation of the independents in the years following the modifications in the Law on Artisans in detail (from September 30, 1964 to March 31, 1968) we find that in this period 25,606 new licences were issued, while 19,084 were withdrawn, that is, that there was an increase of 6,522 craftsmen to serve customers. One of the major reasons for this large-scale fluctuation is the high average age.

The number of people under 29 years of age (1960 figure) was an infinitesimal 3.7 per cent, while the number of those over 50 years of age was 48.3 per cent. Between 1960 and the end of 1965, the ratio continued to increase in the direction as the old, and the increase in numbers over the past three years barely made any difference. The reason is that during the socialist reorganization of small-scale industry, the older people, who were incapable of adapting to the work tempo of large-scale production, were left out.

The volume of trade transacted

Our method of calculation is based on a special economic estimation, which we have developed to approximate accuracy, using existing data.

Table 2

Volume of trade transacted by artisans, 1961—1967

Year	Services*	Commodity production**	KETI turnover***	Total
	thousand forints			
1961	3.714.182	753.525	150.002	4.617.709
1962	3.441.562	705.680	174.264	4.321.506
1963	3.280.001	671.313	192.448	4.143.762
1964	3.495.459	777.216	254.655	4.527.330
1965	4.117.113	716.919	295.536	5.129.568
1966	4.266.582	740.667	272.715	5.279.964
1967	4.299.968	737.679	239.172	5.276.819

* All non-commodity-producing activity.
** Including women's and men's outer garments made-to-order.
*** KETI — Office for Artisan Export Production.

Thus, within the seven years, estimated total production was the smallest in 1963. Later it gradually increased and in 1967 was over half a billion higher than in the base year. Turnover increased faster than numbers. This was possible in private industry, — where the use of machines is unimportant, and we cannot even speak of a division of labour — because if demand increases, the craftsman will as much as double his working hours.

A comparison of the ratios in total turnover in 1967 shows that the artisans used four-fifths of their capacity (81.5 per cent) for the main task, the fervices, 14 per cent went to commodity production and 4.5 per cent to obtain soreign exchange or substitute imports.

The export and the import-substituting activities of private artisans

In Hungary foreign trade has an outstanding role. Private artisans also carry out export and import-substituting activities. A number of their products, individual articles, have been successfully enriching our assortment

of export products. Many thousand products are made for export, and these are not only traditional items. Included, for instance, are the touch-marking machine used in fencing, granulating machines for the pharmaceutical industry, a phial-signing machine, and light diving equipment. The list of these few products shows that the artisans have found their places alongside a developed large-scale industry. The national economy derives further advantages from the fact that should foreign orders for a product go beyond the capacity of small-scale artisans, the production of the product is turned over to the state-owned, or the cooperative industry.

Despite these achievements, there are many drawbacks. Because of the irresponsibility of some craftsmen, and because of difficulties in obtaining materials, many products miss their shipping deadlines. Bureaucratism in the legal procedures and within the Export Office makes the term before the contract can be signed, too long, and carries with it the danger that foreign trade can not utilize the elasticity of small-scale artisan production.

In the first period of the new system of economic management, a number of restricting laws have been repealed. There is a possibility for multi-channel solution. The foreign trade enterprises can order exportable products directly from the craftsmen. Preparations are under way for founding cooperatives to work together in developing ways of purchase — and marketing. This is an attractive idea for craftsmen, because, while their independence would remain untouched, it would ease their material and spare parts purchase. It would also be cheaper, and they could sell their products on the foreign and domestic markets in an organized way.

Income distribution of the artisans

The incomes of private craftsmen cannot be determined by documentation. However, by combining a number of data (the character of the trade, number of workers, mechanical capacity, material and electricity utilization, legal overhead and profit rates, the building permits issued and the income as worked out on the basis of the tax administration's estimates, etc.) and making use of personal experiences over almost 20 years, an approximately accurate estimate may be given.

The monthly income estimate of craftsmen is 1,800—2,000 forints on national average. It is formed on the basis of the following:

Of the 72,000 people in private industry, almost 30 per cent earn under 600 forints. These do servicing and repair work in the villages, and outer districts of cities. The majority are over retirement age. Roughly 35 per cent earn amounts identical with those of industrial workers, an average of 1,800 forints. The third group (27 per cent) have incomes reaching 3,000 forints. And finally, 8 per cent of them attain an average monthly income of from 4 to 12 thousand forints. No doubt there are artisans whose earnings are outstanding and whose way of life is luxurious. Here we must differentiate between those who reached that high level with daily 12 to 16 hours' of high-standard work and are completely entitled to their high earnings, and those whose incomes are undeserved and come from profiteering. The latter, however, are not a mass appearance.

According to these income estimates, the earnings of two thirds of the artisans are not above those of skilled workers. This brings up the question,

why don't they look for employment in the socialist sector? One reason is that almost 50 per cent of the craftsmen are over the age of 50. Then, 39,000 of them live in villages, where there is hardly any socialist industry. At present we don't want to create situations whereby these people leave the villages. Others are tied, whether they want it or not, by the character of their trade, to independence.

The opinion about private artisans is complete in saying that the vast majority do useful work. Their operation is respected by the government and population alike. The small number who are unscrupulous, should be removed from the rows of small tradesmen (where they endanger the consumer) by administrative measures, considering each case individually. This, by the way, is a process already under way. Annually — for breaking the law, and causing damage to public interests and the population — 5 to 6 hundred licences are revoked.

