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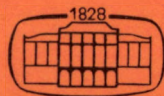
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ACTA OECONOMICA

ECONOMIC PERIODICAL OF THE
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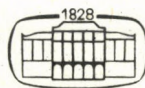
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NATIONAL ECONOMIC OBJECTIVES AND THE REFORM PROCESS IN HUNGARY IN THE EIGHTIES

R. NYERS

The new five-year plan prepared during the aftermath of the recession, lasting since 1979, asserts three priorities in economic policy for the period between 1986—1990: maintenance and consolidation of the external economic equilibrium; further expansion of enterprise autonomy and the implementation of a market-conform government control; resumption of economic growth while external competitiveness is improved. Hungarian economic practice is as yet not backed by a consistent theoretical framework or ideology, however it already relies on certain theoretical bases: on the new requirements raised by intensive development and the objective necessity of commodity production under socialism. Although no general political reform will be implemented in Hungary, it is essential that the further development of the system of political institutions and the adjustment of the style of politics to the logic of the economic system have been put on the order of the day.

In Hungary the year 1985 is the last one of the sixth five-year plan period, and, at the same time, a time of big political campaigns. Among the events the Congress of the Hungarian Socialist Workers' Party in late March and the elections to the National Assembly and to the local councils in early July must be reckoned as outstanding. It all made politics more open and entailed an evaluation of long-term aspects of the economic situation and its discussion. The drawing up of the five-year plan for 1986—90 is nearing completion and, parallel to that, the larger firms have begun with preparations for their own five-year plans. It appears that the social objectives of the medium-term plan cannot be implemented using the earlier instruments and methods; a radical change is needed in the behaviour of economic units. Therefore, in harmony with planning work, a programme for continuing the reform of economic control and management has been worked out, and economic development in 1985 has also started in this spirit. The anxieties are not the same as four or five years ago, but they are invariably great.

The government makes greater efforts than earlier to raise the standards of planning work and, at the same time, to make planning democratic, that is, to allow different interests and views to conflict with each other already in the course of planning so that all that should influence the plan before approval. The world economic forecast taken as a basis in the plan conception includes better elaborated variants, possibilities and difficulties of the cooperation with CMEA countries have been better assessed, and increased attention is given to the social impacts of measures taken to cope with economic problems. Nevertheless, there still are some uncertainties

both in the plan and in the situation of the economy which cannot be clarified in advance but demand flexible adjustment on the part of economic control in the course of implementation.

Priorities of economic policy

Economic policy discussions and the economy-wide plan have unambiguously clarified the medium-term priorities. This was done essentially on a majority basis, but in every case we may speak about a decisive majority. Some reservations or even opposed opinions have, however, survived in some segments of the economy or political life, it cannot be taken for granted therefore, if only on this account, that the traffic signals of the economy offer a synchronised green all along the route for these priorities. What is more, the objective difficulties deriving from the existing circumstances are substantial. In the economic policy of the years 1986—1990 the following three goals enjoy priority:

- Preservation of the external economic equilibrium attained in 1984, and its support by improved domestic economic efficiency;

- Revival of economic growth by increasing investment and raising efficiency, concurrently with a moderate encouragement of personal consumption;

- Continuation of the reform process of economic control and management, expansion of the scope of firms to engage in autonomous operation, and the realization of government control that conforms to the laws of the market.

The difficulty lies mainly in the simultaneous assertion of the three priorities: each of them should be realized, but in a way that does not cross the implementation of the other two — or does so to a minimum extent only. In the first half of the decade this was not and could not be done. Given world market pressures that proved serious for the Hungarian economy, economic policy took up a defensive position. All forces were concentrated on improving external economic equilibrium, and this was also supported by a necessary curbing of imports. The growth rate fell steeply for this reason and in the context of central restrictions reform measures were confined to the stimulation of small ventures, a comparatively narrow field.

At present the essential improvement in Hungary's external economic situation in 1981—1984 already allows the simultaneous assertion of the three priorities, although it can certainly not be excluded that the tendency that foreign trade conditions have a restricting effect on economic growth and cause difficulties in the highly necessary improvement of economic control and management should make a come-back. This danger has to be reckoned with, but the plan cannot be based on this assumption.

The balance of trade deficit attained its peak in 1978 with \$ 1.100 million, falling to \$ 155 million by 1980, but, in addition, there was also a deficit of Rb 524 million in

rouble-accounted trade. In the years that followed large improvements appeared in the balances of both convertible-currency and rouble trade in the wake of powerful government measures and considerable efforts by enterprises. There was already a surplus of \$ 280 million in the aggregated balance of the years 1981—1982 but a deficit of Rb 914 million remained, that is, while the dollar balance improved, the rouble deficit did not grow (it somewhat diminished) in the average of the two years. In 1983—1984 there was a considerable improvement in the balances of both markets. In the aggregated balances of these two years the dollar surplus increased to \$ 1157 million, while the rouble deficit fell to Rb 572 million.

In 1984 the balance-of-trade surplus of \$ 603 million allowed Hungary to meet its debt service commitments and reduce the stock of debts as well. The deficit in the rouble balance was only Rb 140 million and in the next year or two this, too, will disappear since the bill for oil imports will cease to grow. Thus, the two balances improved simultaneously, but for different reasons. The dollar value of imports from the dollar area diminished by \$ 1 thousand million (partly because of the hardening of the dollar), with stagnating exports. In the same period the value of exports to the rouble area increased by Rb 2.500 million (with a somewhat falling value of the rouble) and the growth rates of imports for roubles were declining. The reproduction of the surplus in the dollar balance cannot take place in the future through a forced curbing of imports but only by boosting exports (mainly of highly processed manufactures). From the market aspect, the exports necessary for improving the balance in roubles appear attainable but, here too, a more profitable product pattern is necessary.

The debt stock of Hungary attained its peak in 1980 when, according to the official publication of the National Bank of Hungary, gross debts amounted to \$ 9090 million and Rb 1224 million. By the end of 1984 the gross dollar debt fell by a round \$ 1000 million, and the net stock (reduced by claims and reserves) amounted to \$ 4.100 million, with the ratio of long-term loans increasing to above 80 percent in the meantime. The sum of gross rouble loans increased by Rb 200 million in four years because repayment will only start in the next years. In 1983—1984 the Hungarian balance of payments on current account showed a total surplus of \$ 600 million and, essentially, the planned deficit appeared in the rouble-accounted balance.

It follows that a smooth development of external economic relations can be secured with an annual trade surplus of \$ 600 million and a balanced rouble-accounted trade; but improved export performance is needed to attain these. The balance-of-payments position also allows the smooth transaction of credits. Our situation is on the whole truly described by a compilation of the *Institutional Investor* in March 1985, in which the indicator showing Hungary's credit rating increased in a year by almost 3 percentage points (in the 109 countries measured by only 0.5 percentage points) and exceeded the average of countries by 7 percentage points. As regards the future, the

requirement of monetary (balance-of-payments) and budget equilibrium are invariably stressed in government policy and, from the aspect of economic theory this can only be approved. Hardly any doubt can arise in this respect.

The resumption of economic growth and the creation of more favourable distribution ratios have become a political necessity in Hungary, and from the economic point of view they are—if not easily—yet nevertheless attainable. They have become politically necessary since, given the prevailing slow rate of growth, the preservation of living standards and improvement of external competitiveness would be jeopardized, while they have become economically possible because, with the adjustment of the main distribution ratios and the activation of the market mechanism, the basic economic conditions for balanced growth have been created.

We have behind us a particular socialist recession period, initiated and controlled by the government because of a gross deterioration in external conditions. The strong market constraints and the financial emergency were acknowledged. In the years from 1981—1985 GDP increased by 2.3 percent on an annual average, but, accounting for the continuous terms-of-trade losses, in real terms this was only 1.5 percent p. a. The increment was almost completely used to improve the external equilibrium, domestic absorption did not grow in practice. Investment on a national level diminished by 3.1 percent p.a., consumption increased by 1.3 percent on an annual average (because of an extensive growth of social benefits), while real wages diminished by 1.2 percent p. a. Exports increased by a yearly 5.5 percent, and imports by only 0.3 percent. Although the import intensity of production was moderated, the difference had to be covered in part by reducing stocks.

According to the concept of the 7th Five-Year Plan in the years ahead we shall make an attempt to prevent the reproduction of the recession, and to fight its paralysing impacts. GDP is planned to grow by 2.8 percent p.a., domestic absorption may grow at the same rate, within it investment by 5 percent, and consumption by 2 percent annually. Henceforth, imports may grow concurrently with exports. The envisaged revival of growth is modest (and, therefore, seems attainable), but the change in tendency is highly important.

Some economists have reservations related to the resumption of economic growth, and are afraid that, within the framework of such a trend, low-efficiency production might also be given the go-ahead, and thus finally the domestic and/or the external market would suffer because of an acceleration of growth. Those who observed past trends aimed at boosting quantities, neglecting the market situation—this last happened in the seventies—cannot interpret such anxieties as mere mulishness, lacking any foundation. Nevertheless, anxieties that obstruct action must not be allowed to prevail. The real problem is whether we can raise the cost and market-sensitivity of firms to sufficient degree, whether we are able to concentrate

investment on technological developments with quick returns, whether we can establish incentives stimulating higher productivity and capital efficiency in various fields, in other words, whether we shall be able to implement our economic control ideas correctly in practice.

It should be clear from what has been said that the attainment of both the foreign trade objective and the growth target decisively depend on the successful continuation of the reform process of economic control and management. This is why the latter is an important priority not only for the foundation of long-term development, but also for the solution of economic tasks in the years between 1986—1990.

Principles, methods and rate of development of the system of economic control and management

The reform process of the Hungarian system of economic control and management stopped short in a semi-developed state in the early seventies, and certain prereform methods were fitted into the system of controls; thus the whole system became ambivalent. The idea of renewing and continuing the reform process reemerged in 1978—1979. The final decisions were taken in 1984.

Relying on a profound analysis of the situation and possibilities of the Hungarian economy, and following discussions among economists and policy-makers, the Central Committee of the HSWP decided, in April 1984, on the further development of the system of economic control and management. The resolution set out from the recognition that the principles of the reform introduced in 1968 had been tested and proved sound; they should, therefore, be further developed in the course of their systematic application. The whole system of management ought to be overhauled in conformity with the prevailing and the expected situation. It also had to be borne in mind, however, that, while in the late sixties and the early seventies the reform process could be started under advantageous world economic conditions, these days we have to reckon with external circumstances and influences that are disadvantageous for Hungary. Today sacrifices are demanded from people to help implement the reforms, that was not so then, although it is also true that the load-bearing capacity of sections of society with above-average incomes essentially exceeds that of the late sixties.

What is the substance of the trend sometimes called in Western Europe “the Hungarian model of economic control and management?” Some people use this description when they compare the Hungarian reform to economic changes in Yugoslavia, or those discussed in the Soviet Union and Bulgaria, or those aimed at in Poland, and not infrequently also when they examine the connections between the economic reform campaign that flared up in China and the seventeen-year-old

Hungarian reform process which appeared in two waves. On the other hand, some other Western economists wonder whether an autonomous Hungarian solution has any justification whatever within the socialist world, whether the community of CMEA member countries can be "receptive" to intensive cooperation with an economy which fits the market mechanism into its own system.

The experience of the past seventeen years has convincingly proved—as against long years of scepticism in Eastern Europe, and a certain Western scepticism as well—that the economy applying the market mechanism in the Hungarian manner is capable of intensive planned cooperation with economies where almost the full range of economic decisions is centralized. It has also become clear to the Hungarian leadership that the criterion of adjustment to the CMEA is not the extent to which the role of the market mechanism is reduced by the cooperating country, but much rather whether, beside the market mechanism, adequate economic "bridges" (commercial, price and financial instruments) are available for drawing in the autonomous enterprise sphere into the process of cooperation. Although the problem of the criterion has remained undecided at the theoretical level in the socialist countries, practice has spoken an unambiguous affirmative. Thus, it can be considered as settled that the Hungarian solution is "CMEA-conform" even if the other countries do not apply similar methods.

Developments over the last few years have had a modifying impact on thinking all over Eastern Europe. It is increasingly recognized in the European socialist countries that intensive economic growth—soon to present itself almost everywhere as a necessity—demands a system of economic control radically different from that established in the period of extensive development. Yet, except for a few common characteristic features—such as the dominating role of socialist ownership relations, the principle of economy-wide planning, the state monopoly of foreign trade and foreign exchange management—economic control and management no longer disposes over a monolithic economic theory and practice. Several kinds of practice have developed, there is a regular exchange of experience among countries concerning the impacts of different methods, relying on the principle that there is no way in which a uniform model for all the countries can be devised. The variety of methodologies will, in all likelihood, persist over a longer period, since this is advantageous from the point of view of work seeking ways to elaborate the most expedient mechanism. However painful this may be for philosophers and political economists who have already conceptually "elaborated" the model of socialism, we cannot avoid a new relatively long period (or even age?) of searching for ways, aimed at devising concrete methods. This is a duty that must be successfully carried out.

In the course of the current further development of the Hungarian system of economic control and management we are proceeding essentially towards the "target

model" worked out in 1966, implementing its principles, going beyond what had been implemented of it in the system introduced in 1968.

The basic principle is invariably to organically link central planning with the market mechanism in a single uniform system. That is, it is out of question that the economy be divided into two spheres with their own laws, that planned control would prevail in one, while the other would be ruled by the self-regulation of the market. Central planning has a full-scope impact on the macroeconomic level and, through economic and legal regulations, it has a directing role on microeconomic actions to the necessary depth. The participants in economic activities act in the microeconomy under market conditions (on a market regulated by economic instruments), and the impacts of their activities are "fed back" to the central control. The substance of the present further development is to improve economic regulation, to improve its "market-conformity", as well as to find a more rational solution for the "feedback" of market effects.

The principle of an economy with several sectors—in which different forms of ownership can be found—has been confirmed. This, too, is a principle that dates back to 1966—1968, but in the seventies some uncertainty arose in its interpretation, more precisely questioning whether it should be employed for a shorter time, to revive business, or whether it should be a lasting concomitant of the socialist economy in Hungary. It should be noted that the necessity for several sectors had been acknowledged also by conventional socialist economic thinking as a principle valid for the period of transition to socialism, but in socialism it was already considered as unnecessary and wasting resources. The Hungarian solution has now repeatedly and unambiguously argued for several sectors under socialism, doing so—in contrast with the earlier assumption—precisely in the interest of a rational management of resources.

In the course of the further development of the economic reform the original concept will become consolidated and expanded so that the interests of the socialist economy may not be simply derived from a "central will". National economic interest truly expressing the social consensus should come about by integrating particular interests differing from each other on short-term questions. According to the worked out programme this concept is more consistently applied, and in a more practical manner, than was the case earlier. It is under consideration to form bodies representing the interests of enterprises and cooperatives, to let producers' and consumers' interests conflict with each other, to bring into harmony the interests of economic units with those of the financial agencies; and to encourage the development and to help the smooth operation of a democratic mechanism for the reconsiliation of interests.

A new solution is applied in the present process to exercising ownership rights in state enterprises. The enterprises will find themselves in different positions depending

on whether they perform public services or operate in a situation depending on the market. In the former case the duties of ownership are carried out by government agencies (or by local councils), in the latter by enterprise councils (in larger firms) or by the assembly of employees (in smaller firms). Expectations connected with the new solution are that it will be more effective in demanding the efficient use of social capital, and stem the tendency of wasting capital in the state enterprises.

The immediate goals of the present reform process are to consolidate the external and the domestic economic equilibrium by the end of the eighties, to achieve some excess supply on the domestic market (on most of it), to ensure smooth operation of the market mechanism and to strengthen the effectiveness and market-conform nature of central control. In economic-policy planning it is considered likely that, as in predictable economic processes, there will be a two-stage development also in control. In 1985—1987 the completion of the consolidation period will dominate, with a partial and gradual enlivening of the market mechanism, while in 1988—1990 the economy will already start to grow along a new path, under more advanced conditions of market relations and a completely market-conform economic control.

What has happened and what is going to happen?

At the end of 1984 a true avalanche of regulations was published in the official Gazette of the Hungarian People's Republic. With January 1st, 1985, 58 new or modified regulations came into force which provide a complex framework for the conditions of economic management and harmonize the modifications introduced in various fields.

Let us survey, in somewhat more concrete terms, what the Government has regulated by issuing this package:

— four regulations deal with the possibility of expanding competitive economic relations, and the delimitation of desirable enterprise behaviour; at the same time they declare illegal the abuse of economic superiority at the expense of other enterprises or consumers. The scope of government economic control is outlined, for the firms operating in the competitive sphere, as the supervision of legality, financial regulation and market surveillance. This abolished the "umbilical cord" (enterprise supervision) which allowed operative government interference with the operation of enterprises.

— nine regulations provide for the expansion of the legal and economic autonomy of enterprises and cooperatives. The autonomy of enterprises in decisions concerning production, capital management and the use of income is growing. The relationship between government bodies and enterprises is placed on a strictly legal

basis; if, in the case of possible government interference, firms suffer damage, they can sue in a court of law.

— thirteen regulations specify the modifications in the duties of the pricing authorities and the tax system. The scope of official price limitations becomes somewhat restricted and the procedure itself will be simpler. The substance of the change in the tax system can be summed up in two measures. The first increases the taxes productive and service enterprises pay on resources (wages, capital, investment), simultaneously reducing the rate of the profit tax. The other shifts the weight of taxation from the production phase to sales, thus increasing the weight of the turnover tax (sales tax) in the system.

— fourteen regulations provide for the general order of income distribution in the enterprise sphere, for the taxes to be paid, state subsidies, enterprise funds as well as the general rules of investment and capital management. These measures provide for a greater freedom of enterprises in using their income and in development issues than they enjoyed earlier.

— nine regulations deal with labour questions and the regulation of earnings in enterprises. All regulations allow more scope to enterprise interests than was the case earlier, and reduce government constraints. The enterprises may decide themselves which of the three available systems of earnings regulation they wish to apply.

— nine regulations cover measures affecting state and enterprise finances as well as the further development of the banking system. The provisions separate the scope of state and enterprise management more clearly from each other, increasing the autonomy of the banking system *vis à vis* the state budget and regulating the financial relations among the three spheres in a more transparent order. In connection with the banking system the rules cover two essential changes: on the one hand they emphasize and precisely describe the tasks of the National Bank of Hungary as the bank of issue (also allotting it the duties of a credit bank), on the other hand they make it possible to establish further financial institutions and affiliates according to needs.

It ought to be added to these that in 1984 the process of change affecting the economic system already asserted itself in practice. Three important aspects ought to be mentioned. First the many new small ventures, small cooperatives and a large number of other small businesses which quickly filled the "market gaps" and, in spite of their relatively small number, powerfully troubled the "stagnant waters" of the overregulated domestic market. Second, the reestablishment of the bond market, within the framework of which two submarkets are coming to life: one for the bonds of enterprises and public bodies (in which enterprises participate) and one for the general public (where the issuing bodies are local government authorities). Third, a start was made on drawing in foreign equity capital (productive and banking capital)—true, for the time being only to a modest extent.

What is still going to happen in the eighties?

According to plan, between 1985—1987 the system introduced and the principles that have already been applied will gradually take shape. Thus the transitory favours granted to enterprises to mitigate market impacts, exemptions and “brakes” will be abolished, the tax system will be further improved (the profit tax will be reduced, the wage burdens increased), and the organizational system of the economy will be modernized. A certain part of large enterprises will be decentralized, the expansion of small ventures will continue and the monetary and banking systems will develop according to the present order.

In the second stage of development (1988—1990) a two-tier banking system may be created, i.e. beside the central bank of issue a network of independent commercial banks may be created. In this period it will also be possible to introduce a system of personal income tax, and to realize the joint taxation of incomes from diverse sources. A major part of social net income may be regrouped into the sphere of trading and consumer price subsidies may be reduced to a rational level. Preparations will be made to work out a VAT system for Hungary and better conditions will be created for a long-term interest of firms in the value of their assets.

A “bird’s eye view” of economic control: government anxieties and expectations

The recognition, which became palpable in the reform of 1968, that a new, greater driving power is needed for intensive development and efficient management, is today a political commonplace in Hungary. It can not be considered a satisfactory driving motor if management and the workforce are stimulated to better work by political campaigns, nor if the government raises the presently relatively low rate of investment, since in the seventies both were applied together and yet efficiency could not be substantially improved. A new driving motor can only be obtained for the economy by enlivening and channelling into the right direction ventures based on individual and collective interests. This recognition is powerfully present in current government policy and manifests itself by taking the initiative and stimulating the continuation of the economic reform process. Both the present situation and the forecasts about the future argue for the reform, thus the reform process relies on an objective situation and on objective interests. As such, it is essentially an irreversible process in Hungary.

The government concept is characterized by the recognition, that low-efficiency production can gradually be rendered more efficient by better work on the job. There are large reserves in this respect which can be exploited even in the short run. This concept expresses a basic truth, it may be objected at most that the government did not

always find the right method, and also that earlier it expected results too quickly. E.g. the restrictive economic policy of the years between 1979—1984 was expected to raise enterprise efficiency significantly, setting out from the fact that the rate of investment remained high even during the restraint (22—24 percent relative to GDP), and the expectation that “socialist pressure” exercised through the regulators would force enterprises to increase efficiency rapidly. This expectation was not fulfilled, and it could not, because internal market pressures and a satisfactory freedom of manoeuvring of enterprises were absent, both of which were the result of the domestic applications of a whole armory of restrictive policy. The concern now is to produce the two missing factors and to reinterpret the “socialist constraint”: to apply a general instead of a firm-by-firm restriction (directed against low efficiency). This is not easy, but certainly deserves support.

In recent years the government has fully adopted the ideas of the 1966 resolution about the reform, that an efficient economy needs sectors with different kinds of ownership relations, and that room must be afforded to competition of reasonable dimensions both among and within sectors (the latter has proved to be as important as the former). In 1982 the government took a significant step by permitting various small ventures over a wide range, and their evolution exerts a highly positive effect on the present situation. This process is double-faced. On the one hand it makes the earlier legalized forms economically more advantageous (agricultural small-scale production, handicrafts, retail trade). On the other hand it provides a legal form for such activities which earlier had found their place in the illegal or semi-legal “second economy”. The process evolving under the slogan “with small ventures against the second economy” has been unambiguously successful—despite the accompanying concerns and problems—but time is needed for their completely smooth fitting into society and the market relations need further development for a complete suppression of the second economy.

The government possesses a further option along the sectoral line, and that is the drawing in of foreign equity capital into the Hungarian economy. This idea can be implemented mainly through companies of mixed ownership (as joint property), but in a given case a venture in exclusive foreign ownership may also be licensed. In principle the government agencies fully accept the idea of expanding such ventures. At present the practical possibilities are being weighed up, setting out from the fact that a compromise between two different interests has to be found: the Western interest, i.e. access to the CMEA-market, and the Hungarian interest, i.e. improving the balance of trade in convertible currencies.

Among the anxieties of the government related to economic control the following are the biggest and the most difficult to cope with:

— Gradual reduction of the rate of inflation, first from 7—8 percent p.a. to 6 and then to the order of 4—5 percent p.a., simultaneously with stimulating growth. The task is rendered difficult by the fact that the danger of deterioration in the terms of trade will still persist for some time, consumer price subsidies can only slowly be reduced, the ratio of social benefits can hardly be diminished, and excess demand prevails in a considerable part of the market. The solution is helped, on the other hand, by the necessary corrections already made in respect of the main ratios of the economy.

— Income differences between enterprises depending on their efficiency ought to be promoted, financial favours should be reduced and, in general, the observance of normative rules should be insisted on, special treatment for individual firms or industries should be highly limited. Such anxieties cannot be overcome by a simple sword-stroke.

— A more powerful influence than at present ought to be exercised on personal incomes, in order to remunerate more skilled work better and also to syphon off high “windfall” incomes deriving from small ventures, but mostly from the second economy. The first can be done by reducing the rigidity of central earnings regulations, the second by the introduction of personal taxation.

Economic control “viewed from below”: anxieties and expectations of enterprises and entrepreneurship

Viewed from below, the economic processes offer a different image of the same situation. In this a variety of particular phenomena dominate in concrete form. Sometimes the macroeconomic contradictions can hardly be recognized in enterprise problems, while at other times the constraints on economic action appear to be much greater in the microsphere than the government agencies consider to be urgently soluble. The two approaches confront each other already in an institutionalized form within the framework of the Chamber of Commerce (which represents the interests of its member firms), and also related to the extensive nation-wide activities of the Hungarian Economic Association and the Federation of Technical and Natural Scientific Associations. This is one of the important aspects of the growing democracy of Hungarian economic life, a particular kind of pluralism, which channels thinking and activity, in the last resort, towards a more clarified integrated social interest.

The greatest concern of firms today is that, in financial and foreign exchange matters, government does not yet provide satisfactory scope for entrepreneurship. Many firms have made comparative calculations about the weight of taxation in developed industrial countries and it has turned out that, in the same industries, the Hungarian rate of the total tax burden is one and a half-times that of the market

economies examined. Foreign exchange management (and in this respect the transaction of imports and, not infrequently, of exports) is extremely sluggish from the viewpoint of the enterprises. Because of this fact useful deals are settled more slowly than necessary. As a consequence, it is the established view of enterprise managements that in this field there are powerful brakes on management and they ought to be slackened as soon as possible.

A great many socialist enterprises do not look kindly on the idea of competition if it endangers the safety of their own markets. In addition to this understandable aversion, there are frequent concrete objections in connection with poor competitive conditions. The main argument is that the socialist enterprises still are overregulated in both legal and economic respects, and that this is a handicap in rapidly responding to market changes. Another handicap is the limited availability of loans for business purposes. Enterprises also justifiably object to the slow growth of the infrastructure serving production and sales.

The gradual introduction of democratic management methods in 1985—1987 will cause a transitory uncertainty in the life of enterprises. In the current year, in one third of the firms, Enterprise Councils will be formed or Enterprise Assemblies will be convoked in order to formulate the development strategy of the firm and to elect the management. Where no new enterprise bodies are as yet in operation, we frequently find a feeling of uncertainty in management, and the avoidance of risk-taking. Where they are already established, they made a positive impact on the enterprise atmosphere right from the start, but they can as yet hardly work in the manner designed for them. Many enterprise managers fear that the new agencies based on the principle of partnership will be inclined to interfere with the rights of operative enterprise management. These anxieties are, obviously, not unfounded. Still, they are rather of a psychological nature, since, after a period of "running-in", the new forms of "democratic enterprise management" are expected to produce better enterprise operation.

In spite of the extraordinary liveliness of small ventures, much hesitation is still felt here also on part of the entrepreneurs. Many people still feel that things will not last, a feeling unjustified "in general and in principle" since even the Party Congress declared itself in favour of the maintenance and even development of this sector, yet "in concrete terms and in practice" it still is justified. There is a certain temporariness also about Hungarian market relations. In the case of several products and services it cannot be predicted whether or not the socialist firms will nevertheless be able of doing the job, or whether there will not be a powerful import competition on the market. But the problem is more substantial because of the uncertainties of material supply and taxation, as well as because the government has no established trade cycle policy yet in connection with this sector.

The reform process of economic control and management and the political sphere

At times some people ask, both abroad and in Hungary, whether an economic reform can be consistently implemented without a political reform; and the answer always is, naturally, that in general and in principle, it cannot. If the question is put in concrete terms for the present-day Hungarian reality, it can be formulated in the following manner: is the current Hungarian political structure and practice suited to carry out the economic reform process? In discussing the problem it is important to distinguish the ideological line of politics, the functioning of the institutional system and the style of political practice.

As regards the ideological line, it seems that the bases of an adequate ideology are already given, although not everything is as yet complete in the system of ideas. The Hungarian method of tackling economic control and management relies on two "ideological pillars" or principles, and today both of them are already strong: one is the necessity for intensive development as a fact demanding changes; the other is that the socialist economy is a commodity producing economy and commodities cannot be managed efficiently on a social level in physical terms. Intensive economic development, fast technical progress and the necessity to confront inputs with results also lead to the necessity of commodity production. On the basis of these principles the Hungarian economic methods can be fitted into the political economy of socialism since they separate the category of commodity production from the category of capitalism. But this new interpretation of the substance of socialist society has not (or not sufficiently) penetrated the broad masses.

No political reform will take place in Hungary which would basically change the political objectives, or the conceptual setup of the political system, nor is such change a condition of the consistent and successful implementation of the economic reform process. But the development of the system of political institutions, in order to conform to practical needs, is and remains on the agenda. Similarly, changes in the style of policy-making are on the agenda and will continue. The general trend is to work out a national consensus under the aegis of a strengthening and growing democracy. This demands that particular social interests be integrated from time to time, and in this integration process the main role will continue to be played by the Hungarian Socialist Workers' Party; but an important role will be given to the Patriotic People's Front, the Trade Unions, the Cooperative Movement and the representatives of local bodies.

The development of the political system manifests itself in the more democratic electoral system, in the substantial expansion and consolidation of the system of local self-government, in a freer assertion of the principle of representation of various

interests, in the ever more open handling of political questions, in the diminishing difference—initiated from both sides—between “official” and “non-official” public affairs. The ideas of the Marxist philosophy of political freedom are compatible with an even higher degree of freedom than the present one, and also with more substantial democratic methods. It is not right to assume that the present “official philosophy” prevents this. But, under the given realities, a more advanced system and practice of political institutions can only come into being gradually, in a longer process. From the aspect of the economic reform process the Hungarian political system is not a handicap but a support and the decisive criterion is that the development tendencies should lead towards strengthening democracy.

Greater democracy, in Hungary as well, brings out into the open the clash of interests on concrete and short-term issues. It must therefore be presumed that certain parts of the reform-process produce different effects and at times evoke sympathy, at times aversion on the part of various sections of society. Thus, given strengthening democracy, not only the driving power of the reforms gathers momentum, but, simultaneously, also the braking powers. The two forces alternate also in the Trade Union movement, where at times the increase in the degree of freedom of enterprise management is welcomed, and at other times the steps taken by the government with a view to economic equilibrium meet with suspicion. Trade Union solidarity is sometimes spontaneously opposed to the political leadership also when some reform-measure serves efficiency, but renders the situation of a narrower group of workers difficult. These problems may be solved within the Trade Union movement, by confronting the short-term interests of a narrower group of workers with the long-term interests of a wider community. This situation necessarily introduces more politics into the Trade Union movement than is the case at present, and demands the development of the internal democracy of the movement.

It is of fundamental importance for the implementation of the socialist objectives of societal policy that the central control over macroeconomic processes should not diminish, it ought to increase rather in the context of the economic reform process. The economic panel of instruments has, on the whole, been already created but it requires refinement and improvement: its political instrument, the mechanism for the reconciliation of interests, for creating and maturing the consensus, is being developed and is a target to be attained in the near future. The driving power of the progress of the reform process may—and hopefully, will—be the authoritative majority in society itself.

НАРОДНОХОЗЯЙСТВЕННЫЕ ЦЕЛИ И ПРОЦЕСС РЕФОРМЫ В ВЕНГРИИ В ВОСЬМИДЕСЯТЫЕ ГОДЫ

Р. НЬЕРШ

Процесс реформы управления экономикой и пятилетний народнохозяйственный план на 1986—1990 гг. разрабатывались в Венгрии параллельно и согласованно. Руководители народного хозяйства руководствовались тем, что намеченные планом цели не могут быть выполнены с помощью прежних средств и методов, что необходимы коренные перемены в поведении предприятий и хозяйственных руководителей экономики, поэтому необходимо продолжить реформу. Правительство стремится к тому, чтобы объективно существующие в обществе различные интересы и взгляды сталкивались уже в процессе разработки плана и на базе выясненных приоритетов была лучше организована работа по его выполнению.

В предстоящий пятилетний период приоритетом пользуются три цели экономической политики: 1. сохранение внешнеэкономического равновесия при повышении экономической эффективности; 2. оживление экономического роста при улучшении качественных показателей; 3. расширение самостоятельной деятельности предприятий и функционирование государственного управления в соответствии с требованиями рынка. Трудность задачи состоит в одновременном соблюдении трех приоритетов, причем таким образом, чтобы свести к минимуму их взаимоисключающие эффекты.

Из статьи видно, что в 1980—84 гг. улучшение внешнеторгового баланса происходило по-разному в сфере расчетов в рублях и в конвертируемой валюте: если во внешней торговле с расчетами в рублях определяющую роль сыграло повышение венгерского экспорта на сумму 2,5 млрд. рублей, то в торговле с расчетом в конвертируемой валюте — сокращение венгерского импорта на сумму 1 млрд. долларов.

События прошедших 17 лет свидетельствуют о том, что вопрос позволяет ли своеобразная венгерская система управления экономикой осуществлять интенсивное сотрудничество в рамках СЭВ в случае, если остальные страны не применяют подобных методов, можно считать решенным. Венгерская система бесспорно отвечает этой цели.

Цель нынешнего процесса реформы состоит в том, чтобы добиться прочного внешнеэкономического равновесия к концу 80-х годов, чтобы в большей части внутреннего рынка было достигнуто некоторое превышение предложения над спросом, чтобы рыночный механизм действовал бесперебойно и чтобы централизованное управление функционировало прочно на основе учета требований рынка.

ALTERNATIVES OF GROWTH AND PRIORITIES IN THE 7TH FIVE-YEAR PLAN OF HUNGARY (1986—1990)*

J. HOÓS

The article reports on the planning variants in preparing the seventh five-year plan for 1986—1990. Planners expect that in these years there will already be an opportunity for a perceptible acceleration of growth. This can only happen if the general equilibrium position of the economy is simultaneously improved including the reduction of the stock of debts. The basic targets of the plan are the following: energy consumption is allowed to grow only at an essentially lower rate than national income; exports against convertible currencies have to be expanded fast; simultaneously, also exports and imports settled in roubles have to be boosted; the efficiency of production has to be definitely strengthened by modernizing the product pattern. Development resources are only available in limited quantities, thus they have to be used in the possible most effective manner. Also the development of the regulatory system now under way has to be put at the service of these goals.

Drawing up alternative plans, finding points at which main efforts should be directed, establishing priorities and ranking the objectives on such basis have been a well proved practice, to be also followed in the 7th five-year plan period. Which of the alternatives and objectives will govern our actions can only be decided on the basis of the prevailing conditions. This is not simply a methodological or a technical approach but an exigency deriving from objective circumstances of the Hungarian national economy. This is especially true under the circumstances of the foreseeable future.

Economic policy objectives

In the period covered by the 7th five-year plan we have to solve difficult and epochal tasks, namely to accelerate the adjustment process of the Hungarian national economy to changes in world economy. This is a precondition of not only the equilibrium but also the development and growth of the Hungarian economy. Without keeping pace with world economy the rate of economic growth would necessarily continue to slow down and external equilibrium could only be maintained at the expense of domestic consumption which is, in the long run, clearly not a feasible way. In the practice of economic policy, while preserving continuity, all the foregoing require marked changes. The most important continuity in the economic policy is the

*The paper is based on the lecture delivered at the 24th Itinerary Meeting of Economists in 1985.

task to improve the external balance, to decrease the net amount of debts and it will remain so further on. At the same time, there are some essential changes, such as:

— *improving equilibrium must be fully achieved from the additional resources to result from domestic production, without the reduction of domestic absorption; what is more, while increasing it* (the plan reckons at present with a 2—3.5 percent annual growth of domestic absorption which was 0.6 percent per annum in the preceding plan period);

— the latter implicitly assumes *a certain revitalization of economic growth* (in contrast with the 2 percent yearly average growth rate in the last plan period, now an average of 2—3.5 percent is envisaged);

— on the grounds of the foregoing it becomes possible to increase investment in the national economy (at a yearly rate of 2.0—7.0 percent, as against the average yearly decrease of 3.1 percent in the preceding plan period);

— favourable objectives may also be set in respect of living circumstances and standards of living, first of all by raising the real wages (by 0.5—1.5 percent annually, as against the earlier 1.2 percent annual decrease);

— imports settled in non-rouble currencies can be increased (by an average of 4.0 to 6.0 percent annually, in contrast with the yearly 0.6 percent of the preceding period).

It must be seen, however, that *no possibility exists for a radical change in economic policy*. A change can only come about gradually, and even the time when it may occur is uncertain, since it *may be protracted*, depending on the development of conditions. Three of these conditions should be mentioned here:

1. the external economic circumstances, which are mostly beyond our control; mainly the conditions of the market, prices, credit and interest;

2. the pace at which the favourable results of the further development of economic control and management will evolve; this, for the most part, depends on ourselves;

3. an issue depending both on ourselves and on external factors, namely, how the economic situation will develop in 1985. The year 1985 serves as a basis for the 7th five-year plan and as such, it is only natural that it will determine a lot of things.

The plan alternatives

The uncertainty of the above mentioned conditions is an objective justification for an open and flexible planning. Practically, planning means elaborating alternatives, making time schedules, sectioning the plan and establishing appropriate priorities and rank orders. At present, planning is carried on in three main alternatives and by separating two phases within the period.

— The first phase is that between 1986—1987 (adding to it 1985 as the base year), and

— the second one embraces the years 1988 to 1990.

In the first phase, according to our present opinion, the consolidation process started in 1979 has to be completed, by stabilizing the external equilibrium of the economy, as well as by providing foundations for a further revival of economic growth and a more rapid rate of domestic absorption. *In the second phase*—based on vivid economic growth,—the positive changes in economic policy have to be fully implemented. However, the phases may shift, particularly the first one may require more time than the two years mentioned above. (Taking into consideration the data of 1985, this is, unfortunately, an actual danger to be reckoned with.)

The three main alternatives of the plan differ from one another in the rate of economic growth, i.e., in the generation of resources and, consequently, in the rate of their domestic uses, depending on how the circumstances determining growth will develop or, respectively, how we will be able to influence them. The main factors determining economic growth are the following:

— Exports settled in non-rouble currencies, the extent to which the amount of non-rouble debts can be reduced, and, linked to these, the credit and interest conditions. (Imports against non-rouble currencies basically depend on these two factors, hence, to a great extent production, too.)

— Imports settled in roubles, which basically determine the exports for roubles, taking into account that in this market there is no possibility for additional exports by placing out resources, what is more, it would be desirable to maintain a certain volume of debts.

— Trends in the terms of trade.

— The improvement of efficiency attainable in the domestic economy, especially by improving the specific (per unit) energy and material consumption and by increasing net incomes. (The plan envisages a one-percent annual increase of energy consumption and, within this, a 3 percent increase of electric power consumption p.a. which is an extraordinary tight target.)

All of these factors play a determining role, yet exports settled in non-rouble currencies, imports coming from rouble accounting countries and the development of power consumption must be stressed as direct constraints on growth and very hard conditions. Namely, more or less all the other factors find their expression in them. Thus, for instance, better management can increase exports and reduce the losses caused by deteriorating terms of trade, greater exports for convertible currencies can create favourable possibilities for imports and for decreasing debts. Thus, if we wish to revitalize economic growth, we have to focus on these, because they represent the

direct priorities the assertion of which has also to be supported by other conditions, first of all on the part of economic control.

From the three plan-alternatives we deem No. II as the most likely one to be realized; we might also formulate this by saying that today this can most safely be built upon the expectable foreign trade conditions and on the improvement of domestic efficiency. Therefore, this is considered as the *basic alternative* so that any further planning work is directed at its elaboration in detail and at laying the foundations for it.

Which are the most important characteristics of the alternatives?

The annual average growth rate of the GDP will reach 2.5 percent between 1985—1987 (in the last five-years it was 2 percent), meaning that a certain recovery may already be observed in the first phase of the plan period (later on, between 1988—1990 it will be 3.0—3.5 percent). A moderate increase of investment and maintaining the level of the average real wages will also be possible already in the first phase; in the second one the dynamics of both indicators may become more intensive. In these five years investment will grow by 4—5 percent on yearly average and real wages by 1 percent (meaning a total of 5—6 percent). Exports settled in non-rouble currencies will grow on the average by 3.0 percent annually, (imports by 4—5 percent), exports settled in roubles by 3.0 percent (imports by 2 percent).

This is the alternative which basically satisfies the socio-political requirements of the economic policy, therefore everything has to be done for its sound foundation. At the same time, a less favourable development of the outlined conditions cannot be excluded, while there also are some chances for the development of a better situation. Precisely on this account, we must reckon with the reality of some elements of the two other alternatives; thus it is expedient to work them out too, at least as additional alternatives. No. I is the less favourable one from them, since it takes into account that

- profitable exports to markets paying in convertible currencies can hardly be increased,

- imports settled in convertible currencies can only grow to a lesser extent (by only 3—4 instead of 4—5 percent), thus, also exports can only be increased moderately (by 2—2.5 percent instead of 3);

- we will simultaneously be forced to reduce our debts significantly in both Eastern and Western relations, and

- the processes of 1985 essentially differ from what had been planned.

Under such conditions the yearly average growth of the GDP can only reach 2.0—2.5 instead of 3 percent, that of the domestic use of GDP 2 instead of 3, investment 2 instead of 5, and real wages 0.5 instead of 1 percent. In the first phase the rates would even be lower, e.g. total investment would remain on an unchanged level. Hence, this alternative should by all means be avoided.

Alternative No. III presupposes a more significant improvement in domestic efficiency, under circumstances similar to those in No. II. In this, exports against convertible currencies increase annually by 4 percent, the GDP by 3.5, its domestic use also by 3.5 percent. This alternative represents a particularly stepped-up task in exports and their efficiency, furthermore in respect of achieving favourable results in specific (per unit) energy consumption. (This higher dynamism of growth ought to be based on a one percent annual average increase of total energy consumption and a 3 percent increase of electric power consumption.) Nevertheless, especially in respect of production and export efficiency it is highly justified to approach some of the targets set in this alternative.

Thus, following from what has been said, *it remains a primary task in the plan period to reduce the stock of debts but, parallel to this, revitalizing economic growth to a certain extent emerges as a new priority.* Both priorities can be asserted in harmony, if some relevant requirements are met. The most important of the latter is that *revitalizing is essentially only possible depending on efficient exports to markets with convertible currencies and on imports from socialist countries.* If it cannot rely on these, it would find itself in opposition to the requirement of reducing the stock of debts, otherwise, namely, a higher growth rate could only be maintained by involving external resources. We have already tried this way and know its unfavourable consequences.

At the same time the requirement *is not merely to prevent the increase of debts but even to reduce them.* There are two reasons for this: on the one hand the burdens of debt service are considerably high, mainly because of the high real rates of interest (drawing away significant resources from the national economy). On the other hand it is only possible to preserve our creditworthiness by proving that the Hungarian economy is not only able to meet its debt service through its export performance, but can also reduce its accumulated debts; thus its growth is not based on the involvement of external resources by raising loans, but on a more efficient utilization of its own resources. Thus, the creditor can continually make sure that the country is a reliable debtor and therefore always grants the loans necessary for keeping up a balanced economy. (While reducing the stock of debts, significant amounts of credit are needed, i.e., we are vivid participants in foreign credit transactions.)