Social re-stratification of craftsmen

In pre-1945 Hungary the family, as a production unit, had an important role. In the private workshop, often three generations worked together. In the social regrouping following 1945, the private businessman and his family found their place in the building of socialism, but the participation of family members still remained important. The wife — depending on the character of the trade — is in most cases a co-worker, and the family members handle certain work processes, as well as accept goods for repair, give out finished products, handle purchasing, and administration. Private business requires this help. Nevertheless, tremendous changes have taken place as regards the aims for and the results in raising children. Comparatively few tradesmen think that when they become old their children will take their place. By asking seven hundred small craftsmen (by interview method) we completed a survey, in the course of which we also asked about their children's chosen vocations. Only 8.5 per cent of the children of those asked had chosen independent work. This is connected with the fact that the road to other vocations has been opened to these children. The majority of them (23.5 per cent) became workers, while 11.1 per cent chose intellectual occupations. This proves that the boundaries of the small workshops aren't large enough for the young people. The small artisan family, as a closed production unit, is in an advanced state of dissolution.

The important improvement in the living standards of the people is also expressed in the changes in the living conditions of the craftsmen. Their housing situation changed in that, from among those questioned, in 1938 22 per cent did not have a flat (as tenants), while in 1964 but 3.4 per cent did not. At the same time the number of those owning their own apartment rose from 48 per cent to 68.1 per cent. These same families show a positive change in the possession of durable consumer goods. In 1949 66.4 per cent owned a radio, while in 1964 the number rose to 91.7 per cent. Washing machines grew from 1.3 per cent to 48.1 per cent, vacuum cleaners from 2.7 per cent to 18.7 per cent, refrigerators from 0.4 per cent to 9.2 per cent, motorcycles from 4.7 per cent to 14 per cent, automobiles from 0.9 per cent to 4.4 per cent. These figures indicate the improved living conditions of the people questioned.

However, it would be erroneous to conclude that all private craftsmen live under excellent conditions, in homes well equipped with durable consumer

goods. Even today, the average of those with only one room, is high. And while it is true that over 90 per cent of those asked own radios, the average of these owning other durable consumer goods remained under 50 per cent, and regarding several products, under 10 per cent.

The socialist system, and changes in social existence had a tremendous effect on the thinking of the private artisans. The idea of cooperatives is not foreign to them. When conditions become ripe, they change their way of existence. This can be seen by the fact that between 1961 and 1967, over 30 thousand craftsmen and their family members chose to join the cooperatives.

Expected development of the activity of artisans

The development of the role of small producers is a historical process full of contradictions, dependent on economic policy as a whole. Even under the new economic mechanism, small businessmen can usefully serve the development of the economy and the interests of the ordering parties, for a long time to come.

Based on the demands and tastes of the people, we can count on the fact that the outstanding masters will be called upon for a long time to solve questions of clothing, interior decoration, and supply personal requirements. The construction of private homes, building repairs, rebuilding of apartments, are jobs which are not profitable for the socialist construction industry, and — particularly in the villages — they have no capacity for it. The spread of durable consumer goods, and the electrification of the villages demands that there be people to repair this equipment. The export of artisans' products and the import substitution activity can well use the highly trained, experienced craftsmen who can also produce new inventions or innovations.

The chain of council enterprises and industrial cooperatives can generally only be found down to the district centre level. In the villages, there is at most a spot for handing out and collecting items. The population of the villages await with some justification a change in this situation, since under circumstances like that, the solving of tiny problems requires considerable time and expense. Filling out these blank spots could be aided, if a private craftsman, receiving a licence to operate, in a village with a population under 5,000, were to receive exemption from taxation, for a period longer than a year (as is the law at present). It would also help if the councils issued permits to young skilled workers trained by the craftsmen in the provincial towns and large villages, permitting them to work independently in a small village. At the same time, local retired skilled workers could work in their villages without having to give up their pensions. In building small family homes, state and cooperative industry should be partially relieved of this task, so that their capacity be left for large-scale construction, for apartment houses. For this purpose, the Ministry of Construction could widen the private construction workers' sphere of operation (the scope of activities they are entitled to carry out).

The question of replacement is a topical one. In the majority of industries, training takes place in the traditional manner, since this is more economical. However, repair work, made-to-order individual work require different, more versatile training, than making many new products, which can be done in industry under conditions of a broad division of labour and with modern

machinery. The training of universally skilled repair and service workers is the job of the socialist local industry and private craftsman. Everyday demands appear in these places in countless variations. However, the fluctuation of demand forces a study of what it is worth-while to preserve in the composition and tradition of private artisans, that is, what would need social support, and what are those spheres of activity which are dying out? In those private trades which have outlived themselves (boilermaker, carriage-lamp maker, makers of peasant wear, shepherd's cloaks, preserved food-makers, rock, stone and sand miners) there is no need for replacement. However, traditional artistic handicrafts (art locksmith, blacksmith, carpenter, wood sculptor, violin maker, musical instrument repairmen, etc.) must be saved from dying out, not because of respect for tradition, but for objective reasons. Their work is sought after on foreign markets, but due to a lack of experts we are already in a position where we cannot increase this type of labour-intensive exports.