Consequently, we must disagree with those who

- wish to accelerate growth independent of realistic and efficient exports and import possibilities, practically disregarding these matters, and/or

- recommend the acceleration of growth at the expense of foreign economic equilibrium. It may be a matter of discussion—particularly in the annual plans—what the actual extent of decreasing debts should be; but there is no realistic alternative to reduction.

If we went the way according to the above mentioned goals we would perhaps make transitory achievements which would be rather easy and indeed transitory, but it would become obvious in a relatively short time that this path is a blind alley. It would mean losing valuable time. *Genuine and permanent development must be achieved through the improvement of efficiency in production and by increasing the ability of the economy to produce resources; this is a more difficult way indeed, but it serves the purpose.*

Tasks in the real sphere of the economy

The national conditions and requirements of economic growth entail more specific tasks in the various particular fields of economy. These more or less delimit the priorities to be asserted there and also the deriving alternatives. This applies separately to spheres of production, distribution and management.

In production the key question is the orientation of development which, unequivocally, cannot be but export-oriented. This does not exclude, however, a reasonable import substitution and, where it is feasible, it is necessary to exploit it. But *a better adjustment of the Hungarian national economy to the world economy can solely be carried out by increasing the export potential.* For several years, the Hungarian economy has been an economy governed by exports and it will be increasingly so in the future. This is also reflected in the main alternatives of the plan; as we have seen, exports and the growth rate are closely interdependent.

Activities in foreign trade (in a wider sense) and the work of domestic development have to set out from this fundamental requirement. Currently we can not yet say that we were able to come up to the ever greater and more difficult tasks in these two spheres.

In regard to *foreign trade* the following have to be stressed:

— Within the CMEA new possibilities for dynamizing the turnover have to be explored. The main efforts should be, however, focused on increasing imports and thereby the mutual trade relations and, in order to promote them, on developing methods and forms of more efficient cooperation.

— New forms and solutions are needed in non-socialist markets, too. In addition to the traditional trading and commercial relations, the opportunities offered by involving equity capital and leasing must be much better utilized. Without these, we could only make very slow progress and would have no real hope of achieving the planned dynamism of exports. All these are also essential conditions of speeding up technological development.

On the whole, the foundations of the plan can only be laid down by a *much more active, expedient foreign-trade policy, using more varied tools than has been the case so far.*

In respect of *domestic economic development* technological development, investment activities and the trends to be followed by structural transformation have to be subordinated to export orientation and the complementing import substitution. In this respect it is not the volume of available resources that is the basic determinant but the efficiency of their utilization. If the available resources are not utilized with proper selectivity, for the purpose of boosting profitable exports, for a rational substitution of imports—primarily of energy and materials—the aims cannot be achieved by even more resources. From the side resources (mainly investment, imported technology or techniques) the expansion of productive and development capacities may only be advanced to the degree an efficient result, yielding real surplus resources can be foreseen, with reliable certainty. (For instance not a loss caused by the terms of trade but an income is produced which can actually be distributed and used.)

It is necessary to meet this requirement at any rate, since resources will continue to be in short supply in the 7th five-year plan period. At the same time it is also true that to the extent economic growth will accelerate as a result of improving actual efficiency, surplus resources will also be produced for a higher rate of development. *But only to that extent.* The national economy cannot afford ineffective development the products of which are non-marketable. What is more, it is an urgent task to stop non-profitable production, since it creates losses and depletes funds, thus resources from efficiently operating enterprises have to be regrouped to cover them. In these main issues agreement has been reached during the planning work, yet there are several questions to be decided hereafter and a number of contradictions wanting for solution in certain concrete fields. In the sphere of industry two of these are worth mentioning:

The first one is coordination of the development and investment demands of the raw material extracting industry, energetics and the manufacturing industries with their export tasks. The manufacturing industries, particularly the engineering industry, are facing extraordinary export tasks, what is more, parallel to a rather significant structural change in the market. (For instance the exports of the engineering sector settled in roubles increased by about 30 percent in 1981—1985, while up to 1990 only an expansion of 10—15 percent is possible, and exports against convertible currencies have to be increased by 35—40 percent, in contrast to the 20 percent expectable in the current plan period.) The exports of manufactures as a whole, destined to convertible-currency markets, have to be increased by 30 percent within five years. (Between 1981—1985 this was 15—20 percent.) The technical background for the enhanced tasks of the manufacturing industries can only be provided if we reduce the share in investment of the raw material extracting industry and energetics in favour of the manufacturing industries. Planning activities up to now have failed to find a proper way of achieving this.

The other, still unsatisfactorily solved problem is adequate development of the specific energy demand in compliance with the requirements of the plan. This is not merely a task of industry, but depends to a considerable extent on industry, that is to say, it is closely interlinked with industrial modernization. The reason why it is necessary to get along with an annual one percent increment of energy and 3 percent of electric power consumption is that a demand higher than that could only be covered by significantly increasing the imports settled in non-rouble currencies and/or by a considerable growth in investment into energetics which would, in turn, severely jeopardize economic modernization. Thus all efforts must be spent on fulfilling the target set for economical energy management. Even a central economic development program is being worked out for this purpose.

— Thus, the tasks and importance of industry will grow significantly in the plan period, not in the last place because the share of other branches in the increment of exports against non-rouble currencies will decline, owing to the market and foreign-trade conditions. Thus, efficient industrial activity turning out marketable commodities becomes the main carrier of the dynamics of the national economy, more precisely, industry *must become* the carrier of this dynamism. In the following phases of planning a lot has to be done in order to create good foundations for this.

All this is also closely linked to the position of the *food economy** in the period of the 7th five-year plan. In the coming years the possibilities of increasing the output of the agricultural sector will be ever more determined by the market conditions and efficiency. These, in their totality, may hamper and slow down the growth of this sector. Sales in convertible-currency markets can only be increased to a limited extent, by products of better quality and a larger range of choice and by increasing economically the degree of processing (both of which are very hard tasks). Domestic sales can only moderately be increased even in the following years. In turn, the volume of exports settled in roubles will strongly grow. If increasing production will take place along with a more rapid adjustment to market conditions and demands and while improving efficiency and profitability, even a more intensive course of development can be found. A contribution to this process could be if the expansion of auxiliary (complementary) activities in the farms, as one of the sources of increasing income, would again grow more dynamic.

Owing to the foregoing, only a more moderate growth of the output of the agricultural sector than in earlier years could be established in the plan. According to our present understanding, the goal that can be set is a 7—10 percent increase of the agricultural products and a 12—15 percent one of the gross output of the sector. This is not to say that achieving these targets is not an extraordinary result worth of

* The term includes agriculture plus food processing—Ed. note.

appreciation, mainly if it is taken into account that it means maintaining and even exceeding the initial basis which is considerably high even in comparison to international standards. At present the role of agriculture in *stabilizing* the national economy is coming to the fore, the *dynamizing* role has to be taken over by other sectors, mainly by industry, as has been mentioned before. For the sake of strengthening the stabilizing role of agriculture it is necessary to implement a development policy capable of asserting these requirements and allowing certain changes in emphasis relative to the past.

In developing the *productive infrastructure* the national economic plan sets out from the fact that neither the productive branches, nor the activities determining living circumstances and standards of living of the population can operate on the level demanded by our times without up-to-date sectors in the background. Therefore, all the alternatives of the 7th five-year plan approach the development of the infrastructure in a way different from that of earlier plans. This becomes manifest in the fact that—for the first time in several decades—the volume of infrastructural investments grows at the same rate as that of the productive sectors. Increasing the fixed assets at a rate equal to that of the productive sphere will stop the earlier trend of decreasing capital supply of the infrastructural sector and—to a degree different in each alternative—even allows outstanding development.

Alternative No. II (the basic alternative) of the national economic plan stresses the importance of *communications* by the fact that the funds destined for the development of telecommunication increase by 75 percent. This development is justified because the field is lagging behind and the understanding that in a modern economy even the productive branches cannot do without an efficient, highly developed communication background. The plan figures reflect the recognition that any further delay would create a hardly quantifiable but widely perceptible obstacle to modernizing the production structure and raising the technological standards of the economy. The measures of developing telecommunication are delimited in the alternatives of the national economic plan by the lack of resources rather than by the judgement on the importance of the field to be developed. Thus, for example, as regards the telephone situation a much more rapid and significant development would be justified, from the viewpoints of both production and the population.

It is still under discussion how the telephone network could be developed more rapidly than it is laid down in the plan. The subject of the debate is the availability of resources: whether it is possible to accelerate the development at the expense of other branches and by involving more sources from the population, raising thereby—if possible—investment into communication to the double of the amount invested in the preceding plan period.

Furthermore, there are some sectors in the sphere of the productive infrastructure which cannot be given preference on the level of the national economy, but where primary centres of efforts may be identified within the sector. Thus, within the substantially unchanged amount to be invested into transportation a modest opportunity for modernizing the railway system is open; in the management of water economy it is possible to achieve improvement in the supply of healthy drinking water and in the protection of the natural water resources. The precondition of true advancement is the assertion of alternative No. II, since in No. I the investments of all fields of the infrastructure other than those of the postal services and telecommunications would be smaller.

Further development of economic control and management

The factor of the alternatives of growth depending most on ourselves is the *modernization of the economic control and management system*. The coming period can be divided into two phases also from this point of view. In the first one (practically during the years up to 1987) strong efforts have to be made for the assertion of earlier accepted modifications, gradually releasing some formerly built-in "brakes" (e.g. in the sphere of wages and income regulation, in applying non-normative processes, in granting state preferences). In the second half of the period the building in of new elements may be reckoned with, including the development of the banking system, a new order of personal income taxation and rechanneling net social incomes to a certain extent into the sphere of distribution.

Changes in the elements of the mechanism will obviously depend on how the real processes will take shape. For instance, one of the *central problems* in economic control has for a long time been to what extent enterprise incomes should be centralized. If, in the course of planning, no development processes can be properly founded which require relatively less investment for energetics and the raw materials extracting industry than in earlier periods, an increasing income centralization will become inevitable. If, in turn, the economy can grow in a structure conforming to our conditions, the centralized share may remain unchanged, or even decrease. Such a decrease is actually aimed at by the economic policy, since this is the basis on which enterprise autonomy can really unfold and profitable enterprises can develop more rapidly. Here we may note that at present not even the necessary extent of enterprise income centralization can be envisaged with appropriate safety.

Throughout the plan period, the income processes are greatly influenced by the demand for large state investment projects and by the ability of enterprise management

to produce income. The demand for *large state investment projects* and the currently known investment commitments deriving from cooperation within the CMEA impose heavy burdens on the economy, particularly in the first phase when the growth rate of distributable sources is anyway lower. Experience of planning work has so far shown that the income producing ability of the enterprises does not grow as yet at the desirable pace. If, however, we cannot proceed towards higher efficiency and the production of higher value added, demand for the state supplementing of enterprise income will grow in all probability. And this will necessarily result in concentrating the income produced by enterprises and in strengthening the undesirable redistributive role of the state budget.

Income-producing ability is a matter of key importance also from the viewpoint of one of the central questions of the next period, i.e., a successful *anti-inflationary policy*. The twofold demand has ever more definitely been formulated that prices should allow the assertion of cost inputs and market signals (changes in quality, the relation between demand and supply) on the one hand, and that the rate of general price rises, especially in respect of consumer prices be restricted on the other. Based on analytic work and on the preparation of decisions carried out so far, it may be stated that an efficient anti-inflationary policy cannot be merely built on administrative methods. Namely, such an approach can only bring about results in the short-term, while making the structure of the economy rigid in the long run and putting a brake on the improvement of efficient production. As a result, subsidies to consumers and producers have to be increased, inevitably spoiling the influence of economic control pressing for efficiency. In addition, in the case of insufficient income production real wages cannot grow to the extent provided for and if—for the sake of stimulation—nominal wages are increased, this may elicit rising consumer prices. This means that improvements in efficiency and in the production of resources are the keys to the implementation of an anti-inflationary policy. At the same time it is, of course, necessary to employ the appropriate system of instruments available to the state (beside building up the market and creating the conditions for competition, to have central prescriptions, legal regulations and strict price control, etc.). Satisfactory results can only be achieved through such twofold approach.

All that has been told in the foregoing shows the issues that have been relatively precisely outlined in the course of national economic planning and indicates the problems in which new knowledge has to be acquired within the next few months and for which adequate solutions have still to be found.

ВАРИАНТЫ И ПРИОРИТЕТЫ ЭКОНОМИЧЕСКОГО РОСТА

Я. ХООШ

Статья знакомит с вариантами плана, которые выдвигались в ходе подготовки 7-ого пятилетнего плана (на 1986—1990 гг.). Составители плана рассчитывают на то, что в этот период уже будет возможность для ощутимого ускорения роста. Однако они категорически утверждают, что это может произойти только при одновременном укреплении равновесия народного хозяйства в целом, причем не только без привлечения новых внешних источников финансирования, но и при сокращении имеющей задолженности. Основные задачи плана: потребление энергии должно расти гораздо меньшими темпами, чем национальный доход; необходимо быстро наращивать экспорт, оплачиваемый в конвертируемой валюте; одновременно необходимо расширять экспорт и импорт, оплачиваемый в рублях; необходимо существенно повысить эффективность производства за счет модернизации ассортимента продукции. Однако для достижения всего этого в распоряжении будут иметься лишь ограниченные ресурсы развития, поэтому они должны использоваться как можно эффективнее. Этому должно быть подчинено и ведущееся совершенствование системы экономического регулирования.

QUESTION MARKS IN HUNGARIAN FISCAL AND MONETARY POLICY (1979—1984)

M. TARDOS

The economic policy evens out the economic results of Hungarian enterprises on three levels: through price control, the subsidies and levies of the state budget and the credit mechanism.

The mechanisms of income levelling after 1979 put a strong break on the consolidation process becoming necessary on account of the credit crisis.

The changes introduced in 1985 allow a mitigation of income levelling. In spite of the changes, the prospects are uncertain.

In forming a judgement of the last six-year development of Hungarian economy let us start from the point that the period of earth-shaking external shocks—the sudden oil price hikes of 1973 and 1979, rising energy prices and their consequences, the drastic fall of imports from the CMEA countries and fading credit prospects—has come to an end. A new situation has developed which is usually characterized by the devaluation of Hungarian labour on external markets.

In evaluating the prevailing situation, some have formed the opinion that it is undoubtedly a success, since a grave process of running into debts has been stopped in Hungary, while personal incomes have not decreased. We have arrived at a new growth period, which allows us to ease the tensions concomitant with the consolidation following the credit crisis of 1979—1982. [1]

Others hold the view that, though the process of running into debts has been stopped, this has not brought about such changes in economic management as could lay the grounds for an upswing. Success is only transitory, and new tensions are inevitable, because the sudden fall of imports and the ensuing permanent difficulties in interfirm trade relations, the withholding of performance motivated by the restrictive, i.e. income taxing, measures of the government, low enterprise wages kept between strict limits by the wage regulation and the highly profitable activities of the second economy all have contributed to the disorder of the economy already showing a low performance. [2]

These two opinions exist simultaneously and at times it is the first and at times the second that is stressed (sometimes both) in the Hungarian press. In order to grasp the problem, the last six years' events have to be considered from which economic policy alternatives and in what manner did the government make its choices and how did it apply its strategy? Also, how could it adjust itself to the changes yet unforeseen at the beginning of the period?

The economic policy offered alternatives mainly in the four questions following here-under:

1. Slowing down growth or efficient and market-oriented development while constraining demand.
2. Withdrawing to the CMEA market, or responding to the world market challenge.
3. Concentrating the dwindling investment resources to a few fields, or reducing investments to a level at which development is safe according to the returns required.
4. Should the necessary restriction be asserted by resorting to the direct instruments available to central management, or by letting market methods i.e. the pressure of money prevail? [3]

Before discussing dilemmas and the answers given to them, the point must be made clear that political thinking has been characteristically optimistic all along. It treated the deterioration of economic conditions, taking place up to 1978, as well as the prognosticated further deterioration as an extreme and occasional event. Nobody reckoned with what followed after 1978: the temporary discontinuation loans, the necessity to reduce the credit stock and further, that raw material supplies from the CMEA, including oil supplies might fall.

And yet conditions continued to deteriorate. The growth rate of raw material and energy imports from the CMEA, settled in roubles, slowed down, and also the quantity of crude oil to be bought against roubles decreased. In 1982 the situation worsened by high interest rates and tightened credit terms.

The unexpected difficulties and continuously worsening conditions increased the uncertainty of decision-making concerning the dilemmas set forth above. Some radical measures were taken, while it has remained unclear all along, whether the measures directed at improving the balance of payments would strengthen the market or the direct control methods.

The measures were connected with a few socio-political aims considered to be of fundamental importance. The government considered as such, for example, that transformation of the production pattern be not forced by a drastic reduction of demand. Instead, attempts have been made to slow down production, combined with efforts aimed at transforming the production pattern in compliance with the central plan. This solution was adopted in order that the government can avoid any large-scale production restraints, bankruptcies and dismissals.

Beside preserving solvency, economic policy considered its second main objective to maintain the standard of living, which is an important element from the aspect of regulating production and demand. Practically, this has led to the assertion of two requirements: the budget had to carry the burden of increasing amounts of earlier stated pensions, as well as of the usual growth of nominal wages, which the government

had no intention to change, trusting that the growth of nominal incomes would provide better incentive. However, the growth of nominal incomes was later on deliberately neutralized by inflationary measures.

The real success of this economic policy consists in that the country, which in 1978 was unable to repay earlier accumulated credits and had to raise loans even for the continuous operation of its economy (GDP used surpassed the one generated by 9.1 percent), already had an export surplus amounting to 3.1 percent of the GDP in 1984. Another positive feature of this turn: GDP has grown by 11 percent in the meantime, and the government's intention to effectuate the change by cutting back investment has come to reality, while the households' real incomes have been further increasing, even though slightly; and a large-scale halt of production, as well as unemployment, could be avoided.

These results were, of course, accompanied by several unfavourable phenomena. The curbing of investment alone would have caused no trouble, since in 1978 Hungary used, in quite a unique way, 35.7 percent of its national income for net accumulation; 41.3 percent of the GDP was gross investment. By 1984 this rate fell to 17.2 and 25.4 percent, respectively, which is still acceptable by international standards. The trouble is, however, and this cannot be denied, in part that the neglected state of the infrastructural facilities (transportation and postal services, the telephone network, hospitals, schools, etc.) caused difficulties even before the slow-down of economic growth, and the deterioration has since worsened in several fields. Also, the curbing of investment did not spare even the most profitable activities. Therefore, the means of production were not renewed in fact anywhere; instead only earlier started investment projects were slowed down and, as it actually happened, to the least extent in mining, of which nobody can expect an improvement in the efficiency of the Hungarian economy.

It is undoubtedly another unfavourable factor that the practically parallel growth of personal consumption and GDP took place with a 10 percent fall in real wages, compensated by the growth of other labour incomes. The financial pressure thus created put a limit on the scope of manoeuvring of the enterprises of the so-called socialist sector* and hurt the interest of people who had no intention to, or could not, earn incomes other than wages. It was only the amounts paid out in pensions and the real value of benefits in kind that were growing, without, however, the beneficiaries judging their own situation as favourable. This is a matter of course, since the pensioners of today do not compare their situation with that of the poor pensioners who have already died, but compare their income with the real value of their earlier salaries or of their first pension.

*State-owned enterprises, and cooperatives (Ed. note).

Finally, one has to judge as unfavourable that the most important achievement of the last years: the improvement of the balance of non-rouble payments has not been brought about by a growth of Hungarian exports to the advanced and the developing countries, but by import restriction and by means of transactions settled in convertible currencies with socialist countries.

In spite of growing production, the volume of Hungarian imports settled in convertible currencies was 4.7 percent less in 1984 than in 1978 and the situation was similar in the intervening years. And the export volume grew by 44.5 percent. In a number of cases, however, this was not the consequence of rational economising and import substitution, or of efforts made in the interest of exports, but that of an administrative pressure that caused a lot of difficulties in economic management.

Before taking an unambiguous stand in regard of the quality of changes, let us examine the methods used by the Hungarian economic management in reaction to external changes after 1978. Experience has shown that the government refused the extreme solutions of the alternatives set forth above. It had no intention to restore the directive planning mechanism in economic control and management; on the contrary, it stood up for the 1968 reform in several of its declarations, warning enterprises that their activities would be placed under market pressure. At the same time it refrained from applying the market methods. Yet it sought out the methods through which it could achieve its objectives so that the least possible resistance be met.

Before turning our attention to the methods adopted by the policy directed at stabilization of the balance of payments, let us examine the general armoury of the Hungarian financial policy.

The main features of the Hungarian price and financial policies

Facts clearly show that the undisputable results and the unfavourable effects have their common roots in a successful combination of individual financial regulations and the market control introduced in 1980. [4]

The price system

The Hungarian "reform-conform" method of individual financial regulations is applied at three levels of activities.

The first level is that of price control. Price formation is under strict central control which covers, in the treble system of fixed, officially regulated, and so-called free prices, even the latter. The method of price control is, however, changing. From

1968 to 1979 it was mainly based on a comparison of costs and sales returns and, as an important change from 1980, on competitive pricing. In 1984—1985 a gradual switch-over from competitive to free pricing began, and the introduction of free product calculation became the watchword. [5]

In the first phase this meant that in a part of enterprises prices were not simply controlled by comparing costs and prices, but it was demanded that the price level of domestic sales should follow the changes in export or import prices, and also that the domestic trade in products should not bring more profit than exports settled in convertible currencies. This was so in order that enterprises can raise their prices on the domestic market only if they have also raised them in their exports settled in convertible currencies, i.e. on the "real" market, and that they should not be in a position to shift increased costs—including the price rises of raw materials and energy—directly on to the user.