It would be correct to increase sizably the number of apprentices trained by private craftsmen from the present 6,000 annually, since possibilities are far greater. The majority of these young people serve as replacement in socialist industry, and a small portion of them supply requirements in the villages. It would be worth-while to ensure (by territory and trade), that the young skilled workers trained by private craftsmen should work at council enterprises, or cooperatives, after their apprenticeship. However, it would be even more important to ensure that both apprentice training and the issuing of new licences result in a basic improvement in the present situation of services in the villages.

Increase in artisans' exports could be helped if foreign trade would include the Office for Artisans' Export Production in its market research. An important condition for the operation of private industry is to ensure that private industry can legally obtain the materials and parts necessary to carry on the work, ordered by the population. These materials are generally meant to restore the use value of a product, thereby lengthening its period of service. This way the consumer has the opportunity to purchase the new item at a later date, and the new item presumably needs even more raw material, often imported, than the repair of the old. A situation under which the most typically necessary spare parts are continuously in stock should be brought about by commerce.

The new economic mechanism will make enterprises, and public bodies cover their needs where the price, quality, and deadlines are the most advantageous to them. In daily practice, there are many small, individual and specialized demands which private artisans could meet. A definite step forward in this field was the April 1968 decision of the Council of Ministers, under which up to the value of 100 thousand forints could be ordered by public bodies (in goods or services), from private artisans without any special permit. It would be too early to measure the effects of this decision, but no doubt it will be one of the important factors aiding artisans to find their places within the relations and possibilities marked out by socialist economic relations.

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I. Kovács

THE INSTITUTE FOR ECONOMIC PLANNING OF THE NATIONAL PLANNING OFFICE

The Institute for Economic Planning of the National Planning Office was founded in 1966 by the fusion of the Independent Scientific Planning Section of the Planning Office and the Institute of Regional Planning. The purpose in founding the Institute for Economic Planning was to bring about an institution under the auspices of the Planning Office where economic research serving the improvement of the foundations of planning, the raising of its standard and the improvement of its methods could be conducted. In addition to economic research, the scientific investigation of theoretical, methodological and organizational problems connected with the application of up-to-date computers and data processing machinery in planning is also carried out by the Institute and — until the Computer Centre of the Planning Office will be set up — it also transacts the necessary computations as well as organizes the Computer Centre itself.

In these two years the organization of the Institute has become established, its field of activity and its particular working methods have been formulated.

The Institute of Economic Planning is the scientific research organization of the National Planning Office. Taking into account the requirements of scientific work, the Institute's activities are carried out in the service of the work of the Planning Office. The primary task consists in applied research in economics, the investigations being aimed at the theoretical and methodological problems of planning, the economic interrelations to be considered in planning and the working-out of up-to-date planning methods.

Research is generally not extended to general economic and special branch problems but the results achieved in these fields are followed with close attention and utilized in the Institute's work according to necessity.

The Institute may commission also other institutions (research institutes, university departments, etc.) or individual research workers, as the case may be, to examine problems connected with planning for the analysis of which the conditions do not exist in either the Institute or the Planning Office

Major tasks and organization of the Institute

The Institute concentrates its whole activity on improving the scientific foundations of decisions on economic policy to be prepared or taken in the course of national economic planning. This is done partly by investigating and analysing the factors determining economic growth, partly by studying the theoretical problems of national economic planning, and its organizational, logical order, its methods and techniques, and by making efforts at their improvement.

In the next two to three years the most important and immediate tasks to be analysed by the Institute are the following:

a) Examination of the factors determining the structure of the Hungarian national economy and the changes therein;

b) The exploration of possibilities and conditions of a wider application of mathematical methods in national economic planning under the conditions of the new system of economic control and management;

c) The analysis of the role of national economic planning in the planned control of the economy and of the interrelations between the plan and the economic regulators;

d) The utilization of the laws affecting the regional distribution of productive forces in planning the regional pattern of the economy;

e) The study of information requirements of national economic planning and the most expedient form of meeting these requirements under the new system of economic control and management.

The organizational set-up of the Institute was worked out in accordance with the fields of research and the methods employed, with the further intention to handle the organizational forms in a flexible way and make changes in the organization according to the possible changes in the tasks or, to re-group individual researchers if necessary, while maintaining the existing organization. At present, the Institute comprises the following sections:

1. Section of economic analysis
2. Section of planning models
3. Section for the application of mathematical methods
4. Section of planning theory and the economic mechanism
5. Regional planning section
6. Section of information research.

The task of the individual sections

Section of economic analysis

The Section carries out, first of all, the analysis of the structure of the Hungarian economy with the aid of various methods. The aim of the research work is to explore as fully as possible through static and dynamic analysis the position of the economy, the factors, laws and constraints affecting the changes in structure. A further task of the Section is to analyse with the aid of value and physical indicators, the economic development level of various countries, as well as the factors determining their level and rate of growth with the aim of providing more solid foundations for long-term planning by disclosing the most important qualitative and quantitative relations.

Section of planning models

Its task is to prepare the application in planning of up-to-date mathematical methods and macroeconomic models. Analysis of the reliability and error limits of the calculations to be performed with the models and the determination of the limits of accuracy to be observed in the necessary data collection are also among the tasks of this Section.

A further task of the Section is to systematize the models, to adapt the known mathematical models and to work out new models according to the requirements of Hungarian planning practice.

Section for the application of mathematical methods

The Section organizes and controls the practical calculations to be performed with the aid of the models tested in the course of experimental calculations and which are applicable in national economic planning.