According to the prevailing ideas, in the next phase real free prices should replace the following of export or import prices, and they should be situated between the level of export prices and that of potential import prices, according to demand and supply. Particular attention was called to the fact that the overhead carrying capacity of the different products is varying according to differences in demand, which is to be made use of, contrary to previous practice.

Without presenting the technique of regulations, I only wish to point out the fact that earlier, before the introduction of the competitive pricing system, it was the total receipts and total expenses of the enterprises that the central organs really knew and through which they controlled enterprise activities. Practically, enterprises were always free to manipulate the fixed costs (of workshops and of the enterprise), since the inner structure of the costs and the proportions in which they charge the different products could not be followed by any central organ.

Thus rising costs were shifted on to the buyer by raising domestic prices in a way that overhead costs were charged to those products which sold well on the market even at higher prices; a dispersion of profits, more exactly higher profits earned on products much in demand, were avoided even in the scope of the so-called free prices.

Competitive pricing was designed to put an end to this practice. For two reasons however, the experiment only brought a moderate success.

First, the domestic price level linked to the export prices discouraged enterprises from increasing the volume of their exports even if they had free capacities, because a possible fall in export prices would have necessarily resulted in a lowering of the domestic prices, too, and the losses thus incurred might be higher than the profits earned through exports.

The second reason for which the practice of competitive pricing could not spread successfully was that, in many cases, such items should have been exported at declining

prices the domestic demand for which could not be satisfied from production. Thus, when the producer was compelled to sell his products on the domestic market at prices reduced in proportion to the lowered export prices, he thereby increased the shortage. Since this disturbing phenomenon had to be avoided, the economic control and management bodies could not consistently implement the original conception and were compelled, on the one hand, to interpret the possible principles of price regulation in a liberal way (originally, the domestic price formation had to follow export prices, and later on it had to follow import prices, too, etc.), thus making it possible for enterprises to find the most convenient regulation for themselves. On the other hand, the government had to make a great many exceptions, which further eased the financial pressure. [6]

Beside the old and new forms of the price system, it has remained characteristic of the situation that the practice of pricing did not help prices in approaching the real market value of the products—i.e. that products much in demand should bring high profits and the prices of products selling with difficulty should be low—, but that the profitability differences between enterprises and products should be limited.

The situation may be approximately described with the aid of figures borrowed from market models, even if the weakness of this characterization is clear for us. Accordingly, if competition were perfect, prices would represent a given condition for enterprises. Thus, until a so-called long-term equilibrium develops, some efficient enterprises would earn high profits. Of the other enterprises, some would suffer losses. However, since the reallocation of capital takes time and the exploitation of capacities reduces losses, they would carry on production, for continuous production is more advantageous for them than leaving their assets unused. The third group of producers would go bankrupt, since even their marginal costs would not be recovered.

A monopolistic market differs from the one described above. There, by determining the exploitation of capacities, the seller is in a position to manipulate prices in a way that they bring him the maximum profit.

In the case of small open countries* a monopolistic position can only be interpreted below import prices. A competitive situation is conceivable at import prices and below them, if the rivalry of domestic producers creates competition.

It is equally characteristic of the perfect and of the monopolistic competition that demand exerts a serious influence on the producer.

A schematic representation of Hungarian enterprises is characteristically different from the above, since the price determining role of demand is to a great extent

*By "open" we do not mean the countries where foreign trade is large in comparison to the gross domestic product, but those in which imports are only constrained by exchange rates and a (non-prohibitive) tariff system.

completed there by that of price authorities, and enterprises must mainly adjust to the latter. Besides, even though its import turnover amounts to almost 40 percent of the GDP, a very high rate by international standards, Hungarian economy is not yet an open economy, since it also uses administrative measures to influence foreign trade.

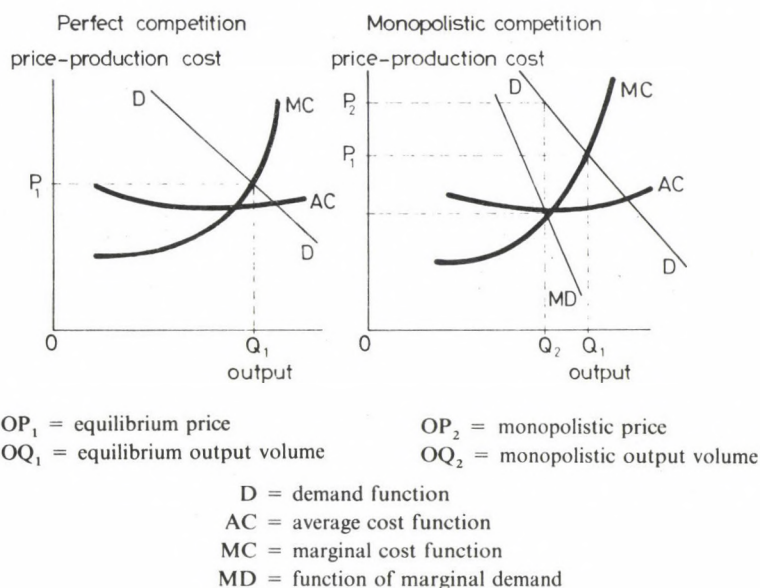


Fig. 1
The market model

In the following, I shall outline the typical market situation of Hungarian enterprises in a model, similarly to the preceding. The initial assumption is that there are enterprises producing single items in a monopolistic situation in the Hungarian economy and, under the impact of the price and financial control measures, they state domestic prices in a way that they only slightly surpass production costs.

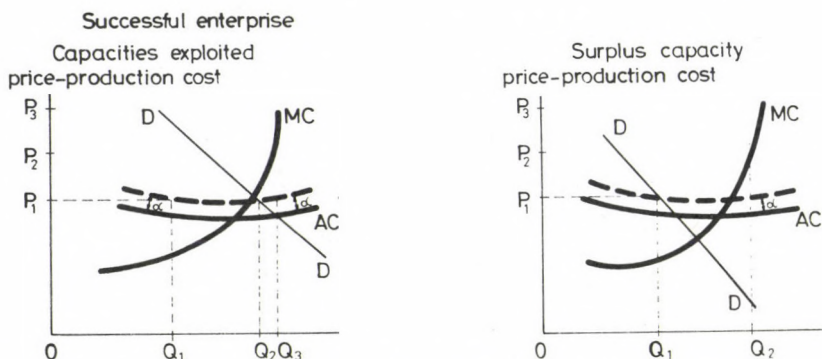
Supply problems are similar, and enterprise profitability is not much different from the one previously described.

The domestic price is irrationally high. Imports are available only through intensive subsidy. The production of the enterprise has to be transformed. It ought to be permitted only temporarily and only as long as the marginal costs do not reach the import price; exports ought to be stopped.

The unfavourable situation notwithstanding, the income earned by the enterprise is not much different from the previous cases, due to the economically unjustified protection of the domestic market and to the export subsidy. Shortage may come

about, too, if exports bring more income than domestic sales, on account of the subsidies.

In our reasoning, three cases are distinguished from the aspect of efficiency: successful, adequate, and unsuccessful enterprises. For each one, two sub-cases will be considered in respect of capacity exploitation prospects: either the production



A shortage $Q_1 - Q_2$ is created on the domestic market, if government fails to prompt the enterprise, by administrative means or by persuasion, to supply the domestic market instead of a full utilization of export opportunities, or if it does not tax away the export income $OP_2 - OP_1$.

Exports can be assured in a volume $Q_1 - Q_2$ and the domestic market is also in equilibrium. But the enterprise does not try itself to increase exports by lowering domestic demand that has developed at the irrationally low prices.

Fig. 2

Model of the Hungarian market
Successful enterprise

OP_3 = import price

OP_2 = export price at selling volume Q_1 Q_3

OP_1 = import price (average cost α)

α = permissible profit rate according to experience (profit/production cost)

capacities under prevailing behaviour of enterprises do not allow satisfaction of domestic and export demands, or there are superfluous capacities.

That enterprise is considered to be successful whose producers' price exceeding the production cost remains considerably below not only the import but also the export price. In such a case, if the production capacity is low relative to demand, the domestic price may easily remain so low because of price control that the enterprise will prefer exports and a shortage will come about on the domestic market. Then the unsatisfied demand of the domestic market can only be reduced if the enterprise is compelled, contrary to its own direct interests, to supply the domestic market. It follows from this situation that 1. successful and large-capacity enterprises may

themselves create a shortage, or they will supply the whole market only if they are compelled to; 2. successful enterprises may be compelled to rest content with a moderate level of profit, especially if they are placed under administrative pressure.

With an adequate enterprise (Fig. 3) the price relying on domestic costs is lower than the import price but higher than the export price, yet, with subsidized exports (tax

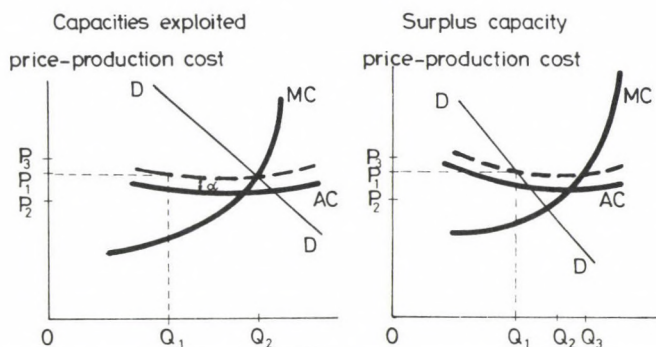


Fig. 3

Adequate enterprise

$$OP_2 \leq OP_1 < OP_3$$

OP_1 = domestic price (average cost $\cdot \alpha$)

$$\beta \cdot OP_2 \geq OP_1$$

α = profit rate sufficient for survival of the enterprise

β = available tax reimbursement, considered to be normative in the case of exports

reimbursement), its exports are profitable. In such a case enterprises having surplus capacities supply the domestic market and they even export. If, however, their capacities do not allow them to satisfy total demand, they will decide at the expense of either exports or the domestic market, depending on where they are more successful: in bargaining for price or for export subsidy. Owing to their decision-making sphere, the central organs repeatedly feel it necessary and justified to intervene, using also other administrative tools beside price regulation. Further, the income producing ability of such enterprises largely depends, in both sub-cases, on the authorities.

An unsuccessful enterprise (Fig. 4) is the one in which the production cost i.e. the producers' price exceeding it is higher than either the import or the export price. The difference between the domestic and the export price is not covered by the given export subsidy (tax reimbursement). If buyers were not forced by the government's administrative import restriction to buy from it, this enterprise would have to supply the domestic market at prices lower than those of imports, in order to avoid greater losses. If its capacities did not allow the enterprise to satisfy total demand, it would decide for the domestic market or for exports, depending on which is more

advantageous from the aspect of sales returns. And, in the long run, it would try to improve its situation by transforming its production pattern, or by reducing inputs. If, however, either its export earnings, or its domestic prices, or perhaps both were so low as not to cover even the variable costs of production, the enterprise would, of course,

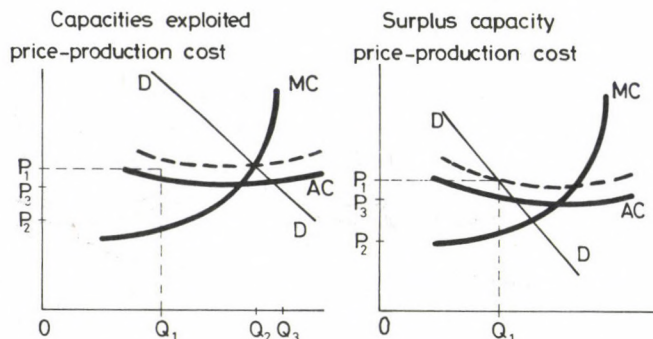


Fig. 4

Unsuccessful enterprise

$$OP_1 < OP_3 < OP_2$$

OP_1 = domestic price (average cost $\cdot \gamma$)

$$\gamma \cdot OP_2 \geq OP_1$$

γ = maximum available export subsidy

be immediately compelled to reduce or stop production, and initiate another way of exploiting its assets.

However, the practice of pricing and export incentive makes the unsuccessful Hungarian enterprise act in a different manner. The ruling principle notwithstanding, it is in a position to form a price that exceeds the import price and to obtain such export subsidy which helps in making its export earnings exceed production costs. Thus, also the unsuccessful enterprise is dominating on the market and can decide for itself which product to prefer, if its capacities do not allow to satisfy total demand.

Summing up what has gone before, the statement can be made that the market power of the Hungarian monopolistic enterprises is not broken by imports. Unprofitable enterprises cannot only avoid bankruptcy and changes in the product pattern, but they are free to decide, just as profitable enterprises are, what demand to satisfy. Thus the neglect of buyers and rigid prices create further shortages. [7] There is only one thing the sellers in a power position cannot do: they cannot use their strength for realizing monopolistic prices in a favourable market situation. The increase of the general price level, however, greatly depends on the choice of the authorities between the preference of curbing inflation or of decreasing the purchasing power.

Table 1
GDP and money supply in Hungary
 (thousand million Ft)

		1978	1979	1980	1981	1982	1983	1984
GDP	(1)	628.3	681.1	721.0	779.9	847.9	896.3	978.7
Inflation (percent)	(2)	4.1	8.4	5.9	8.1	8.7	5.7	9.1
Final consumption	(3)	426.1	472.8	515.3	556.9	599.3	642.1	698.7
Gross accumulation	(4)	259.5	232.0	221.3	231.3	241.8	237.1	249.1
Export-import surplus	(5)	-57.3	-23.7	-15.6	-8.2	+6.8	+17.1	+30.9
Quasi-money and account money (thousand million Ft)	(6)	160.3	172.5	186.8	198.1	204.6	212.2	227.6
Velocity of money circulation	(7)	3.92	3.66	3.86	3.94	4.14	4.22	4.30
$\frac{\text{GDP}}{\text{QM}}$	(1) (6)							

Source: Hungarian Statistical Yearbooks, data of International Finance Statistics

Fiscal policy effects

The state budget is the second level of financial regulation. In comparison with the leading industrial countries, the ratio of the state budget to the gross domestic product is not too high in Hungary, about 60 percent. The only special feature of its composition is that on the revenue side, payments by enterprises and cooperatives fluctuate about 55 percent and on the expenditure side production subsidies plus state investments of the enterprise sphere amount to about 60 percent. The taxes imposed on enterprises centralize 65 percent of their net income, of which 25 percentage points are allotted by the budget to other enterprises, and then 60 percent of the profit earned in the enterprise sphere is taxed away again. In industry, these figures are 13, 28, and 57 percent, respectively.* (See *Table 1*.)

Thus, once carried by the administrative price system towards egalitarianism, the enterprise income is exposed to a further levelling effect through fiscal channels.

Granting of credit

The third level of regulation—and of levelling influence—is the banking system. Banks are responsible for supplying enterprises with money. The money issuing activity as an independent task of the banking system is not regulated by any

*The shares after 1985 will substantially grow because of the change in the system of taxes and subsidies.

administrative or government authority. Thus the National Bank of Hungary, as the central bank, has to finance the public and market activities, and only exerts its influence on the extent of activities, relying on rationality criteria. Long-term credits (serving development targets) and short-term credits (to contribute to working funds) are effectuated through different channels. Up to 1968 investment credits were floated separately by the legal predecessor of the National Development Bank; at that time, both banks financed business in a way to promote plan fulfilment. Repayment obligations were stated so as to stimulate fulfilment of the plan. Since 1968 business credits are granted by the National Bank of Hungary for financing both working funds and investments. The National Development Bank only finances priority, so called "state", investments.

After 1968 the National Bank of Hungary wished to assume such a central role in the economy, functioning without directive planning, through which, uniting its forces with the National Planning Office, it would have exercised control by the central will in the whole of economic life. [8] Such centralization of the financial management did not take place, yet the National Bank of Hungary has in fact received an increased role in financial management, beside the National Planning Office, the National Office for Material and Prices, and the Ministry of Finance. This role has remained, however, much more that of a central institution of control and management than that of a commercial bank. It is characteristic of this situation that it cannot deny loans from development projects supported by government authorities and cannot stop granting working capital credit to enterprises whose solvency it no longer trusts. It can drive a losing enterprise into bankruptcy only on the basis of a government decision and only if the practical questions of liquidation have already been arranged by the competent organs.

The fact that for the National Bank of Hungary, as for the central bank no rules are set concerning the money supply is by no means to say that it is irresponsible in this field. In its operation of creating money, however, it proceeds in a specific way. Instead of providing for stability of the currency, the Bank issues a quantity of money corresponding to the planned rate of inflation and reconciles it, not with a safe return of the money placed, but with the financing of economic actions judged to be useful from the national economic aspect. That is, it does not raise the rate of interest to insure against a demand for credit jeopardizing the stability of currency, but applies credit quotas. It does the latter by scrutinizing enterprise plans and stating how much additional money the enterprises need for their planned activities judged as necessary also by government authorities. It forces the enterprises expected to earn more after-tax profit than what is necessary for the repayment of their earlier raised loans and planned new development projects to spend their development resources on financing working capital and renounce new credits. On the other hand, the Bank does grant

credit to enterprises which need more money for their planned activities than their earned income. Redistribution is also served by the rule that enterprises are generally obliged to deposit 30 percent of the planned costs of a new investment project from their own resources. The National Bank of Hungary demanded the 30 percent deposit from the enterprises that had asked for credit for their approved activity and disposed of the required amount, while it allowed other enterprises to start a new investment project (from the credit granted), even if they did not possess own resources.

The National Bank of Hungary thus tries, through its credit activity, to replace the money and capital market and to control capital allocation centrally. Together with the wage regulation having, as is well known, a destructive effect on efficiency and restricting personal incomes within enterprises, this system enables the central management to keep inflationary processes in hand, i.e. to finance the economy continuously according to the predetermined rate of inflation, without changing, however, shortage or surplus to any considerable extent. Thus, taking into consideration also the changing speed of money circulation, the quantity of money in the hands of economic actors—enterprises and individuals—does not elicit any higher inflation than what is in the plan. It is this practice of “fine tuning”, of an almost artistic perfection, the quantity of money about which Imre Tarafás writes that Fisher’s famous identity $MV = PT$ describing financial equilibrium cannot be read at all from left to right in the European socialist countries, since there it is quantity of goods (T) and the planned values of the price level (P) that determine the quantity of money (M) and the velocity of its circulation (V). [9] In my opinion, it is characteristic of the success of this practice that in the years between 1974 and 1978, when the Hungarian economy ran into debts, inflation did not speed up, even though 5—9 percent income was earned yearly without being covered by production. At that time, inflation could be kept at a low, a yearly 3—4 percent, level. Later on, in the period when the growth of debts was stopped and they were even reduced, when the growth of incomes was less than that of production, no deflation developed, but inflation speeded up.

Financial policy in the period of restoring equilibrium of the balance of payments

For countries struggling with balance-of-payments difficulties, economic theory offers a clear solution. What is to be done is to curb purchasing power on the domestic market and perhaps also to devalue the home currency. This creates a situation in which, in order to utilize their capacities, enterprises are compelled to turn towards export markets, and to substitute domestic production for imports.

The Hungarian economic management did not apply this strategy in full consistency. [10] It did not bring the required result because the above-described triple system of financial control delimiting the dispersion of incomes continued to be in force and neutralized the pressure exerted by the reduction of domestic consumption in comparison with production capacities. As a consequence, in the new situation that developed in 1979—1984 enterprises were not seriously forced to change the efficiency of their exports and imports. The restoration of the export-import equilibrium (with a slight deterioration in the level of domestic commodity supply) was not so much attributable to the enterprises' efforts, but much rather to central interventions.

Let us now survey the different groups of the changes actually made.

The reduction of enterprises' resources

For the case of balance-of-payments disturbances economic theory prescribes the reduction of the quantity of money in economic circulation and, what it implies, the raising of interest rates, as well as a reduction of budgetary expenses.

Accordingly, bank interest rates were raised to 8—14 percent in the Hungarian economic practice in three steps, of which one case affected not only new credits, but the entire credit stock. It is, however, remarkable that the increased interest charges did not reduce the demand for credit. This happened because the restrictive policy was not primarily put into effect by using monetary means. The terms upon which enterprises could obtain money were not primarily affected by the general restriction of credit granting, but by the previously mentioned practice of siphoning off money, which was further completed by debts incurred by enterprises among themselves. This happened after the bank had dissolved credit contracts where this did not cause immediate insolvency, and stipulated acceleration of repayments. Thus the velocity of money circulation rose by 1—2 percent each year, except in 1970 and 1980, and from 1978 to 1984 it grew by 9.5 percent. The situation of money holders was further equalized by the fact that debts to suppliers were growing about twice as fast between 1978 and 1984 than the quantity of money in circulation, which acted as a life-belt for enterprises struggling with payment difficulties, while it deteriorated the situation of solvent enterprises.

Also, the tax burdens of enterprises were increased. The amount of wage tax* was raised from 24 to 40 percent; contribution to communal development was put up by 5 percent, the progressivity of profit tax was increased, first a 10, then a 20 percent building tax was imposed, levies on investments and on imported parts were introduced. A part of enterprises' money reserves (4—6 percent) was blocked, and the

*Non-deductible, payable by enterprises—Ed. note.

utilization of amounts reserved for wage increases was limited. From enterprises where surplus income was earned in comparison with what had been planned, it was on one occasion taxed away.

Also subsidies were reduced in a similar way. Meanwhile, the exemption from centralization of 40 percent of the depreciation allowance was withdrawn in numerous cases.