Drawing on the experiences gained in the course of the calculation, the Section also investigates the possibilities of a further improvement on the models serving as a basis of the calculations.

Section of planning theory and the economic mechanism

The tasks of the Section include research into the theoretical problems of national economic planning and the examination of the organizational and logical order of planning. It also has to work out, on the basis of the investigations, proposals to improve the technology of planning.

A further task is to examine the connections and interrelations between planning and the economic mechanism. In this framework special attention is paid to disclosing the factors which promote and further the fulfilment of the national economic plan, to the interrelation between the regulators and the plan, and to the solution of coordination problems arising in connection with the plans covering various fields.

Regional planning section

The task of the Section is to provide foundations for regional planning activity, to work out and improve the theoretical and methodological problems of regional planning. The research projects aim at disclosing the laws of the regional distribution of productive forces and production, and investigating and analysing the territorial pattern of the economy.

Beyond that, the task of the Section includes the complex economic analysis and evaluation of individual economic regions, the working out of models for optimum spatial patterns and to solve economic-cartographical tasks.

Section of information research

Its task is to examine in the framework of organizational and methodological studies the supply of information for national economic planning. As a result of the investigations, a practical system of information network has to be devised. A further task is to organize research connected with the flow and processing of information and to carry out the necessary processing work.

Major results of scientific research

In spite of the relatively short existence of the Institute, many studies have been published and several works entirely or partially completed which have contributed and will continue to contribute to raising the standards of planning work. The most important research projects can be summed up under the following headings:

Some problems of the international comparability of input—output tables

The research was aimed at a methodological foundation of comparative analysis based on input—output tables. The major findings are:

a) a type of model has been constructed to be used in international comparisons;

b) it has been proven that the more complex indicators (e.g. the import content of exports) are more stable and thus better suited for comparison.

The results of this research project have met with great interest at the 1967 Moscow conference of the CMEA countries and at the 1968 Geneva conference of UN, which both dealt with input—output analysis.

Analysis of the structure of the Hungarian economy

The research projects relied on input—output tables covering various years, utilizing also the results of price-type calculations. In order to get a clear picture of the position of the economy, laws and limitations influencing the changes in structure, both static and dynamic analytical methods have been used.

The examination of the structure of the economy on the basis of different price types enabled a more realistic evaluation of the fundamental economic proportions, of the weight of the major branches, their role in the economy as well as a more exact formulation of guidelines of economic policy to be followed in the future.

Simulation model of income distribution

The testing and generalization of the simulation model of income distribution as well as the establishing of its information basis have been completed. In the course of this project the following tasks have been performed:

a) testing of the abstractions hitherto used; estimation methods have been worked out to assess changes in demographical factors and their impact on income distribution; the methods of measuring income inequalities and the research of their motivation have been improved;

b) the model has been extended to include farmers' households and those "with dual income";

c) the data of the 1962 sample survey have been systematized and fixed for the purpose of simulation calculations and the missing informations have been estimated.

The immediate task is to construct a model of the interrelations between income distribution and consumption, to extend the simulation model into a decision model on income policy, and to clarify some related theoretical problems.

*Economy-wide programming**

The sector-level experimental calculations with 48 sector models have been completed. Drawing on the experiences gained with the sector models, four so-called "department models" have been constructed and successful calculations carried out. (The models cover the domains controlled by the ministries for engineering, light industry, food industry and agriculture.)

* Joint research project with the Computation Centre of the Hungarian Academy of Sciences.

Based on the computation results obtained from the 48 sector models and other programs, variants have been worked out for the development of the sectors and these have been linked up with each other into a nation-wide model. The economy-wide programming model comprises 377 variables and 209 constraints. We have not yet succeeded in solving the programming tasks connected with this economy-wide model. Therefore, from the 48-sector development variants so-called principal-sector proposals have been worked out by simple aggregation and from these a smaller model was built, comprising on the national level 112 variables and 70 constraints. The calculations performed with this aggregate model give an answer to the following questions:

a) How can the desired output of the individual sectors be reached with a minimum of investment by utilizing a given amount of labour, material, foreign exchange, etc.;

b) How can the same output be reached with a minimum of labour input or a minimum wage fund;

c) How can the maximum of socialist or capitalist foreign exchange returns be attained with the given resources and output.

Further computations have been performed to investigate the interrelations between investments and the balance of capitalist foreign exchange and between investments and labour utilization. The evaluation of the results is still in course.

International comparison of economic development levels and rates of growth

The first study published by the Institute, entitled "The trend line of economic development and the characteristics of the reconstruction periods" yielded useful points of view mainly for medium and long-term planning and had an animating effect on economic thought. The international comparisons of economic development levels and growth rate still requires the clarification of several problems which have only been raised up to now in the course of research. From among these, it is the problems related to the extensive and intensive periods of industrialization that require clarification by research.

Characteristics of the territorial pattern of the Hungarian economy

In the framework of this project the studies: "Industrial development levels in the various regions of Hungary" and "Regional distribution of industrial investments completed under the Second Five-year Plan" have been published. These present in a manner directly utilizable in planning the data on the quantitative and qualitative differences in industrial development level between individual areas and on the factors affecting industrial development as well as the tendencies of changes in the differences between development levels.

Special mention should be made of the study "The impact of the supply with land on international specialization in agriculture". The functional relationships worked out on the basis of data covering thirty countries enable the planners to estimate the net agricultural foreign trade turnover of Hungary and other countries in the knowledge of the supply with land and of the level of national income.

The relations of the Institute with other organs

It follows from the general tasks of the Institute that the closest connections have developed with the various Departments of the National Planning Office. It is characteristic of these connections that the bulk of the research projects have either been commissioned by the Departments or, if initiated by the Institute, are carried out in agreement with them. The Institute fosters regular working and consultative relations with several state institutions, research institutes and universities.

Beside a certain expansion of foreign relations, it was considered the main task to maintain and to develop those already established. The most important relations are those with the Planning Research Institute and other economic institutions of the Soviet Union, the German Democratic Republic, Czechoslovakia, Bulgaria and Yugoslavia. With some Institutes in the socialist countries also common research projects are under elaboration. Other fruitful connections worth mentioning are those established with the Economic Standing Committee and with the Methodological and Comprehensive Department of the CMEA, with the ECE and the European Coordination and Documentation Centre of Social Sciences of the UN, with the International Econometric Society as well as with the Regional Science Association.

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A NEW HUNGARIAN ECONOMICO-MATHEMATICAL QUARTERLY: SZIGMA

The Hungarian Academy of Sciences fulfilled an old desire of mathematical economists by having published late 1968 the new quarterly SZIGMA. Prior to this, Hungarian economic-mathematical investigations, which became especially vivid in the last decade were not provided with independent publication facilities. Studies of this kind were published dispersed in half a dozen periodicals, their observation was therefore hindered both for inland and foreign readers. This situation is now changed by issuing their new quarterly, published under the auspices of the Section for Mathematical Economics of the Hungarian Economic Association. Main papers of the first issue are as follows: *A. Bródy:* Cycle and Equilibrium; *Gy. Simon:* The Dynamic Model of Economy—Wide Price Programming; *P. Glattfelder:* Extrapolation on the Average of Sectional Trends. The first number contains beside these a number of smaller studies, book-reviews and professional news. In view of the expected interest by foreign readers Acta Oeconomica will publish from time to time translations of the main articles published in SZIGMA.

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OBITUARY

On the 18th September 1968 died unexpectedly in his 46th year of age under tragic circumstances Dr. Lajos Ács, candidate of economic science. Late Dr. Ács joined economic research 12 years ago. For a long time he was the Head of the Theoretical and Study Department of the Hungarian National Bank. Recently he has been Deputy Head of Department for International Relations in the Ministry of Finance. In spite of this relatively brief scientific career, he was a very fertile author. In 1961 he published his first book, entitled: "Theory of Credit in Socialism", later in 1966 two further volumes of Dr. Ács appeared following closely upon each other. One of these was: "Economic Growth and International Monetary System" and the other "Theory of Socialist Money". (Both were reviewed in this quarterly.) His early death is a painful loss for the Hungarian economists.

BOOK REVIEWS

RIPP, G.: *A gazdasági növekedés szakaszai és az ipari társadalom elmélete* (Этапы экономического роста и теория промышленного общества). Budapest, 1967. Kossuth Könyvkiadó. 322 стр.

Автор дает многостороннюю марксистскую критику теории «этапов экономического роста» и тесно переплетающейся с ней теории т. н. «промышленного общества», выбрав мишенью, в первую очередь, позицию американского профессора В. В. Ростова, изложенную им в своей книге «Этапы экономического роста». Ввиду того, что эти две теории представляют собой определенный синтез буржуазного общественного воззрения, автор в частности стремится раскрыть их взаимосвязь, с одной стороны, с более ранними течениями буржуазной идеологии, и с другой стороны, с основными тенденциями, проявляющимися в сегодняшних буржуазных общественных науках. Однако в данных рамках ему не представляется возможность для детального анализа каждого из идеологических источников, почему он и показывает историческую последовательность в первую очередь с точки зрения политической экономии. Поэтому в произведении относительно много внимания уделяется анализу и марксистской критике основных направлений буржуазной политической экономии, в частности — взглядов Маршала, Кейнса, Гаррода.

Автор сопоставляет современный вариант теории экономического роста и динамической теории производства с трактовкой экономического развития как классической буржуазной, так и марксистской политической экономией, а затем он противопоставляет буржуазные теории об этапах экономического роста марксистской периодизации общественного развития. Он показывает, что теория Ростова не пригодна ни для разграничения крупных этапов общественного развития, ни для установления этапов технического развития, ни для употребления единого мерила, при помощи которого можно было бы последовательно и убедительно определить уровень экономической развитости. В теории Ростова, согласно которой имеется пять этапов экономического роста (а именно этапы 1. традиционного общества, 2. предпосылок развертывания, 3. развертывания, 4. зрелости и 5. массового потребления на высоком уровне), существенным стропилом является резкое разграничение этапов развертывания и их предпосылок. Без него рухнула бы вся постройка. Однако как раз это разграничение неосуществимо на основании критериев самого Ростова, на что было уже указано даже рядом буржуазных теоретиков на основании статистических данных различных стран.