Table 2
GDP and the budget
(thousand million Ft)

	1978	1979	1980	1981	1982	1983	1984
GDP	628.3	681.1	721.0	779.9	847.9	896.3	978.7
Budget expenses	386.4	437.0	452.0	482.1	498.1	549.0	
in percentage of GDP	61.5	64.3	62.0	61.0	58.7	61.3	
Investment costs	77.3	82.3	69.9	60.4	53.3	57.3	
Subsidies to enterprises and cooperatives	126.5	81.3	68.8	72.4	73.0	86.2	
Subsidies to agricultural cooperatives		5.7	8.8	9.4	9.2	9.7	
Budget revenues	382.9	434.3	447.5	472.6	485.8	543.7	
Payments of enterprises and cooperatives	293.2 ^a	242.8	232.1	257.1	256.2	289.6	
Payments of agricultural cooperatives	11.1	11.0	10.8	10.3	15.2	16.5	
Incomes total in percent		58.2	54.2	56.6	55.9	56.3	

^aalso comprising the social insurance cost, amounting to Ft 53.6 thousand million in 1979

Source: Hungarian Statistical Yearbooks

The imposition of taxes and the withdrawal of subsidies brought no essential change, since the enterprises' payments to the budget did not grow relative to the value of GDP. A single reduction was a consequence of the price and tax adjustments of 1980 that changes the situation of the enterprises.

Regulation of prices and earnings

In the period of economic restrictions, the most efficient instrument of monetary policy was the regulation of prices and earnings. Through the practice of strict earnings regulation, the government was able to reduce real wages by almost 10 percent. It is quite interesting that even with this efficient means of restriction in hand, the possibility of slowing down the growth of nominal wages did not arise. As a result of the practically successful earnings regulation, nominal wages kept on growing by a

yearly 5—7 percent even after 1978 (with the only exception of 1983, when this growth did not exceed 4 percent). There may be three factors justifying an unchanged nominal wage policy amidst changing conditions. On the one hand, up to then government could control the wage level better than anything else. It, therefore, could not let go this means acting as a safety valve. The wage-bill regulation replacing the average wage regulation preserved, under the given conditions, the government's feeling of safety while also facilitating the situation of enterprises and of their regular staff. It is because, on the basis of the likely development of the labour market and production conditions, a reduction of employment was to be expected, which is, with wage-bill regulation, more advantageous from the aspect of individual incomes than the average wage regulation. On the other hand, the income illusion was widely entertained among economic managers, i.e. the assumption that wage earners can more easily bear the lowering of real wages, if nominal wages continue to rise in the usual way. Further, it is quite obvious that stimulation through wages would be made even more difficult by the stability or reduction of the nominal wage. In this situation, inflation was a suitable instrument in the hands of economic management to carry out a yearly 1—2 percent reduction of real wages with nominal wages increasing.

Price policy was an important means of exerting influence on enterprise incomes. Simultaneously with the restrictive economic policy, the previously mentioned competitive price system was announced. Within this framework, the system was provided with good opportunities to try to set the initial price level of 1980 with every enterprise in a way that, with the favourable, levelled conditions, it can bear the rise in previously subsidized raw material and primary energy prices, as well as the raising of transport tariffs, while also exerting a pressure towards improving enterprise efficiency, and providing acceptable incomes to secure survival. That is to say, the government wished to create a situation in which the profit of those enterprises should diminish which were unable to assert their increased costs in the exports settled in convertible currencies.

A similar conception was also formed in relation to exchange rate policy in 1980—1981 when, the balance-of-payments difficulties notwithstanding, the forint was revalued. Namely, this ought to have led to a reduction of domestic prices, should enterprises not achieve a price increase proportional to the forint's revaluation on the markets with convertible currencies.

However, the measures aimed at an exactly regulated reduction of enterprise profit were not unambiguously successful. There were large differences in conditions between enterprises, and, in general, they worsened, too. Slowly but surely, enterprises shifted the rise in costs—including wages—onto the buyer, with the tacit consent of authorities. The resulting inflationary effect is ingeniously described in the study [11] by Klára Csoór and Piroska Mohácsi, joining the previously quoted article by Imre

Tarafás. These articles also analyse the government's deliberate action aimed at restraining the inflationary effect of the rise in energy prices, of nominal wage increases, etc., by reducing the charge on fixed assets and the wage tax.

After 1982 the economic policy on the exchange rate changed: it no longer opposed the apparently justified requirement that the forint be devalued as also suggested by foreign creditors with a view to mitigating their own risks. Under the conditions of the competitive price system however the moderate devaluation could only be put into effect with an accelerated inflation and the taxing of personal and enterprise incomes. It was, therefore, necessary to raise taxes further and—as has been mentioned—raw material prices too, so that, with unchanged foreign prices, no rise in prices should follow in enterprises in the competitive price sphere.

To the complicated interrelations of the special inflation here described three more factors must yet be added. First, the inflationary mechanism only holds for the whole of the national economy. The cost structures of the different enterprises, their successes and failures on foreign markets resulted, of course, in different situations. However, not only that economic management did not let enterprise income differentiation emerge, but, through the three channels of relationships with the enterprises, it even achieved that enterprises facing unfavourable situations received help necessary for survival. In this respect it is an important factor—called to attention by studies describing the bargaining mechanism between enterprises and central authorities—that the bargaining with the budget and the credit granting agency provided opportunities mainly to large enterprises. [12] And yet the profitability level of large enterprises continued to remain below that of medium and small size. I think, however, that one cannot draw the conclusion from this difference that small and medium enterprises work more efficiently than large ones. Official price control is by all means less severe with small enterprises; and especially those small and medium enterprises are capable of manipulating prices,* that sell the bulk of their products on the domestic market and do not manufacture consumer mass articles.

The second factor is that, as long as individual procedures are free to take place in the field of prices, budgetary subsidies, taxes, and credit grantings, enterprises cannot be submitted to financial pressure. What the new prescriptions achieve only is that the financial regulation adjusted to the enterprises' performance has created more difficult conditions equally for the well and the poorly functioning enterprises. They could invest less and, in spite of the wage increase permitted, the real wages of their employees decreased. In spite of the changed conditions after 1979, however,

*This phenomenon might explain the fact that, after the price changes of 1980, enterprise profits fell back to their earlier proportions with both the subsidized large enterprises, and the small enterprises left more to themselves. [13]

enterprises were still not exposed to rigid market laws. Even if some enterprises did go bankrupt, it was not because of the market, but by government decision; economic management liquidated a few of the large group of enterprises apparently working with poor results under the new financial regulations. The group of which one or two enterprises went bankrupt was, however, so large that the few examples did not act as deterrents. [14]

Finally, it has to be pointed out that, in the period of economic restriction, the financial regulations outlined above failed to improve efficiency. What we hold to be unfavourable is that, on the one hand, in spite of an unbroken growth of capacities and stagnating domestic demand, commodity supply did not improve: the range of choice of domestic supply did not increase even in goods manufactured at home. Enterprises were still not forced to substitute restricted imports by domestic products and services. On the other hand, the share of Hungarian exports has shrunk in both the advanced and the developing countries' markets, even though the volume of Hungarian exports has been growing quite considerably on the world market. In 1984, Hungarian export turnover on the nonsocialist markets surpassed that of 1970 by 149 percent, and the turnover on markets with non-rouble settlements surpassed it by 174 percent. This process has even accelerated since the introduction of the restriction policy, which could be registered as an outstanding success in the international field. However, while in the case of several other countries the growth of receipts keeps pace with a moderate change in volume, Hungary's share in the world market is shrinking in all kinds of goods despite increasing export volumes. On the world market, Hungary is lagging not only behind the expansion of the oil producing and fast industrializing countries but, what is worse, the dollar value of Hungarian exports is growing at a slower rate than that of the advanced industrial countries and even than that of various non-oil producing socialist countries (Romania, Bulgaria, GDR). It is well known that the fall in Hungarian food exports is caused by the Common Market's discriminative measures. In the exports of manufactures, however, the permanently shrinking Hungarian share in turnover is caused basically by nothing else but insufficiencies in our own activities.

Capacity utilization is unfavourable. In industry, building industry, and agriculture the increment of output brought about by new investments does not reach even a quarter of the ratios observed up to 1978. Within industry, the output values of mining and metallurgy are decreasing in spite of the 6.4 and 13 percent growth in the volume of investment projects put into operation. In the engineering industry, where the yearly volume of new capacities has hardly decreased, the growth rate of production fell from 5.9 to 1.6 percent.

The incremental investment/output ratio only improved in the food processing industry.

Table 3
Share of Hungarian exports on the world market
 (Percent)

	(SITC)	1970	1972	1975	1978	1979	1980	1981	1982	1983	1984
Exports total	0-9	0.289	0.267	0.219	0.246	0.226	0.217	0.206	0.212	0.234	0.214
Food	0+1	0.668	0.698	0.500	0.519	0.483	0.414	0.445	0.393	0.433	
Raw materials	2+4	0.341	0.264	0.245	0.304	0.242	0.290	0.262	0.294	0.303	
Fuels	3	0.066	0.069	0.061	0.066	0.082	0.078	0.070	0.123	0.156	
Chemical products	5	0.314	0.249	0.238	0.293	0.339	0.332	0.338	0.318	0.314	
Machinery	7	0.109	0.101	0.149	0.120	0.113	0.151	0.149	0.163	0.141	
Other manufactures	6+8	0.368	0.329	0.298	0.257	0.296	0.278	0.251	0.242	0.276	

Source: UN Statistical Yearbook
 Statistical Yearbook of the Central Statistical Office of Hungary

Table 4
Yield of investments put into operation¹

	1970-78	1979-85	Index
	thousand million Ft (at 1980 price)		
Production sectors	16 255	104 405	642
Industry	7 272	33 982	467
of which:			
mining ^{2,3}			
electric energy industry ²	870	3 145	362
metallurgy ^{2,4}			
engineering ²	1 690	10 897	645
building materials industry ²	736	2 610	355
chemical industry ²	1 116	6 499	582
light industry ²	2 121	5 240	247
food processing industry ²	4 087	3 630	88
Building industry	1 578	6 688	424
Agriculture	16 252	74 672	460

Source: Statistical Yearbooks

Notes:

1. The computation compared 1 percent growth of the national income with the value of investment projects put into operation in the previous year.

2. In respect of the various industries, the growth of gross output was taken for a basis, and the base period is shorter: only 1975-1978.

3. The output of mining fell by 6.4 percent from 1978 to 1984; the yearly amount of investment projects put into operation between 1979 and 1984 surpassed the yearly average amount of 1975-1978 by 13 percent.

4. The output of metallurgy fell by 2.5 percent from 1978 to 1984; the yearly amount of investment projects put into operation between 1979 and 1984 surpassed the yearly average amount of 1975-1978 by 67 percent.

The foregoing description relates to the socialist sector dominating the Hungarian national economy. The picture has to be completed, however, by the statement that the part of economy under looser control than the large-scale sector has been gaining further strength in the restrictive period, independently of the forms of ownership prevailing there, and of the nature of the different licensed or tolerated, legal or illegal forms (working on one's own account, evading taxation, not giving proper accounts of labour, material, and other costs). I shall point out three of the advantageous consequences of the activities pursued in the said economic sphere:

— It has helped in that restriction should not render shortages even harder to bear.

— It has offered several social groups the possibility to earn more or less complementary income, in the majority of cases at the price of very hard work. Members of these groups were in a position to neutralize the unfavourable consequences of the stagnation for themselves and their families.

— It has proved that good work can be demanded in Hungary if the necessary conditions are given.

Beside the advantages, one must not forget the disadvantageous consequences of the activities pursued outside the sphere of the socialist large enterprises. What I have in mind is not primarily the injustice that a lot of people have no opportunity for such work, and not even that the spread of illegal activities is demoralizing, but mainly that on account of the persisting rigid regulations of socialist large-scale activities, the highly profitable private enterprises and the badly paying activities organized under socialist conditions have not become each other's competitors. And further, that,—because of the attached political uncertainties—the entrepreneurial sector, or the sector given the name of second economy only encouraged a few people to base their income and security fully on independent economic units outside the socialist sector. And, finally, economic requirements in connection with these activities were not clearly formulated in every case, because of the indistinct limits of solvent demand.

Is there any other feasible economic policy?

The external market conditions of the Hungarian economy have doubtlessly developed in an unfavourable direction in the last years. Yet the shock that hit the Hungarian economy was not a unique one. Several other countries in similar difficulties could maintain their position on the world market better, for their reaction to the deteriorating circumstances was different. In Hungary, an economic policy presented itself, fraught with serious difficulties, i.e. the restriction of domestic demand and the exposure of enterprises to the consequences of severely constrained demand. This amounted to increasing the market regulatory force of money circulation controlled on national economic level. Its conditions, as has been pointed out in several studies concerned with the reform of the mechanism, are by and large the following: a freer competition of enterprises for the limited domestic demand, i.e. their right to raise the prices of their products in demand on the domestic market and salable on foreign markets up to the import price level, and to stop producing such items through which they cannot even earn the variable costs, or instead of which they can produce other, more profitable, goods. The changing of the product pattern necessarily implies the right to wind up and reorganize production units, dismiss

superfluous labour, and make enterprise managers interested in trying to handle wages rationally too, and not to consider them as a money fund waiting for distribution.

Under such conditions it would have become clear which are the factories and enterprises unable to cope with their problems, and for which the solution can only be bankruptcy, merger, the selling of capacities, that is, a complete reorganization of the production pattern and of economic management.

All this infers, of course, a complete transformation of the economic control exercised by the state organs. A most important step: instead of wage and investment regulation, a firm control of aggregate demand. This requires a definite and, it is worth emphasizing, "planned" regulation of credit granting and budgetary expenses, instead of individual procedures leading to incidental results. Once this has been successfully put into effect, the investment and wage regulation, and price control adjusted to the special position of each enterprise can be ended or changed, together with the practice of credit granting upon individual criteria, which can be replaced by an active use of such instruments as interest rate and exchange rate policies, etc. All this can in fact exert a financial pressure on enterprises. The financial pressure brings about changes, of course, not only in the situation of enterprise management, but in that of the workers, too. I shall not discuss the latter in this paper, but only mention that, with a view to a closer link between performance and wages, it is important that the role of workers' collectives and trade unions in reconciling interests should strengthen, so that they can negotiate genuinely about wages with the enterprise management of increased autonomy. The handling of labour reorganization, retraining and, if necessary, dismissals, causing new conflicts, would require new function from the trade unions and other organs for the protection of interests. Besides, an institutionalized form should be created for supporting people hit by the dismissals which would allow that the reorganization of production be accompanied by increased human rights granted to workers (choice of the work place, fixing wages by negotiations, etc.), and by mitigating the depressive impact of unemployment.

Obviously, in 1978 the economic management could not use the reform—having grown uncertain since 1972—as a stimulator of progress, nor could it put into effect with its aid the restrictive policy described in the foregoing. The economy was not prepared for this even in 1982. Between 1978 and 1984, reacting to the consequences of the deteriorating conditions and of the foreign credit squeeze, the means of formal and informal control grew even stronger in the socialist sector of economy. Thus the old difficulties of adjustability and of access to the world market continued to grow. The survival of several elements of the old economic management practice has made it so far impossible to lay the foundations of an efficient economic growth. This is the fundamental disadvantage which, together with falling real wages, receding

investments, deteriorating export positions and worsening domestic supply, counterbalances the advantage of an almost totally undisturbed job security.

The question which only the future can answer is, whether after 1985 we shall be able to break through the barriers of economic management having grown rigid since 1968, different from the traditional management based on plan directives yet not radically breaking with it; and whether we shall be able to increase the direct and general regulatory force of money circulation qualitatively and to eliminate the three channels levelling enterprise income as described above.

The steps taken in the direction of the necessary changes: introduction of new forms of enterprise management, reduction of state subsidies, preparation for enterprise bankruptcies, increased efforts to have credit terms observed, to be followed by an expected reform of the banking system, introduction of a bond market, a considerable softening of the price and wage regulation—are a good beginning. These steps, however, cannot lead to a solution as long as neither the large groups of society, nor the state power are ready to accept the disadvantageous side-effects of rejecting the regulation of aggregate demand and of the levelling of individual incomes.

A lot of tasks are to be solved—such as the establishment of institutions enabling the market to operate efficiency-improving mechanisms and the bringing about of conditions in which some adequate forms of bearing the social tensions that may arise from observing the economic rules can emerge, and the situation cease in which tensions coming to the surface—such as inflation, dismissals, shortages—set into motion corrective mechanisms legitimizing the direct intervention of power apparatuses. This appears, namely, to be inevitable and advantageous only transitorily, while in the long run it becomes by all means an obstacle to economic development and structural change. Without courageous and coherent acts a further slow deterioration of the situation is to be expected. Unquestionably, the number and size of the tasks to be solved are great. Without solving them, however, the many times promised and much expected economic consolidation, upon which an efficient economic growth can be based, cannot be achieved.

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НЕРЕШЕННЫЕ ВОПРОСЫ ВЕНГЕРСКОЙ ФИНАНСО-ДЕНЕЖНОЙ ПОЛИТИКИ (1979—1984)

М. ТАРДОШ

Автор анализирует особенности механизма функционирования венгерских финансов. Он показывает, что экономическая политика выравнивает финансовые результаты предприятий тремя путями: через систему цен, посредством бюджетных субсидий и изъятий, а также через кредитование. Эти механизмы применялись и в период ограничительных мер вместо применения настоящих свободных цен, ограничения общего платежеспособного спроса, политики процентных ставок и валютных курсов. Следствием этого явилось то, что сокращение внутреннего спроса — за счет повышения активности предприятий на внешних рынках — не привело к соответствующим результатам ни в области экспорта, ни в области импорта, а способствовало вместо этого запланированной инфляции и сохранению предприятий в трудных условиях.

Введенные в 1985 г. изменения также не означают однозначного разрыва с прежней практикой. Ждет своего решения проблема создания таких институтов, которые приспособили бы регулируемый государством рынок к функционированию механизмов, повышающих экономическую эффективность, и которые создали бы рамки, позволяющие справиться с социальными напряжениями, возникающими в результате нормального действия экономических регуляторов. Последнее ликвидировало бы положение, при котором возникновение напряженных моментов — инфляции, увольнений, товарного дефицита и др. — приводит в действие поправочные механизмы, оправдывающие непосредственное вмешательство аппаратов власти.

HUNGARY'S EXCHANGE RATE POLICY IN THE 1980S*

I. TARAFÁS – J. SZABÓ

The article, after discussing the relationships between Hungary's exchange rate policy and its domestic price system and price regulation in the 1980s, analyzes the development of the cost- and price-competitiveness of Hungary's exports between 1970-1984 by real effective exchange rate calculations. As for the first problem, it can be recognized that in Hungary's economy changes in exchange rate influence first of all the price level while they only exert moderate effects on relative prices and income proportions. As for the second problem, though marked fluctuations can be experienced in the development of real effective exchange rates, it was found that these fluctuations do not influence Hungarian exporters' pricing behaviour which depends rather on the buoyancy of economic activity in external markets. The statistical analysis presented in the final part of the article represents an attempt to quantify price and exchange rate effects on the development of Hungary's export in the period between 1970-1983. Results suggest that on the supply side the domestic purchasing power control while on the demand side the external market situation have far stronger effects than those exerted by price and exchange rate developments.

Evolution of the exchange rate of the forint against major currencies

In the period under consideration the National Bank of Hungary pegged the exchange rate of the forint to a currency basket reflecting the currency composition of Hungarian export receipts from the non-rouble area. While the peg was adjusted at irregular intervals on the basis of policy considerations explained in this paper, rates against individual currencies were adjusted to cross rates prevailing in international markets on a monthly basis between January 1, 1980 and October 1, 1981; on a weekly basis between October 1, 1981 and December 31, 1984. After a gradual narrowing of the gap between the commercial and non-commercial exchange rates of the forint, reflecting changes in the consumer price level relative to the producer price level, the two rates were unified on October 1, 1981. As from January 1, 1985 the exchange rates of the forint against individual convertible currencies are adjusted on a daily basis.

* Abridged version of the lecture delivered at the seminar of the International Monetary Fund held in Budapest, Hungary, between March 18-29, 1985. Associates of the authors in preparing this paper were Kálmán Fehér and Gábor Markovits, both from the Exchange Rate Division of the National Bank of Hungary. Computations for the first three parts of the following article were done by Gábor Markovits, and those for the last part by Kálmán Fehér. The authors thank their contribution.

Beside continuously adjusting to cross rates in international markets, the exchange rate of the forint was adjusted relative to the peg at irregular intervals. In the period of major increases in world prices—i.e. between January, 1980 and October, 1981—the forint was revalued gradually relative to the peg; then, in the period of price decreases in the world market, it was devalued in several steps. As a result of these developments, the exchange rate of the forint evolved as follows relative to the peg:

Table 1
Evolution of the exchange rate of the
forint relative to the peg*
(previous year = 100.0)

1980**	92.9
1981	97.2
1982	103.1
1983	112.9
1984	108.5

*Chronological average, weighted by calendar days.

**December 31, 1979 = 100.00.

Since cross rates also changed considerably during the period under consideration, the exchange rate developments of the forint against individual currencies were different from those relative to the peg.

Thus, while the forint started depreciating against the US dollar in 1981, it began depreciating against the Swiss franc in 1982 while only in 1983 against the German mark and the Italian lire. Against the French franc and the pound sterling the forint appreciated until 1982 and remained unchanged during 1983 (Table 2).