Геза Рипп убедительно выявляет, что вышеуказанная периодизация этапов роста не отвечает ни одному научному аспекту. Ростов просто-напросто пытается согласовать процесс общественного развития с собственными предположениями. В силу этого его методы обладают исключительным преимуществом: он всегда открывает в истории именно то, что ему хотелось найти. Ростов стремится создать всеохватывающую теорию, способную стать достойным противником марксизма и в соответствии со своей целью отрицающую роль подразумеваемых в марксистском смысле произ-

водственных отношений в общественном развитии. С позиций вульгарной экономии политику какой-либо страны, занимаемую ею на международной арене позицию и основные идеологические течения какой-либо эпохи он объясняет *непосредственно достигнутым производительными силами уровнем*, степенью экономической развитости, измеряемой мерилом этапов роста. С целью разоблачения идеологической целенаправленности теории этапов роста автор анализирует пояснения, даваемые Ростовым на основании этой теории о причинах империалистических войн, об источниках агрессии, о происхождении национализма.

В двух последних главах книги автор рассматривает противоречия, якобы имеющиеся между марксизмом и «современным коммунизмом», а также основные черты теории промышленного общества. Он убедительно опровергает обвинение о том, что марксизм все общественные явления объясняет исключительно экономическими факторами, и даже что согласно его трактовке единственным двигателем общества является автоматизм личной материальной заинтересованности. Такие утверждения свидетельствуют лишь о полном непонимании марксизма.

Теорию промышленного общества, в основу которой легло воззрение Ростова об этапах роста, наиболее детально развил Раймонд Арон и поэтому автор анализирует и критикует в первую очередь его взгляды. В этой теории к материально-техническим отношениям индустриального производства предъявляются такие требования, как будто бы они *сами по себе, непосредственно* выражают социальный тип общества. Однако в то время, как Ростов стремился к вытеснению проблематики производственных отношений из трактовки общества с позиций этапов роста, Р. Арон в свою очередь стремится доказать «лишь» следующее: важность различий в производственных отношениях все уменьшается, и они в крайнем случае являются всего лишь какими-то мотивирующими чертами того же типа общественной системы. В современном промышленном обществе, таким образом, существенные общественно-экономические проблемы или исчезли, или превратились в обыкновенные технические проблемы, и главная беда заключается, в крайнем случае, в том, что руководители социалистических стран по политическим причинам опираются на идеологические соображения, уже не отвечающие сегодняшнему дню.

Автор, убедительно аргументируя в пользу несостоятельности таких заключений и указывая на опасность различных направлений сегодняшних буржуазных идеологий, направляемых против социализма, не упрощает идеологическую борьбу и не ограничивает ее рамками противоречий между социализмом и капитализмом. Несоциалистические, но демократические направления в капиталистических странах должны рассматриваться как противники марксизма и одновременно как его союзники. На идеологическом фронте, однако, и речи не может быть о мирном сосуществовании.

Л. БЕРТОТИ

KOVÁCS, J.: *Szakképzés és népgazdaság* (Vocational training and the national economy). Budapest, 1968. Közgazdasági és Jogi Könyvkiadó. pp. 174.

In the first part of his book the author gives a brief survey of the bourgeois and Marxist literature on the subject. He considers as apologetic the "human capital" theory of the bourgeois economists who view the labour power of the worker as his capital. In his criticism of these theories he adopts the views of Marx. He stresses the hitherto rather neglected concept of the Marxian critique according to which labour power is, as a matter of fact, the wealth of the worker (his constantly rejuvenating, reproducing wealth) but not his capital.

In order to analyse the economic efficiency of vocational training the author first of all defines the term of vocational

training, as the educational process necessary to acquire the basic knowledge needed to perform a certain determined function of the social reproduction process. In order to determine the economic efficiency of vocational training he also defines the economic results and inputs of vocational training. He distinguishes both the input and the returns side between the position of society and the individual as regards the share received and the burdens carried. In connection with the efficiency of vocational training he also states that there is a close relationship between vocational training and the complexity of work.

The vocational training necessary to perform simple and complex labour is, as a body of basic knowledge, changing in the course of history. The author is led to the determination of the returns from vocational training through the following reasoning. National income is produced with a definite amount of labour of average complexity. If we worked out the national income that could be attained with simple labour, and confronted it with the national income attained with labour of average complexity, then the difference will show the returns from vocational training. This result can be confronted with the inputs that enabled the average complexity of labour to increase.

According to the investigations of the author, if the sums available for vocational training are allocated optimally, and if the return functions behave identically in the various sectors of vocational training, the efficiency factors of the types of work needing different qualifications will be related to each other in proportion to the costs of training. Since the concept which the author calls the efficiency factor is close to that called by Marx the complexity of labour, the above statements can be also interpreted by substituting for the term "efficiency factor" the expression of "labour complexity".

By the inputs of vocational training we mean, from the point of view of the social reproduction of labour power, all socially necessary inputs arising on the part of the state and on the part of the family from birth to the attainment of a given qualification.

The author also criticizes the views according to which the degree of complexity of the different types of work can be deduced from the wage proportions. Though the wage relations are determined by the degree of labour complexity, in a given relation this is distorted by several other factors; therefore, one must not draw any conclusions from wage proportions as to the proportions between the complexity of the different types of work.

The author's mathematical model shows certain similarities with the model constructed by Professors Strumilin and Jamin but also differs from them in certain respects. As opposed to the Strumilin—Jamin model, which would consider as an investment only the fixed assets engaged in the educational sector, the author's model treats as a vocational investment all direct and indirect costs emerging up to the attainment of the qualification, inclusive of the costs of education within the family and, in addition, the national income forgone because of participation in vocational training. The author deduces the complexity of work not from the wage proportions but from the costs of vocational training. Also the term "yield" of the Strumilin—Jamin model has been extended by the author.