If the exchange rate indices of the forint against the currencies of Hungary's foreign trade partners are averaged by applying the weights of the respective countries in Hungary's export, the so-called nominal effective exchange rate indices of the forint can be calculated. Since in analyses these types of indices also play some role, they are shown below:

Table 3
*Evolution of the nominal effective
exchange rate of the forint*
(previous year = 100.0)

1980	87.0
1981	84.0
1982	92.6
1983	100.2
1984	95.3

Table 2
Exchange rates of forint against selected currencies

	Ft/US \$	Previous year=100.0	Ft/DM	Previous year=100.0	Ft/Swiss franc	Previous year=100.0	Ft/£	Previous year=100.0	Ft/French franc	Previous year=100.0
1979	35.58	—	19.41	—	24.40	—	75.49		8.36	—
1980	32.53	91.4	17.90	92.2	19.41	90.7	75.67	100.2	7.70	92.1
1981	34.31	105.5	15.18	84.8	17.47	90.0	69.59	92.0	6.31	82.0
1982	36.55	106.5	15.10	99.4	18.04	103.3	64.12	92.1	5.57	88.3
1983	42.76	117.0	16.71	110.7	20.33	112.7	64.72	100.9	5.60	100.4
1984	48.04	112.3	16.88	101.0	20.45	100.6	64.20	99.2	5.50	98.2

	Ft/Italian lire	Previous year=100.0	Ft/Yugoslav dinar	Previous year=100.0
1979	0.0428	—	1.8752	—
1980	0.0380	88.7	1.3203	70.4
1981	0.0302	79.5	0.9814	74.3
1982	0.0271	89.7	0.7286	74.2
1983	0.0281	103.7	0.4596	63.1
1984	0.0273	97.2	0.3144	68.4

Source: International Financial Statistics, International Monetary Fund; chronological averages, weighted by calendar days.

Regarding international competitiveness it is the level of the effective exchange rate while from the point of view of domestic price developments it is the exchange rate level relative to the peg that is an indicator of special importance. Both of these indicators will be dealt with in the course of our discussion.

**Hungary's exchange rate policy, its domestic price
system and price regulation in the 1980s**

*The responsiveness of domestic prices to foreign trade prices;
The 1980 price reform*

In order to understand Hungary's exchange rate policy in 1980–84, it is necessary to take into account that in the period under consideration *Hungary's domestic prices were highly responsive to foreign trade prices*. This responsiveness stems partly from the openness of the Hungarian economy and partly from the price mechanism introduced on January 1, 1980. On January 1, 1980 the price system was reformed: on the one hand, a producer (wholesale) price system with relative prices close to those in the world market was established through price restructurings while, on the other hand, a price mechanism was launched which established a permanent link between domestic prices and foreign trade prices in the so-called competitive sector of the economy. The new regulation made changes in domestic producer prices dependent on price (and profitability) changes in trade with the non-rouble area in those sectors the products of which can be traded internationally (i.e., tradables).*

The price regulation in the competitive sector (or rather in the major part of the competitive sector) applying constraints connected to the development of foreign trade prices represented a substantial change compared to the price regulation having been in force until 1980 which practically applied two kinds of prices, i.e. cost-plus prices and administratively fixed prices. Two important features of the mechanism introduced in 1980 must be emphasized: The adjustment of energy and raw material prices to those of the world market encouraged savings in the consumption of these resources, while pricing rules in the manufacturing industry were designed to provide incentives to the improvement of export efficiency.

In an open economy, provided that competitive elements are strong enough, market competition itself leads to domestic prices of tradables adjusting to foreign trade prices and set between the export price and the import price. In the period under consideration this adjustment, however, could not be reasonably expected in Hungary

* The price formation system introduced in 1980 is analyzed in articles by Béla Csikós-Nagy [1,2].

owing to two reasons: On the one hand, the market structure, both in production and trade, was of monopolistic or oligopolistic character in several cases, large-scale organizations had excess weight which, in turn, weakened competition in the domestic market. (Although this situation was gradually improving during the period, the desired conditions have not yet been achieved.) At the same time, as from the fall of 1982, the reliance on import competition was not possible any more since it was strongly reduced by import restrictions introduced in consequence of balance-of-payments difficulties.

Thus, the price mechanism introduced in 1980 needed administrative rules for the simulation of a market price mechanism in order to achieve that the development of domestic prices be in line with that of the foreign trade prices.

Beside the sectors adjusting to foreign trade prices, there remained fields in Hungary's price mechanism, even after January 1, 1980, with cost-plus pricing (construction materials industry, construction, food-processing industry, trade and some services) and fields applying mostly administrative prices (agriculture, transport and telecommunication), but the share of these sectors is well characterized by the fact that out of total industrial output the price formation adjusting to foreign trade prices accounts for 65 to 70 percent.

The significant weight of the price formation adjusting to foreign trade prices makes it understandable why the Hungarian economy has been so responsive to foreign trade prices in recent years. To the extent that the domestic market situation allowed, price increases achieved in export sales could also be enforced in the domestic market in respect of the great majority of the manufacturing industry, moreover, the price increases experienced in energy and raw material markets penetrated virtually unimpededly into the country. Furthermore, through the consumption of energy and raw materials, the sectors applying cost-plus or administrative prices were greatly affected by changes in foreign trade prices though less than those adjusting to foreign trade prices.

In addition to the development of export and import prices in foreign currency terms, the prices of sectors adjusting to foreign trade prices were, of course, also strongly influenced by the development of the exchange rate of the forint since it was the foreign trade price indices in forint terms that served as a basis for price adjustments.

We attempted to provide some information on the extent of domestic price responsiveness by means of input-output computations. Our computations assumed an enterprise behaviour whereby enterprises take full advantage of price increasing possibilities permitted by pricing rules. According to the results, a devaluation by 1 percent is accompanied by an increase of 0.64 percent in the price index of domestic demand.

Exchange rate adjustments and the ratio of foreign trade prices and profitability relative to those of domestic sales

An exchange rate policy that makes the index of foreign trade prices (i.e. export and import prices) in terms of the domestic currency exceed the domestic price index is usually referred to as encouraging the supply of exports (or import-substitution). It is because, unless the material contents of exports (or of import-substitution) and those of production for domestic sales differ significantly, this development of prices results in raising the profitability of export (or of import-substitution) above that of domestic sales (or the decrease in export profitability is less than in domestic profitability). Furthermore, dividing the domestic production into competitive (i.e. tradables) and non-competitive (i.e. non-tradables) sectors, it can be assumed that, in order to increase export (or import-substituting) activities, it is favourable if domestic prices of the competitive sector increase faster than those of the non-competitive sector.

Thus, two kinds of ratios have to be focused on in order to follow up the effects of exchange rate adjustments on the supply of exports (or import-substitution); one is the ratio of foreign trade prices (export profitability) relative to domestic price (profitability) of the competitive sector while the other is the ratio of domestic price (profitability) of the competitive sector relative to those of the non-competitive sector. Exchange rate adjustments have only exerted a moderate effect on the two respective ratios in Hungary's prevailing price mechanism.

If considering, for example, a devaluation with unchanged foreign trade prices in terms of foreign currencies (which, otherwise, corresponds to a more generally formulated case where all foreign trade price indices in forint terms increase at the same rate by sectors or industries), then, as a consequence, only a moderate effect on the first ratio above can be experienced since the devaluation steps up not only the prices of export sales but, as much as domestic demand allows, it provides an opportunity, in accordance with the prevailing pricing rules, to raise domestic price in the competitive sector as well. As for the second ratio, a devaluation results in a shift in favour of the competitive sector, provided, and to an extent, that price policy, mostly relying on administrative and cost-plus principles in the non-tradable sector, does not allow the price increases of the competitive sector to penetrate fully into the non-competitive sector. The extent of the repercussion concerned depends on price policy considerations on the one hand, and on the size of domestic demand on the other hand. These two factors which are of special importance in respect of price developments in the non-competitive sector have developed in a contradictory way in recent years. While price policy tried to avoid the maintenance of administrative and cost-plus prices on an unjustifiably low level, successive cuts in domestic demand as well as social policy considerations set a limit to price increases in the non-competitive sector.

This foreseeable behaviour of prices and, consequently, costs, i.e. their general responsiveness to exchange rate adjustments, made the exchange rate policy cautious in respect of a devaluation since, as a result, a relatively strong inflationary push and only a moderate shift in the price and profitability structure could be expected.

*Exchange rate policy and economic policy:
a summary of exchange rate policy in 1980–84*

Hungary's exchange rate policy is difficult to understand without the characteristic features of Hungary's economic policy. More concretely, first of all the inflationary target as well as policy considerations on relative prices between major sectors of the economy are in connection with exchange rate policy. As for the economic policy, first of all it is necessary to recall that in Hungary, just like in the West, one of the most important economic policy targets is the inflationary target. However, in the case of the Western market economies, especially in recent years, economic policy sets out from the control of the monetary side and sets a limit to the growth of money supply, i.e. the inflationary target is included in the desired growth of money supply while in Hungary the determination of the inflationary target, as a consequence of the given system of economic control and management, follows a different logic. The phenomenon can be briefly explained, figuratively speaking, by stating that the Fisher formula ($MV = PT$) is being read from left to right in the Western economies while from right to left in Hungary. Economic policy in the Western economies sets out from the monetary side while in Hungary it first determines the real side and the monetary side is derived mostly as a result.*

Beside the determination of the basic macro-economic elements, Hungary's present economic policy comprises targets for the major proportions of economic development as well. The formation of comprehensive and basic proportions includes such issues as the development of industry compared to that of agriculture and food-processing industry as well as proportions between the productive sector and the infrastructure. This latter, at the same time, largely affects the proportion between the competitive and non-competitive sectors. Of course, the targets of these comprehensive proportions include not only the relative growth of the respective sectors in real terms but the income relations of these sectors, consequently, the development of relative prices as well.

After having provided a general picture of Hungary's economic policy, it is just the issue of prices and relative prices in the major sectors of the national economy which may serve as a starting-point in the analysis of the adjustment of exchange rate

* For more details on the determination of the inflationary target see the article of Imre Tarafás [3].

policy to economic policy at large. It is because the exchange rate of the forint also has a role in the formation of major price proportions. This paper has already hinted at the theoretical approach to the effects of exchange rate adjustment on the relative prices between the competitive and non-competitive sector (consequently, between the productive sphere and infrastructure) in Hungary's small and open economy. At the same time, reference has been made to the fact that economic policy is bound to harmonize often contradictory objectives (e.g. flexible prices, curbing of domestic demand, social policy, encouraging export- and import-substituting activities). In this process exchange rate policy serves as one of the policy instruments. Furthermore, the exchange rate exerts an influence on the relative prices between industry and the food economy as well. It is because Hungary, similarly to most European countries, pursues an agricultural policy which involves domestic food prices different from world market prices; therefore foreign trade prices (consequently, exchange rate adjustments) determine, as a matter of fact, domestic prices only in industry (not including food-processing).

Accordingly, a devaluation of the forint, provided that other elements (e.g., administrative prices) are unchanged, increases industrial prices relative to the prices of agriculture and food-processing as well as increases the prices of the productive sector relative to those of the infrastructure. These relationships reasonably justify the necessity of consistency between exchange rate policy and price policy considerations of economic policy.

Namely, if exchange rate policy gets out of line with price policy, i.e. excessively revalues the forint, then undesirable disproportions will emerge in the system. For example, in the case of an excessive devaluation, the sectors applying administrative prices (including, e.g., transport, agriculture) would largely lag behind. The catching up of these sectors with those following foreign trade prices would simply result in higher-than-targeted overall inflation in the economy. Letting them lag behind in terms of prices and profits would, however, impede their development which would, sooner rather than later, cause difficulties in other sectors of the economy, including the foreign trade sector. Furthermore, an excessive devaluation would impede the development of the infrastructure as well, provided that economic policy is to avoid a higher-than-targeted inflation. In the case of the productive infrastructure, this would be accompanied with undesirable consequences flowing through the whole productive sector of the economy while, in the case of public infrastructure, this would directly affect living standards and conflict with social policy objectives.

In the spirit of an exchange rate policy adjusting to overall economic policy, the forint was gradually revalued in the period of Hungary's increasing foreign trade prices, i.e. until mid-1981, while it was devalued in the period of decreasing foreign trade prices, i.e. from mid-1982, in order to ensure that export and import prices in

Table 4
*The GDP deflator and the export and import
 price indices in forint terms*
 (previous year=100.0)

	GDP deflator	Export price index (non-rouble area)	Import price index
1980	105.3	103.6	102.0
1981	105.5	103.0	100.8
1982	105.4	98.6	99.7
1983	105.8	105.5	108.1
1984	106.3	105.7	108.3

Source: International Financial Statistics, Statistical Yearbooks (CSO).

forint terms be in line with the domestic inflationary target. *Table 4* shows the extent of the respective adjustment process.

In *Table 4* the annual GDP deflators are used for the domestic price index. In the period under consideration the GDP deflators were slightly higher than the price indices of domestic sales which, in line with the targets, were about 105 percent in every year between 1981 and 1984. The gap between the domestic price index and the foreign trade price indices stems partly from policy considerations concerning relative prices and partly from inevitable time-lags in the exchange rate policy as well as from the unpredictability of precise effects of exchange rate adjustments.

The time-lags, however, may be attributed to the nature of the information base serving exchange rate policy decisions. With the extreme world market price fluctuations in recent years, it has been impossible to avoid errors by relying either on price statistics or price forecasts. In a situation like this, exchange rate policy must be highly flexible and strive for continuous adjustment rather than sudden leaps, as done also by Hungary. As from January 1, 1980, the forint was revalued or devalued thirteen times relative to the peg, of which a 0.67 percent technical adjustment and a 7 percent change were the smallest and the largest, respectively. This way, though no advantage can be taken of—somewhat dubious—psychological (or “announcement”) effects of major leaps in the exchange rate, it is possible to avoid extreme fluctuations and the need for early opposite corrections.

Beside the fact that time-lags are sometimes inevitable it must be taken into consideration that an exchange rate adjustment is not an instrument of perfect precision (or “fine tuning”) since, on the one hand, fine tuning is constrained by the accuracy of the measurement and of projections of price developments while, on the

other hand, various structural effects, e.g., changes in the terms of trade, may reduce, cross or amplify the effects of exchange rate adjustment.

As for domestic price proportions, it must be emphasized that the process of restructuring domestic prices, starting with substantial changes in 1980, was continued onwards and completed by the end of 1982. Accordingly, all over the 1980–1982 period industrial prices increased faster than agricultural prices and, within industry, the increase of energy prices far exceeded the average, considerably contributing to inflation. Since the relatively fast domestic price increase affected the non-competitive sector of the economy as well, the fact that in the 1980–1982 period the aggregate export price index remained below the aggregate domestic price index did not imply a similar development within the competitive sector. There was only one period, during the first half of 1982, when within the competitive sector production for export was temporarily at disadvantage compared to that for the domestic market. Since 1983 domestic price developments have been much more balanced than earlier which has also been reflected by the relationship between the developments of domestic and export prices.

On the cost- and price-competitiveness of Hungarian exports

The concept of the real effective exchange rate

A comprehensive analysis of the price and exchange rate effects on Hungary's foreign trade performance cannot be confined, as for exports, to a discussion of only the price ratio influencing the supply of exports, i.e. the ratio of Hungary's export prices relative to domestic (producer) prices, but should also comprise the price ratio that exerts an effect on the demand for Hungary's exports, i.e. the ratio of Hungary's export prices relative to those of Hungary's foreign competitors (by applying a numeraire of course). This ratio can be analyzed through the calculation of the so-called real effective exchange rate of the forint.

This paper follows such a simple interpretation of the formula of the real effective exchange rate which considers the real effective exchange rate index as a relative price (or cost) index.* Accordingly, a change in the real effective exchange rate of the forint equals the average of the competitors' price indices in forint terms divided by Hungary's price index.** This paper is not to discuss the full details of weighting

* For other interpretations see the study of E. B. Maciejewski [4]. Note that Maciejewski also views the relative price index interpretation as the most satisfactory.

** In international practice the reciprocal of this formula (i.e. domestic price index divided by the average of the competitors price indices) is used. In the case of Hungary, however, a reverse interpretation is followed as the exchange rate of the forint is quoted on a forint per foreign currency basis.

methods and their interpretation (on these issues we refer to Maciejewski's paper).^{*} As for the types of foreign and domestic price indices used in the formula of the real effective exchange rate computations, three basic types can be identified:

In a "*cost-type*" real effective exchange rate index the numerator reflects the average index of production costs of Hungary's competitors while the denominator reflects cost developments in Hungary. An index higher than 100 percent means that Hungary's production costs have increased less (or decreased more) than those of the competitors, i.e. Hungary's cost-competitiveness has improved. An improvement in cost-competitiveness can lead to an improvement in price-competitiveness since, owing to more favourable cost conditions, Hungarian exporters can improve export sales by increasing their prices less (or decreasing them more) than their competitors. Thus, an improvement in cost-competitiveness can potentially be transformed into improvement of price-competitiveness.

In a "*price-type*" real effective exchange rate index the numerator reflects the foreign trade price (i.e. export price) developments of Hungary's competitors while the denominator those of Hungary's foreign trade prices (i.e. export prices). If the index exceeds 100 percent, Hungary's price-competitiveness has improved and if it remains below 100 percent, the price-competitiveness has deteriorated.

To calculate a pure cost-type real effective exchange rate index is rather difficult since international statistics do not abound in comparable cost data. As for Hungary, only one pure cost-type real effective exchange rate index could be computed on the basis of unit labour cost data published in International Financial Statistics. There are some difficulties inherent in the calculation of a real effective exchange rate index with export prices as well, since the commodity structure of exports of various countries may be substantially different; therefore it makes no sense to compare aggregate export prices.

These difficulties suggest a multi-based approach which practically means the calculation of "*approximative*" or "*mixed*" type real effective exchange rate indices involving various price indices. The indices under consideration should be interpreted individually, i.e. they need a separate analysis to decide whether they are rather cost-type or price-type indices. The most widespread type of real effective exchange rate indices involves the *wholesale prices* of the respective countries. An improvement in competitiveness (i.e. an index higher than 100 percent), reflected by the real effective exchange rate index with wholesale prices, can be interpreted in two different ways. If it is assumed that the level of wholesale prices reflects cost-developments on enterprise-

^{*} In the course of the further discussion so-called double-weighted real effective exchange rate indices will be used in all cases. These kinds of indices reflect the development of Hungary's competitiveness relative to that of the competitors in Hungary's most important external markets.

level in each country involved, then a *cost-competitiveness approach* is applied. However, it can also be interpreted as an *improvement in price-competitiveness* since, owing to the relatively moderate domestic price increase, the competitiveness of the country's export prices improves relative to those of the *competitors' domestic supply*.*

Evolution of the real effective exchange rate of the forint between 1979–1984 as reflected by calculations involving wholesale prices

Since the application of wholesale prices is extremely widespread, moreover, this method was used by the International Monetary Fund for evaluating member-countries' exchange rate policy (while recently it has rather preferred calculations

Table 5

Evolution of the real effective exchange rate of the forint, 1979–1983
(relative to a double-weighted average of 19 competitors,
calculated with wholesale prices, previous year = 100.0)

	(1) competitors' average price indices (in domestic currency)	(2) nominal effective exchange rate index of the forint*	(3)=(1)×(2) competitors' average price indices (in Ft)	(4) Hungary's domestic price index**	(5)=(3):(4) real effective exchange rate index of the forint
1979	109.1	99.2	108.2	101.3	106.8
1980	111.6	91.4	102.1	119.4	85.5
1981	110.0	87.8	96.6	107.1	90.1
1982	107.4	95.2	102.3	105.1	97.3
1983	104.9	106.7	111.9	105.2	106.3
1984	106.0	101.3	107.4	103.6	103.7

* The nominal effective exchange rate indices presented here are different from those shown in Table 3. This stems from applying export-weights in Table 3 while calculating with so-called double-weights in this table.

** Industrial producer price index.

based on consumer prices), the development of the real effective exchange rate of the forint will be presented on the basis of this method.

As Table 5 shows, the price—and cost—competitiveness of the Hungarian economy improved in 1979, fell back to a large extent in 1980 and 1981, and

* This latter interpretation, however, holds only when applying the so-called export-weighted indices. As mentioned earlier, indices calculated with this kind of weighting method will not be dealt with in this paper.

Table 6

Evolution of the real effective exchange rate of the Forint, 1970-79
 (relative to a double-weighted average of 19 competitors,
 calculated with wholesale prices, previous year = 100.0)

	(1) competitors' average price indices (in domestic currency)	(2) nominal effective exchange rate index of the forint*	(3)=(1)×(2) competitors' average price indices (in Ft)	(4) Hungary's domestic price index*	(5)=(3):(4) real effective exchange rate index of the forint
1971	103.7	101.8	105.5	101.3	104.2
1972	104.1	99.0	103.1	102.1	101.0
1973	111.0	97.8	108.5	102.0	106.1
1974	120.8	94.5	114.2	101.2	112.8
1975	105.7	97.8	103.4	110.7	93.4
1976	108.0	88.3	95.3	106.6	89.4
1977	106.7	100.9	107.5	101.4	106.0
1978	103.9	101.9	105.9	104.5	101.3
1979	109.1	99.2	108.2	101.3	106.8

*Industrial producer price index.

deteriorated slightly in 1982. As reflected by monthly data, this trend reversed already in 1982, since then the improvement in competitiveness has been continuing.

In respect of the development of the real effective exchange rate of the forint calculated with wholesale prices in recent years, the appreciation in 1980 and 1981 deserves a more detailed analysis.

In 1980 the major reason for the appreciation of the forint was a 19.4 percent increase in Hungary's industrial producer prices. In order to understand the real appreciation as well as the increase of domestic prices in 1980, it is necessary, however, to summarize the developments preceding 1980.

In the period immediately preceding 1980, i.e. between 1977 and 1979, the forint depreciated in real terms by 14.7 percent, as can be seen in *Table 6*. This development was owing to the fact that, while the nominal effective exchange rate of the forint remained roughly unchanged (altogether slightly depreciated), Hungary's industrial producer prices rose by 2.4 percent p.a. on the average compared to the competitors' 6.6 percent annual rate of inflation in the period under consideration. If the domestic price increase in Hungary had continued, in 1980 as well, to be as moderate as before, the real effective exchange rate of the forint would have stopped to increase at most but it would not have turned into a decrease. However, as discussed above, the 1980 price reform drastically increased the prices of raw materials and energy which account for

the vast majority of Hungary's imports while the price level of the manufacturing industry as well as agriculture and food-processing, having a substantial weight in domestic Hungary's exports, rose at much lower rate, moreover, within this latter group sectors with declining price level could also be found.

In 1980 the restructuring of relative prices ultimately resulted in a 19.4 percent increase in industrial producer prices compared to the level in the previous year. Thus, the bulk of the subsequent deterioration in price-competitiveness, the extent of which was 14.5 percent in terms of the real effective exchange rate index calculated with wholesale prices, can be regarded as "sacrificing" the improvement achieved in the preceding years.

This does not mean, of course, that the real effective exchange rate level of the forint, whether in 1976 or 1980, could be viewed as "adequate" or "appropriate". Real effective exchange rate calculations are not applicable to the comparison of price levels but only of price indices. However, after having analyzed the developments of the 1970s, it is obvious that by 1979 the real effective exchange rate of the forint had reached an unrealistically high level* which could only be maintained at the cost of an extreme divergence between domestic and foreign trade prices. This divergence was corrected by the 1980 price reform.

The 10 percent real appreciation of the forint in 1981, as witnessed by real effective exchange rate calculations involving wholesale prices, can be explained by international exchange rate developments. As it is well-known, the process of a considerable appreciation of the U.S. dollar against European convertible currencies started in 1981 (or, to be more precise, at the end of 1980). Since in 1981 the maintenance of the exchange rate of the forint relative to the peg was in consistence with the inflationary target of Hungary's economic policy, the forint depreciated against the U.S. dollar and appreciated against other major convertible currencies (while remaining unchanged relative to the peg) (see *Table 2*). The process resulted in a 12 percent decrease in the nominal effective exchange rate of the forint (see *Table 5*). As the appreciation of the forint in the nominal effective exchange rate was partly offset by a 2 percentage point faster increase in the competitors' average wholesale prices (in terms of national currencies) relative to Hungary's domestic prices, the real appreciation ultimately amounted to 10 percent.

At the same time, Hungary's foreign trade prices in forint terms developed in line with the expectations (i.e. slightly increased) during the year. Thus, price policy

* Between 1970 and 1982 two waves of depreciation and subsequent appreciation were experienced in the real effective exchange rate of the forint (1970-76 and 1977-82). Considering the level in 1970 as 100 percent, the average level of the two waves equals 107.8 percent compared to 120.5 percent in 1979 (see the curve with wholesale price indices on *Chart 1*).

considerations did not justify any devaluation to compensate for a deterioration in competitiveness. One further aspect of exchange rate policy in 1981 was that, despite world market prices starting to decrease in terms of U.S. dollar in the second half of 1981, this development was not seen as sustained (just as the U.S. dollar was not expected to gain in strength all the time either) and the possibility that this process

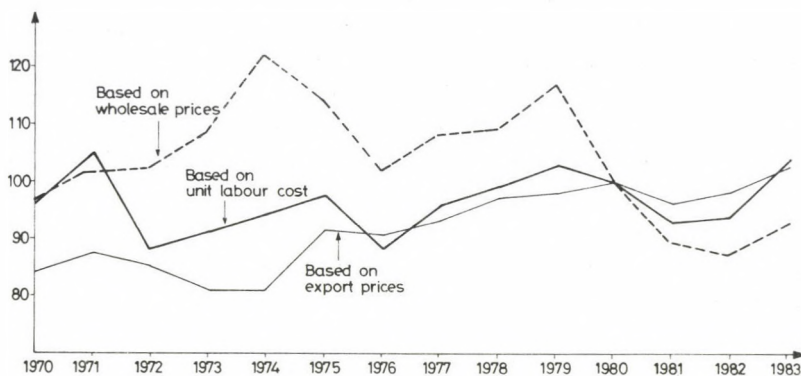


Chart 1
Real effective exchange rate indices
(1980 = 100.0)

would seriously affect Hungary's foreign trade prices was not considered very likely either. During 1982 it became clear that earlier expectations had failed to realize, and the decline of Hungary's foreign trade prices ultimately led to considerable devaluations of the forint, by 7 and 4 percent during the summer and at the end of 1982, respectively.

*The concept of price-competitiveness and the relationship
between price- and cost-competitiveness*

As this part of the paper actually aims at analyzing the relative price that theoretically* exerts an influence on the demand for Hungary's exports, i.e. the ratio of Hungary's export prices relative to those of the competitors, now the discussion is to return to this issue.

As a matter of fact, the macro-level measuring of price-competitiveness is not quite clear. This fact seems to stem from theoretical and conceptual problems. This is

* The issue whether price and exchange rate developments have an effect on exports or not is discussed later in this paper.

because price-competitiveness, on the one hand, is basically a micro-level category: in respect of an individual commodity, the exporter of a given country has an advantage over its competitors if it increases less (or decreases more) the price of the respective commodity than the competitors do. On the other hand, the advantage in price-competitiveness, as a pricing behaviour, i.e. that the exporter lets the price off compared to the competitors, may appear basically in two different ways. In one of the cases the seller can "afford" to take the opportunity of price advantage because of its favourable cost developments compared to the competitors. In the other case the seller can reduce the price even at the cost of its profit (i.e. the price advantage offered may exceed its cost advantage or it may take the opportunity of price advantage without having any advantage in costs), provided that it seems to be important in order to maintain its existing market share.

As for the macro-level analysis of the Hungarian exporters' pricing behaviour, first of all it is necessary to eliminate the differences between the commodity structure of Hungary's exports and that of the competitors' exports in the aggregate export price indices.

When drawing conclusions, however, it should not be left out of consideration that differences in commodity structures or a shift in the commodity structure of a given country's exports compared to other countries are fairly important questions from the point of view of shifts in the competitive position. Beside price-competitiveness, structural differences and shifts in structure may also lead to an advantage in competitive position if the exports of the given country are directed to more favourable, more profitable and more expansive markets than those of the competitors. Furthermore, it should be noted that *exchange rate policy can influence not only the pricing behaviour but can urge to change the commodity structure of exports as well*. These two effects complement each other in the following way: A real depreciation reflected in costs may result in a relatively soft pricing behaviour and thus, may lead to a decline in the aggregate export price index and to rigidity of the structure of exports while a real appreciation reflected in relative costs may, similarly, urge a tougher pricing behaviour and a shift of the structure in favour of commodities and markets with more dynamic prices, consequently, it may increase the aggregate export price index.

As for the demand for exports, the two effects analyzed above lead to opposite consequences. Though soft pricing behaviour encourages the demand on product-level, the accompanying rigidity of the structure of exports may result in a decrease of the aggregate demand (as the country gets jammed in declining markets). On the other hand, as a consequence of tough pricing behaviour, the demand for individual commodities decreases but the subsequent structural shift in favour of relatively expansive markets calls forth an increase of aggregate demand. These relationships

suggest that a *real depreciation cannot always be referred to as encouraging exports*, moreover, can be viewed as a *double-edged weapon which, on the long run, may lead to the opposite of the desired effects*. This issue will be further discussed, although no comprehensive analysis on the structure of Hungary's exports can be given in the framework of this article.

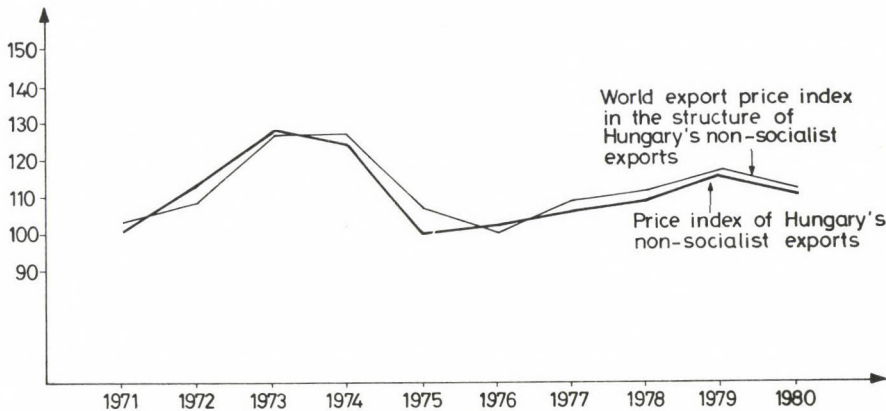


Chart 2
Aggregate export price indices
(in US dollar)
(previous year = 100.0)

Differences between the prevailing commodity structures of exports have been eliminated by comparing Hungary's export price index to that of world exports weighted by the commodity structure of Hungary's exports (disaggregated according to the one-digit SITC classification) (see *Chart 2*).* In order to obtain longer time-series, the average of export prices of industrial countries** can be used and compared to Hungary's export prices, as an alternative. (Data are shown in column RWP in *Table 8*).

As shown by our calculations, world market prices determined Hungary's export prices to a great extent as the development of Hungary's export prices followed that of world market prices even if subject to a constant and slight price erosion which, however, never but once exceeded 1 to 2 percentage-points annually (in 1975, see *Chart 2*). Tough pricing behaviour could rarely be experienced (in 1972, 1973 and 1976) and

* The sources of one-digit SITC aggregates for the world export price index and Hungary's export volumes are UN Statistical Yearbooks and Statistical Yearbooks of Foreign Trade (Central Statistical Office), respectively. Comparable data are available up to 1980.

** Source: International Financial Statistics.

Table 7

*Partners' import volume indices
averaged with the weights of the partners
in Hungary's exports* (previous year = 100.0)*

1971	106.2
1972	108.4
1973	110.5
1974	101.4
1975	95.4
1976	112.0
1977	104.4
1978	103.3
1979	109.6
1980	100.1
1981	95.6
1982	100.1
1983	103.7

*Calculated on the basis of IFS data.

Table 8

Data used in the regression analyses (1970=100.0)

Year	EXPQ	DOD	EXPP	RWP	CON	REX	IMPQ	RIP	Y
1971	97.2	111.3	101.4	100.0	106.2	104.2	113.7	100.1	105.9
1972	112.4	107.2	106.4	95.0	115.1	101.4	110.3	100.9	112.4
1973	123.8	109.3	120.0	93.8	127.2	96.3	111.0	115.1	120.3
1974	120.4	123.1	142.5	98.1	129.0	96.2	130.4	157.6	127.5
1975	120.5	131.1	133.7	103.0	122.8	109.0	127.6	154.1	135.3
1976	138.2	132.8	127.8	105.1	137.5	107.9	140.6	130.4	139.4
1977	147.9	140.8	134.0	110.1	143.5	110.9	155.8	137.3	149.3
1978	152.2	153.8	134.9	109.5	148.2	115.6	180.6	131.5	155.3
1979	178.6	144.9	146.1	110.5	162.5	116.5	164.1	135.6	157.2
1980	185.7	142.4	148.4	113.1	162.6	119.0	166.9	130.5	155.8
1981	182.6	143.4	149.9	112.9	155.4	114.1	172.4	123.2	159.7
1982	202.8	141.8	149.9	114.4	155.6	117.0	172.4	116.3	163.9
1983	234.5	138.0	159.3	114.4	161.4	122.2	182.0	118.5	164.4

from among these cases only the last one (in 1976) was accompanied by a real appreciation in terms of costs; nevertheless, all cases can be seen in connection with strong world economic activity in the respective years. World economic activity is measured here by import volume indices of Hungary's partner countries averaged with the weights of the respective partners in Hungary's exports.

It seems more justified to explain the exporters' behaviour with the evolution of "world" economic activity than with relative costs. In the years of outstanding growth of markets exporters had the opportunity to pursue a relatively tough pricing behaviour (e.g. in 1972, 1973 and 1976) while in the years of slump and recession they were forced to a soft pricing behaviour (i.e. in 1974, 1975 and 1980), even if relative cost developments did not warrant it (e.g. in 1973, 1980).

**An attempt to quantify the effects of prices and exchange rates
on the development of Hungary's export in 1970-1983**

The calculations presented below aim at analyzing the development of Hungary's export in connection with the evolution of prices and exchange rates.* According to textbooks, a devaluation of the domestic currency encourages exports (and discourages imports) while a revaluation discourages export (and encourages imports). This is because, briefly, a devaluation, on the one hand, gives incentives to increase the supply of exports through improving the ratio of export prices in domestic currency terms relative to domestic prices while, on the other hand, it provides an opportunity to improve the price-competitiveness of exports (i.e. to reduce export prices in terms of foreign currency), consequently, to encourage the demand for Hungary's exports. In the case of a revaluation the opposite logic can be applied.

Reality, however, is not that simple. Under present circumstances where prices and exchange rates are highly volatile (and recessions in world markets are much deeper than they used to be in the fifties and sixties), it is very difficult to determine the effects of prices and exchange rates** on the exports of a given country—in this particular case, on the export of Hungary.

At the very beginning of the analysis it is necessary to separate clearly two links of the exchange rate effects. One question is how strong the effects of a devaluation or of a revaluation of the national currency are on the ratio of export prices relative to the domestic prices (supply side) as well as on the price-competitiveness of exports, i.e. on the ratio of competitors' export prices relative to those of Hungary (demand side). Another question is whether the above-mentioned ratios exert any influence on the

* We have made a mathematical-statistical analysis of the quantity of imports and the factors having effects on it as well; however, its publication would go beyond the possibilities of this article. Our calculations fully support the view, widely spread among Hungarian economists, that relative prices hardly exert any effect on the volume of Hungary's imports, and it can rather be associated with the development of domestic demand as well as of national income.

** Since the exchange rate exerts its influence through prices, in the course of this discussion the effects of prices and exchange rates are sometimes referred to simply as price effects.

supply of, and on the demand for, exports or not. On the basis of these considerations the following scheme can be drawn:

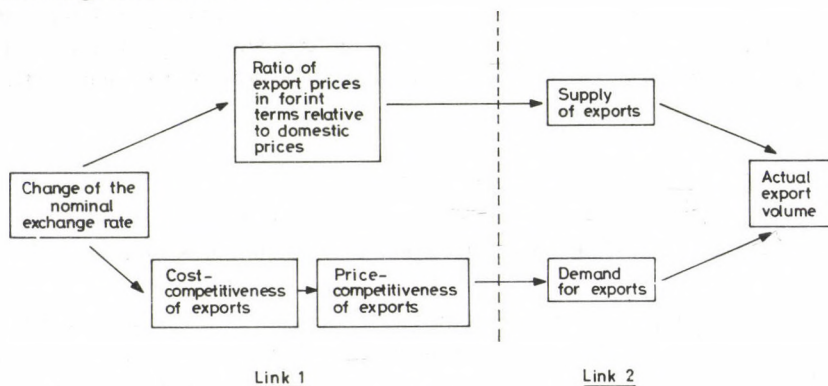


Fig. 1

The effects of exchange rate developments on the ratio of export prices in forint terms relative to domestic prices have already been dealt with at the beginning of this paper. As pointed out there, owing to the high responsiveness of domestic prices and costs to exchange rate changes in the 1980–1984 period, a relatively high inflationary push and only a moderate price- and income-restructuring effect can be expected as a consequence of a devaluation. Further on, some statistical results are presented on the factors influencing Hungary's export volumes, then a brief summary of the conclusions is given.

Factors affecting the supply of exports

On the basis of time-series of the period between 1970–1983,* no price effects can be found in the development of the export supply. This may stem from two causes. On the one hand, the realized export volume may actually be different from the supply of exports. During the period under consideration there have been years when the supply of Hungary's exports exceeded the demand for Hungary's exports and, consequently, the realized export volume reflected the demand for, and not the supply of exports. To identify the export volume with both the supply of, and the demand for, exports at any time, i.e. to assume an equilibrium for each year, is a rather questionable course;

* The analysis, in all of the cases, is based on power functions set up between the base indices of the various time-series. This is the method that makes possible the setting up of the simplest demand and supply functions with constant elasticity. Data used in the regression analyses can be seen in Table 8.

however, in most of the cases no other possibilities are available, therefore this method has internationally been accepted. The other reason, which is likely to play an important role in awareness of the features of Hungary's economy, is that the ratio of export prices in forint terms relative to domestic prices actually did not have any influence or, owing to its weakness, it was offset by the stronger influence of other factors. These factors include, first of all, the time component (which represents all the factors correlating with time) and domestic demand. There is only one supply function the result of which is acceptable from both mathematical-statistical and theoretical points of view:

$$(1) \text{ EXPQ} = 0.977 \cdot 10^{0.033T} \cdot \text{DOD}^{-0.406}$$

where EXPQ is export volume,
T is time,
DOD is domestic demand.

(The most important mathematical-statistical features of the function are as follows:

$$\lg \text{ EXPQ} = -0.01 + 0.033T - 0.406 \lg \text{ DOD}$$

(0.003) (0.190)

$$R^2 = 0.9759; \quad \text{Standard Error of Estimation (SEE)} = 0.0192$$

$$\text{serial correlation of residuals} = 0.1567)$$

This function shows that, apart from trend effect, in the period between 1970–1983 a decrease by 1 percent in domestic demand was accompanied by an increase of 0.406 percent in export volume.

When bringing the export volume into connection only with time, i.e. calculating a simple trend, the resulting function also has a satisfactory explanatory force:

$$(2) \text{ EXPQ} = 0.940 \cdot 10^{0.029T}$$

$$(\lg \text{ EXPQ} = -0.027 + 0.029T)$$

(0.002)

$$R^2 = 0.9649; \quad \text{SEE} = 0.0222;$$

$$\text{serial correlation of residuals} = 0.0332)$$

The trend implies a 6.9 percent annual growth rate ($10^{0.029} = 1.069$).

As for Eq. (1), the -0.406 elasticity of domestic demand is difficult to rely on in practice since the factors represented by the other variable of the function, i.e. the time variable, can only be identified with considerable uncertainty. However, the important role of domestic demand in the development of export volume is well characterized by the fact that, according to calculations, there is no meaningful relationship involving two explanatory variables between the variables of export volume on the one hand, and of time and export prices or time and export prices relative to domestic prices on the other hand, similar to Eq. (1). No relationship involving three explanatory variables has been found either which would rely on the variables of time, some kind of price and domestic demand as explanatory variables. The mathematical-statistical analysis suggests that *in the supply function of exports only domestic demand can be viewed as explanatory variable beside the time variable, namely, its increase reduces while its decline increases the export volume.*

Excluding the time variable from the analysis, no relationship appears between the ratio of export prices in forint terms relative to domestic prices and the export volume even if we replace the export volume with the ratio of export volume relative to GDP. However, there is a relationship between export prices and export volume:

$$(3) \quad \text{EXPQ} = 0.916 \cdot \text{EXPP}^{1.664}$$

$$(\lg \text{EXPQ} = -0.038 + 1.664 \lg \text{EXPP})$$

(0.287)

$$R^2 = 0.7533; \quad \text{SEE} = 0.0588;$$

$$\text{serial correlation of residuals} = 0.5062)$$

where EXPQ is the variable of export prices.

Since inserting the time variable into Eq. (3) yields no acceptable relationship, while the time variable alone provides a relatively good explanation for the export volume compared to export prices (see Eq. (2)), it seems that the existence of Eq. (3) can only be attributed to a relatively strong correlation between the time variable and both the export volume and export prices; therefore Eq. (3) reflects a coincidence rather than a casual connection. All these make the following statement justified: *on the supply side no price effects can be observed in the development of the export volume (which means, at the same time, that no exchange rate effects can be observed, either).*

Factors affecting the demand for exports

From among the demand functions, the relationship involving two explanatory variables, which brings the export volume into connection with a ratio of world market prices (i.e. the average of export prices of industrial countries and of non-oil exporting developing countries) relative to Hungary's export prices and an indicator reflecting the expansion of partners' markets, has led to satisfactory results, both mathematically and theoretically.

$$(4) \quad \text{EXPQ} = 1.04 \cdot (\text{RWP} -)^{1.513} \cdot (\text{CON} -)^{0.966}$$

$$(\lg \text{EXPQ} = 0.018 + 1.513 \lg (\text{RWP} -) + 0.966 \lg (\text{CON} -))$$

$$(0.647) \qquad (0.278)$$

$$R^2 = 0.8942; \quad \text{SEE} = 0.0404;$$

$$\text{serial correlation of residuals} = 0.0962)$$

where

(RWP -) is the ratio of the average of the export price indices of industrial countries and of non-oil exporting developing countries relative to Hungary's export price index, with a one-year lag;

(CON -) is an indicator of partners' market expansion, with a one-year lag.

According to Eq. (4), a decrease by 1 percent in Hungary's export price index relative to that of the "world" is accompanied by an increase of 1.5 percent in Hungary's export volume in the following year, provided that the partners' markets have not expanded; an expansion by 1 percent of the partners' markets is accompanied, in turn, by an increase by 1 percent in Hungary's export volume in the following year, provided that relative prices are unchanged.

If no time-lag is applied to the indicator of market expansion, the results are still acceptable in a mathematical sense but the price elasticity of exports is lower by 0.3 percentage points compared to the previous case, i.e. 1.2 percent, while its responsiveness to market expansion is higher by 0.3 percentage points, i.e. 1.3 percent.