Next, the author extends the model by considering the demand on means of production. He divides national income according to the ratio of investment into education and into material goods and applies the method described also to the portion of national income thus defined. In this manner he arrives at a uniform investment efficiency indicator valid for both educational and material investments. With the aid of this factor he also shows the effect of employing someone below his qualification. It is proven in the course of the analysis that the efficiency of the state's investments into education

is higher than that of investments into material goods only because also the family contributes to the educational investments of the state.

Also numerical estimates are given with the aid of the model. According to the results, if completed primary education (eight years) is taken as the basis of unskilled labour, then in the years 1960 to 1964 the average complexity of labour in Hungary was 1.15. The investment efficiency indicator (as related to national income) is 0.2 if inputs into vocational training and the means of production are considered as investments. If we also account for the fact that part of the workers is employed below their qualification, the value of the indicator becomes 0.172.

The book deals also with the relationship between qualification and wage proportions. In this connection the author formulates the basic principles of a wage centre valid under conditions of socialism. He divides wages into the following parts: a part for recovering the vocational education costs borne by society and by the state, and the part for the social and family costs to maintain the labour power. If there were no differences in the intensity of labour, the principle of allocation according to performance could be best answered by a system of wages comprising the return falling to the wage period of family costs incurred on account of education, i.e. the maintenance costs of unskilled labour multiplied by the complexity degree of the work in question. The author proceeds by considering in the model also the effects of the differences in work intensity between workers of different qualifications, performing also concrete computations under the assumption of identical labour intensities.

Finally, the author reviews the major conclusions to be drawn from the education efficiency model. In his opinion it would be desirable if the enterprises gave the same importance to the vocational education costs as to investments into the means of production. In the course of investment efficiency investigations, also the "intellectual investments" must be taken into account. If the contributions of industry and agriculture to national income are calculated according to the conception of the author, they will be much closer to each other than shown by earlier computations.

É. KIGYÓSSY-SCHMIDT

VÁGI, F., *Agrárgazdaságtan.* (Agricultural economics.) Budapest, 1968. Közgazdasági és Jogi könyvkiadó. pp. 437.

Though interest for problems of agricultural economics has always been great, up to now there have appeared in Hungary but studies dealing with partial problems of this discipline as well as mimeographed notes to be used by university students. It is thus only understandable that the book by prof. Ferenc Vági and co-workers has been welcomed with interest. It is mainly intended to serve the purposes of a university textbook but satisfies in several respects also the interests of theoretical specialists and economic leaders. The structure of the book indicates that the author has broken with the somewhat schematic approach of earlier years. As a matter of fact, for a considerable time the works on socialist agricultural economics — and particularly those intended for use in teaching — devoted a substantial portion of their space to the problems of the introduction of a socialist socio-economic system in agriculture, to the general features of socialist agriculture and to the economics of the various branches of cultivation. The present work, on the other hand, devotes a substantial part of its space to the treatment on a high level of fundamental economic problems in the field of agriculture: the efficiency of productive forces, the effect of value categories, profitability and material incentives. The measures of economic policy serving the purposeful

influencing of socialist agriculture and the scope of the individual measures are dealt with extensively. Besides drawing on the latest findings in the literature on the subject in a thorough and analytical manner, the authors' original research results are also published in connection with several subjects.

The book falls into 6 Parts and 36 Chapters. The first part defines the subject of agricultural economics and deals with the socialist system of agriculture and its place in the national economy. The subjects of the second part are the value categories, the contribution of agriculture to national income, the relations between agricultural production and foreign trade, work remuneration, the production costs, as well as incomes and the agricultural price system. Part 3 contains the chapters on productive forces, land use, technical development, manpower management and the productivity of labour. Part 4 treats the problems of accumulation and extended reproduction, capital intensity, intensive cultivation, farm size, specialization, differentiation of production and differential income. Part 5 comprises the economics of the various production branches: bread grain production, fodder production, the growing of industrial plants, horticulture, animal husbandry and forestry, together with the economic and political problems involved. Finally, Part 6 deals with the management of agriculture, with independent accounting, the system of material and technical supply, and the organization of agricultural management. The text is supplemented by well chosen tables and a bibliography.

All chapters of the book are well edited and rich in content. Still, it is Parts 2 and 4 which may claim the greatest attention among the specialists on the subject. It is these chapters that show most originally and markedly the novel approach so emphatically represented by this collective of authors. The book treats from numerous aspects the economic characteristics of the cooperatives and their operation, and discusses the question of interestedness in gross income as well as the problems connected with the possible equalization of differential income. Great importance is attached by the authors to a thorough and manysided clarification of the factors affecting the development of cooperative farms, those influencing their extended reproduction. They also point out the economic and political circumstances which may slow down or accelerate the unfolding of the economic power of the cooperative sector. They also evaluate from the macroeconomic aspect some important internal problems of the cooperative farms as, e.g. farm size, the degree of specialization, the cooperation between them, technological equipment, capital supply, etc.

The authors discuss in several places controversial theoretical questions, presenting the opposing opinions and advocating on a high level their own views. It is the merit of the authors that they not only treat the subject of agricultural economics in a novel manner but cover also the most important problems of economic policy, with a special view to the new system of control and management now under implementation in this country.

To sum up, it may be stated that the work of F. Vági and co-authors is not only the first comprehensive book on agricultural economics in Hungary but, at the same time, the carrier of many a new, progressive economic idea and, as such, a great achievement in Hungarian economic literature. It should be consulted by all those interested in the facts and the theoretical problems of socialist agricultural development.

I. GÖNCZI

PAPP, S.: *A különbözeti földjáradék és a gazdaságpolitika* (Дифференциальная земельная рента и экономическая политика). Budapest, 1967. Kossuth Könyvkiadó, 190 стр.

Автор желает внести вклад в выяснение вопроса дифференциальной ренты при

социализме, строя свои положения, главным образом, на опыте Венгрии и Советского Союза.

Книга, состоящая из семи глав подразделяется на три относительно самостоятельных раздела.

Первый раздел охватывает главы I—V.

В первой главе автор анализирует основу дифференциальной ренты. Он выясняет взаимозависимость между двумя формами (временной и устойчивой) обыкновенной и добавочной прибавочной прибыли, их специфику. Споря с представителями различных взглядов, от говорит: «Материальной основой дифференцальной ренты I, таким образом, является создаваемый в средних по обществу экономических условиях устойчивый добавочный доход, а дифференциальной ренты II — устойчивый добавочный доход, связанный с экономическими условиями, лучше средних по обществу» (стр. 21). Он детально анализирует, как можно обособить в добавочном доходе, получаемом с дополнительных вложений, временную и устойчивую часть дохода.

Автор в противоположность многим утверждает, что «. . . дополнительные вложения не приносят дифференциальной земельной ренты II даже на самых плохих землях». (стр. 42.) Это положение он считает исключительно важным с точки зрения осуществляемой экономической политики.

Во второй главе автор занимается стоимостной величиной, а также источником устойчивого добавочного дохода при социализме. Особого внимания заслуживает концепция автора относительно определения стоимости сельскохозяйственных продуктов, согласно которой в социалистическом сельском хозяйстве стоимость определяется «. . . трудом, выполняемым в случае производства, отвечающего эффективным потребностям по объему и структуре, в таких условиях, что им в «предельной сфере» сверх производственных издержек обеспечивается и общественно обоснованное накопление». (стр. 56). Источником устойчивого добавочного дохода автор считает производимый на лучших землях труд, указывая при этом на противоречия между средней стоимостью и рыночной стоимостью слеьскохозяйственных продуктов.

В третьей главе излагаются теоретические проблемы разделения и методов исчисления устойчивого добавочного дохода. По мнению автора, объективная основа разделения противоречива (затраты труда — природные условия), а его конкретные соотношения всегда определяются задачами, стоящими перед народным хозяйством в целом. По его мнению, как устойчивый добавочный доход I, так и устойчивый добавочный доход II должен частично реализоваться в прозводственных кооперативах, так как это представило бы специфическую поощрительную силу. В дальнейшем автор делает попытку подразделения прибавочного продукта на основании теоретической модели, а именно: на обыкновенный прибавочный продукт, дополнительный обыкновенный прибавочный продукт, временный добавочный доход, а также на материальную основу дифференциальной ренты I и II.

В четвертой главе — после тщательного анализа — автор выявляет, что причиной дифференциальной ренты является монополия на предмет хозяйствования. А её экономическую природу он формулирует следующим образом: «. . . (дифференциальная рента) выражает следующие из неравномерного освоения природных условий интересы, направленные на присвоение дохода, создающегося на природной основе.» (стр. 107.)

Пятая глава занимется механизмом распределения земельной ренты при социализме. Автор придерживается того мнения, что для частичного отвлечения дифференциальной ренты I наряду с земельным налогом следует использовать и механизм цен, в то время как в отношении временного добавочного дохода и дифференциальной земельной ренты II он предлагает это же самое осуществлять путем обложения налогом чистого дохода.

Занимаясь вопросами уровня цен и цен-

тра цен сельскохозяйственных продуктов, автор заявляет, что, с одной стороны, не было бы целесообразным стремиться к созданию единого по народному хозяйству типа цен, а с другой стороны, нельзя говорить и о едином центре сельскохозяйственных цен, а лишь о том, что цены отдельных продуктов по-разному отклоняются от стоимостных пропорций.

Все пять глав носят полемический характер; автор излагает свое мнение, дискутируя с представителями самых различных взглядов.

В шестой главе автор делает попытку — причем большей частью на основе собственных расчетов — определения роли системы обязательного сбора и закупок, а также политики сельскохозяйственных цен и налогов в разделении дифференциальной ренты. Изучая заготовительную систему сначала 50-ых годов, а затем — сегодняшних дней, автор приводит к выводу, что прямой эффект отвлечения ренты в отношении последней понизился по сравнению с предыдущей. Согласно проведенному им анализу в кооперативном секторе по абсолютной величине имеется больше дифференциального дохода, чем оставленного кооперативам основного дохода, из чего вытекает, по его мнению, сильная дифференциация производственных кооперативов.

Седьмая и заодно последняя глава призвана показать тенденции дифференцирования сельскохозяйственных производств. Автор оценивает вышеуказанный процесс как объективную необходимость в кооперативном секторе, следующую из производственных отношений социализма. В то же время он указывает на специфику дифференциации, одновременно показывая и действующие против нее факторы.

Ряд таблиц и графиков наглядно иллюстрируют изложенное.

Г. САБО

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