Beside these two above mentioned functions, other demand functions with two explanatory variables also indicate that *a joint improvement in the price-competitiveness of exports and in market expansion by 1 percent results in an increase by about 2.5 percent in the export volume but the effects of the two factors cannot be unambiguously separated.*

As an *approximation*, in the following function, which seems to be the most acceptable from a theoretical point of view, the average of the indices of price-

competitiveness and of market expansion of the respective and the previous year is used as explanatory variable for each year.

$$(5) \quad \text{EXPQ} = 0.94 \text{REXA}^{1.218} \cdot \text{CONA}^{1.138}$$

$$(\lg \text{EXPQ} = -0.027 + 1.218 \lg \text{REXA} + 1.138 \lg \text{CONA})$$

$$(0.619) \qquad (0.305)$$

$$R^2 = 0.9172; \quad \text{SEE} = 0.0357;$$

$$\text{serial correlation of residuals} = 0.5637)$$

where

REXA is the average of the respective year's and the previous year's real effective exchange rate indices calculated with export prices;

CONA is the average of the respective year's and the previous year's value of the indicator for market expansion.

In Eq. (5) the elasticities are 1.22 and 1.14 for price-competitiveness and market expansion, respectively.

Bringing price-competitiveness into connection with nominal devaluation, it must be noticed that, owing to its effect on domestic price increases, a devaluation by 1 percent does not provide an opportunity for reducing export prices in foreign currency terms, i.e. to improve price-competitiveness, at the same rate. Once it is accepted that, as pointed out in the second part of this paper, a devaluation of the forint by 1 percent leads to an increase by about 0.64 percent in Hungary's domestic prices, an improvement of price-competitiveness by 1 percent needs a devaluation by 2.8 percent* which, in turn, results, with other conditions unchanged, in an increase by 1.22 percent in the demand for exports as shown by Eq. (5).

Summary of the computations

As it was shown in the discussion above, the mathematical-statistical analysis of the time-series of the 1970–1983 period has not succeeded in identifying links between the ratio of export prices in forint terms relative to domestic prices and the supply of exports. In terms of the scheme on Fig. 1, as for the *supply side*, the exchange rate effect is rather weak in the first link while it does not even appear in the second link.

* As 1 divided by $1 - 0.64$ equals 2.8.

On the *demand side* of exports the situation is just the opposite. Though the effects of exchange rate adjustments on the cost-competitiveness of exports are easy to understand logically, in the case of Hungary, as testified by mathematical-statistical computations, *a change in cost-competitiveness does not exert any influence on the price-competitiveness of exports*. As for Hungary, improvement of the price-competitiveness of exports depends basically on the situation in external markets: in the case of outstanding prosperity Hungarian exporters can pursue a tough pricing behaviour, otherwise they cannot. On the demand side, however, *price effects appear in the second link*; as presented above, there is a link between the demand for, and the price-competitiveness of, exports even if the elasticity of demand is rather low. Moreover, the *demand for exports* depends on the external market situation as well.*

To summarize the results of the computation, it can be concluded that, according to the experiences of the last decade and a half, *the demand for imports has been inelastic to prices but elastic to incomes in Hungary while, as for exports, the role of exchange rate and price effects has been surpassed by that of the domestic demand on the supply side as well as by the impacts of the situation in external markets on the demand side*.

Summary statements

In the open economy of Hungary, especially since the 1980 price reform, domestic prices have been characterized by high responsiveness to foreign trade prices. As computations aimed at quantifying the effects of exchange rate adjustments of the forint show, in the period under consideration a devaluation by 1 percent resulted in a 0.64 percent increase in the domestic price level. At the same time, exchange rate adjustments only had moderate influence on the profitability proportions between domestic and export sales as well as between the competitive and non-competitive sectors of the economy. We have pointed out that, similarly to many other countries, the inflationary target is one of the most important policy targets in Hungary; however, its control, in line with the prevailing system of economic management, follows a quite different logic compared to Western economies. Hungary's economic policy, unlike that of the Western countries, determines the inflationary target not by setting out from the monetary side but in the process of establishing the main proportions of the economy (e.g. domestic demand—export, productive sector—

* Finally, the mathematical-statistical analysis of the import volume and the related factors prove that prices have no effect at all while the effects of relative prices are very weak; the influence of domestic demand and national income exert on import volume is far stronger. As mentioned above, the publication of numerical results is not possible in the framework of this article.

infrastructure, industry—agriculture, private consumption—nominal wages, etc.). These main proportions involve a given set of relative prices, and it is of vital importance that exchange rate policy be in line with price policy targets. Within the period under consideration, the forint was revalued when Hungary's foreign trade prices in foreign currency terms were rapidly increasing, i.e. up to the second half of 1981, while it was devalued in the period of declining foreign trade prices, i.e. beginning with mid-1982, in order to ensure that export and import prices in forint terms be in line with the targets of domestic inflation and of the structure of relative prices.

From the point of view of foreign trade, price and exchange rate effects appear in the competitiveness reflected by the price and cost conditions of the economy. On these effects the analysis of the real effective exchange rate indices of the forint can provide some information. On the basis of our computations, Hungary's competitiveness improved in the 1977–1979 period while it fell back to a great extent between 1980 and 1981, then slightly deteriorated in 1982, though it started to improve during that year and this trend has been continuing since then. A detailed analysis presented in the final part shows that, owing to the features of Hungary's economy, the tough or soft pricing behaviour of exporters is determined by the export markets rather than by the development of relative costs. The mathematical-statistical analysis suggests that in Hungary, as for exports, the price and exchange rate effects are surpassed by the effects of domestic demand control on the supply side as well as by the impacts of the situation in export markets on the demand side while, as for the demand for imports, its price-elasticity appears extremely weak, while its income-elasticity is rather high.

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ВЕНГЕРСКАЯ ПОЛИТИКА ВАЛЮТНЫХ КУРСОВ
В 80-ЫЕ ГОДЫ

И. ТАРАФАШ—Ю. САБО

В начале статьи показываются изменения уровня курса форинта, а также курсы важнейших валют по отношению к форинту в период 1980—84 гг. Затем рассматриваются особенности венгерской политики валютных курсов, внутренней системы цен и их регулирования в 80-ые годы. Авторы констатируют, что в условиях венгерской открытой экономики — особенно после проведения реформы цен 1980 г. — для внутренних цен была характерна высокая степень чувствительности к внешнеторговым ценам. Из сопоставления экспортных и импортных валютных цен видно, что девальвация на 1% вызывала повышение внутреннего уровня цен приблизительно на 0,64%. В то же время изменения курсов — опять же в результате ценового механизма — лишь ограничено влияли на рентабельность производства и экспорта, а также на пропорции внутренней рентабельности конкурентивных и неконкурентивных секторов. Авторы напоминают, что хотя и в Венгрии одной из важнейших целей экономической политики является установление допустимых темпов инфляции, ее регулирование — в соответствии с существующей системой управления экономикой — требует совсем иной логики, чем в западном мире. Венгерская экономическая политика определяет темпы инфляции не с денежной стороны, а в процессе определения важнейших пропорций экономики (внутреннее потребление — экспорт, производственная сфера — инфраструктура, промышленность — сельское хозяйство, потребление — номинальная зарплата и т. д.). Эти основные пропорции содержат и ценовые пропорции, и для венгерской экономики чрезвычайно важно, чтобы политика валютных курсов соответствовала бы политике цен, составляющей часть экономической политики. В рассматриваемый период до второй половины 1981 г. — при возрастающих индексах валютных цен в венгерской внешней торговле — происходила девальвация форинта, а начиная со второй половины 1982 г. — при снижении валютных индексов цен — девальвация, чтобы тем самым способствовать приспособлению экспортных и импортных цен в форинтах к намечаемым темпам внутренней инфляции и изменениям пропорций цен.

В третьей части статьи авторы рассматривают конкурентоспособность венгерского экспорта в отношении затрат и цен. Ведь воздействия цен и валютных курсов с точки зрения внешней экономики проявляются в конкурентоспособности, отражающейся в отношениях цен и затрат экономики. Эти воздействия можно показать с помощью анализа реальных эффективных индексов валютных курсов форинта. По расчетам авторов, конкурентоспособность страны в 1977—1979 гг. усилилась, а в 1980—81 значительно, в 1982 г. — в меньшей степени понизилась, однако уже в середине 1982 г. началась тенденция к повышению, которая продолжалась и в последние два года.

Изучение опыта 1970-х годов дает возможность сделать вывод, что к 1979 г. реальный курс форинта достиг нереально высокого уровня. Поэтому о сильной реальной ревальвации, происшедшей в связи с реформой цен 1980 г. можно сказать, что она по сути дела «пожертвовала» реальной девальвацией — улучшением конкурентоспособности — предыдущих лет. А реальную ревальвацию 1981 г. можно связать с состоянием мировых валютных курсов (усилением доллара).

В последней части статьи авторы приводят регрессионные расчеты спроса и предложения венгерского экспорта. По расчетам авторов, поведение венгерских экспортеров в области цен — твердость или мягкость цен — определяет скорее конъюнктура мирового рынка, а не относительные издержки. Результат математико-статистического анализа можно сформулировать так, что в Венгрии на объем экспорта сильнее воздействует со стороны предложения регулирование внутренней покупательной способности, а со стороны спроса — конъюнктура внешних рынков, чем эффекты валютных курсов и цен, а спрос на импорт не эластичен ни по отношению к ценам, ни по отношению к доходам.

PRODUCTIVITY GROWTH AND ITS SLOWDOWN IN THE HUNGARIAN ECONOMY

Z. ROMÁN

The level of development of the Hungarian economy has come closer—in the last 3-4 decades—to the average of the developed Western countries, but the economic and productivity growth in Hungary has shown a significant slowdown beginning with 1979, similarly to the other socialist countries. The author analyses the explanatory factors of this slowdown and also points out that the difficulties of the Hungarian economy began to cumulate already from 1974 on. In the last 15-20 years the growth of productivity was about average relative to the developed Western countries, the developing and the European socialist countries, while its slowdown after 1979 was slower than average at the same time, the technological standards of products and production as well as the structural adjustment of the industry are unsatisfactory and international competitiveness of the economy is weakening. This is the main cause of the deceleration in the growth of productivity.

The article also analyses the other causes of the deceleration of productivity growth and the possibilities of acceleration. The liquidation of unprofitable or less profitable enterprises and abolition of superfluous workplaces would allow a rapid and spectacular growth of productivity, but the maintenance of full employment makes a slower process desirable. Resolution of the contradictions between the first and the second economy, a purposeful program for improving productivity and raising the value added, efforts at a faster structural adjustment may help to strengthen the competitiveness of the Hungarian economy and gradually accelerate growth also with full employment.

In every country, and almost without exception in every period, the main source of economic growth is the increase of labour productivity. The slackening of growth, stagnation or decline are, though not always yet normally, similarly entailed or at least accompanied by a slowdown in the growth of productivity. Besides, the development of productivity and wage cost per man-hour are crucial factors determining the competitiveness of a given country. Consequently, it is not surprising that the slackening growth of productivity, everywhere observable after 1973 in the advanced industrial countries, as well as the differences by countries in the degree of this slackening, got into the focus of attention of economists and economic policy makers.

The slowdown of economic growth and productivity also came in the socialist countries including the Hungarian economy, though with about a five-year time lag. Although economic and productivity growth are no longer considered to be exclusive "success indicators" suppressing other phenomena of development and conditions affecting the future, their importance still remains outstanding from the viewpoint of

assessing the performance, the capacity and chances of social advancement of the countries. In this paper I give an overview on the postwar development of productivity in Hungary, then I present some international comparisons and look for the factors explaining the productivity slowdown and the possibilities for an acceleration of the growth of productivity.

The postwar development of productivity in Hungary

Statistical data show that in 1948 the Hungarian national income had already reached the prewar level (of the year 1938) and continued to increase at a high rate. These data give a correct indication of the basic trends, yet they should be treated with particular caution. The methods of computing national income were namely changed in the meanwhile and the mere conversion of the Pengő and Forint prices to identical price level is a source of a great deal of uncertainty. (The data published had repeatedly been corrected earlier by the Central Statistical Office itself.) I will therefore study the years after 1950, describing the beginnings and ends of periods by 3-year averages. (In this way we can avoid the substantial influence upon the value of the average rate of simple exceptionally good or bad years.)

Table 1
*Growth of the Hungarian economy and its sources between
1950/52 and 1982/84 (percent)*

Indicators	Annual rate of growth	Contribution of factors to the growth of		
		national income	per capita national income	labour productivity
National income	5.03	100		
Population	0.38	8		
Per capita national income	4.65	(92)	100	
Employment	0.36	7	8	
Ratio of active earners in the sphere of material production	-0.15	-3	-3	
Number of active earners in the sphere of material production	0.59	(12)	(13)	
Labour productivity	4.44	(88)	(95)	100
Substitution of labour by capital	1.52	30	32	35
Total factor productivity	2.92	58	63	65

Source: Hungarian Statistical Yearbooks.

In the third of a century from 1950/52 to 1982/84, the annual growth rates in the Hungarian economy was as follows: national income 5.0 percent, per capita national income 4.6 percent, labour productivity 4.4 percent, total factor productivity (national income per labour *and* capital) 2.9 percent per annum. In the whole of this period, the increase of the national income can be attributed to the different factors in the following percentual proportions:

- 8 : 92 to the growth of population and of per capita national income,
- 12 : 88 to the growth in the number of active earners and labour productivity,
- 42 : 58 to the change in the increase of total factor inputs (labour and capital) and total factor productivity.

With respect to the whole period 96 percent of the increment of *per capita* national income originated from the growth of labour productivity and only 4 percent from the increase in employment in the material production. In the sub-periods these proportions were as follows: 83 : 17 in the fifties (1950/52–1960/62), 90 : 10 in the sixties (1960/62–1970/72) and + 120 : – 20 in the seventies (1970/72–1980/82). This is a sort of a reflexion of the so-called extensive and intensive growth. Considering the whole period, one third of the growth of labour productivity can be attributed to the substitution of labour by capital, and two thirds of it to the increase of total factor productivity.*

In a previous paper [1] I also tried to quantify the impact of a number of another set of factors of the growth which labour productivity underwent between 1950 and 1970. Carrying this computation on till 1980 remarkable differences appear at two points: the structural impacts—owing mainly to the changing proportions of agricultural and industrial employment—diminished while the role of substitution of labour by capital increased. According to this computation the different factors account for the following percentages of the growth in labour productivity between 1950 and 1980:

economies of scale	12 percent
increase of qualification (skills)	15 percent
structural impacts	21 percent
substitution	33 percent
other factors	19 percent

The above proportions are near to the results of similar computations for other countries. With respect to the last decade, however, the roles of *demand* and of *external*

* I assume the substitution of labour by capital to be equal to the difference between the growth rates of labour inputs and total factor inputs (labour inputs + fixed capital inputs) (see [2] Chapter 10). I am going to revert to some aspects of the interpretation of data and computations, in particular in respect of the last decade.

Table 2
Growth of the Hungarian economy and changes in its factors
in different partial periods

Indicators	Annual growth rate, percent					Difference between partial periods :					
	1950/52–	1957/59–	1966/68–	1976/78–	1950/52–	1	2	3	2	4	3
	1956/59	1966/68	1976/78	1982/84	1982/84	in percentage points					
National income	5.4	5.6	6.1	2.0	5.0	0.2		0.5		–4.1	
Population	0.6	0.3	0.4	0.2	0.2	–0.3		0.1		–0.2	
Per capita national income	4.8	5.3	5.7	1.8	4.6	0.5		0.4		–3.9	
Employment	0.5	0.5	0.6	–0.4	0.35	0		0.1		–1.0	
Ratio of active earners in the sphere of material production	0.3	–0.1	–0.3	–0.5	–0.15	–0.4		0.2		–0.2	
Number of active earners in the sphere of material production	1.4	0.7	0.7	–0.7	0.6	–0.7		0		–1.4	
Labour productivity	4.0	4.9	5.4	2.7	4.4	0.9		0.5		–2.7	
Output/fixed capital ratio	0.1	0.7	–0.4	–3.6	–0.6	0.6		–1.1		–3.2	
Substitution of labour by capital	0.8	1.3	2.0	1.9	1.5	0.5		0.7		–0.1	
Total factor productivity	3.2	3.6	3.4	0.8	2.9	0.4		–0.2		–3.2	

Source: Hungarian Statistical Yearbooks.

economic relations, which increased considerably in the 1960s and 1970s, deserve special analysis.

Let us first review, however, the growth trends of productivity in different stages of the period under study. Following rather the events of the Hungarian economic history than round periods of 5 or 10 years, four partial periods will be delimited by the years 1957/59, 1966/68, and 1976/78. In this way the subperiod subsequent to reconstruction, that before and after the reform of economic control, and the one subsequent to the slackening of growth can be studied. This delimitation is nevertheless conditional as, for example, it can be shown that the causes for the post-1978 deceleration and slackening of growth go back to many years earlier. V. Nyitrai presents convincing evidences of the above in her book [3] published in 1983.

According to our data (see *Table 2*) the growth rates of total and per capita national income as well as of labour productivity were equally high and even somewhat accelerating in the first three subperiods. Our indicators show a more marked growth of labour productivity in the period after the introduction of the reform in 1968, but also show that this was accompanied by a decrease in the output/capital (fixed assets) ratio and an increasing substitution of labour by capital. (It would give a similar picture if the post-reform subperiod were closed with the years 1972/74.) The above, however, are too little to evaluate the reform, because 1) we ought to take into account also other, later and not quantifiable impacts, and 2) we cannot tell what values these indicators would have shown without the introduction of the reform.

After 1976/78 essential changes became apparent; the number of active earners in the productive sphere of material production decreased by 1.4 percentage points and in the course of the, first intentional and thereafter inevitable, deceleration of growth the labour productivity growth rate decreased by 2.7 percentage points. The above together cut back the growth rate of the national income to one third of its earlier value. The output/fixe capital ratio robustly decreased (by 3.2 percent per annum) while total factor productivity was only slightly increasing. (Beside the diminishing utilization of capacities and structural impacts, this probably also reflects that the valuation of the old and new fixed assets is only approximately brought to the same level by the Hungarian price indexes and the increase of fixed assets is probably overvalued in the volume indicators.) Although in the period after 1978 a new orientation was applied in economic policy, one paying more attention to realities and targeting the steady carrying on of the reform of economic control and management, a substantial slackening of the growth rates of the economy and of productivity was inevitable.

The last decade, and some methodological problems

Figure 1 shows the growth of national income and labour productivity in the years between 1980 and 1984. It indicates the fluctuations at the beginning of this period, the impact of 1956, the subsequent lasting growth and then, after 1978, the decline of the

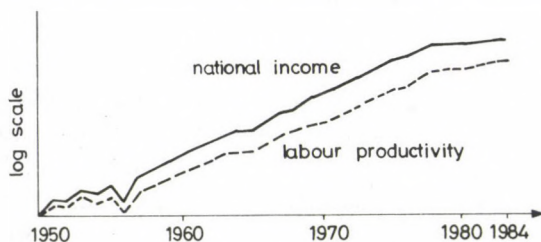


Fig. 1

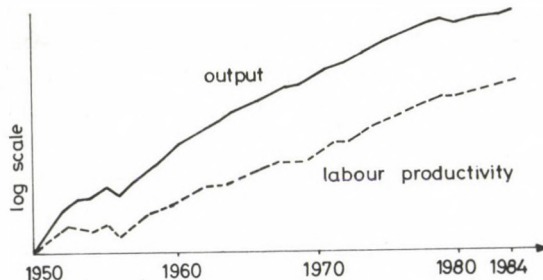


Fig. 2

previous trend line. The fast increase of industrial production, amounting to a yearly average of 7 percent, was the motor of growth. The national income produced by agriculture hardly increased, the productivity indicators of agricultural activity, reckoning with net output show only a moderate growth in spite of a considerable decrease of employment. At the same time, the increase of *gross* agricultural output was a substantial contribution to the supply of the population and proved to be extremely important from the viewpoint of the balance of foreign trade. As shown by Figure 2, after 1978 the growth of production and—to smaller extent and with strong fluctuations—of productivity decelerated also in industry. A slight increase of labour productivity—along with an increasing rate of substitution of labour by capital, a diminishing ratio of output/fixed capital and a slower growth rate of total factor productivity—could not compensate for the decrease in industrial employment. However, the evaluation of the past decade cannot dispense with involving further indicators in the scope of our analysis. (See Table 3).

Table 3
Main economic indicators of the years 1974-1984

Indicators	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984 ^a
	Change over the year before (percent)										
National income produced	5.9	6.1	3.0	8.0	4.2	1.9	-0.8	2.5	2.6	0.3	2.8
Labour productivity	6.2	6.4	3.4	8.9	4.7	2.1	0	4.1	2.9	0.9	3.8
Total productivity	2.3	4.3	0.8	6.5	2.5	-0.2	2.2	1.7	1.2	0.3	1.3
Domestic use of national income	12.7	6.4	1.2	6.2	10.0	-5.8	-1.7	0.7	-1.1	-2.7	0
Per capita real income	6.2	4.4	0.8	4.9	2.9	-0.2	0.4	2.9	0.9	1.1	1.0
Real wages	5.6	3.8	0.1	3.8	3.1	-1.7	-1.6	1.1	-0.7	-3.2	-3.0
Consumer price index	1.8	3.8	5.0	3.9	4.6	8.9	9.2	4.6	6.8	7.4	8.3
Volume of investment	4.0	8.9	-0.1	12.7	4.9	1.0	-5.8	-5.1	-2.2	-2.7	-6.5
Volume of exports	3.5	4.8	8.1	12.7	1.5	12.5	0.9	2.6	7.2	9.5	4
Volume of imports	17.5	5.7	3.8	8.6	12.6	-3.3	-1.2	0.2	0	4.0	0
Change in terms of trade, total	-7.5	-7.1	+2.2	-3.4	-0.6	-1.8	+0.4	-0.8	-2.2	-2.6	-2.3
in convertible currencies ^b	-14.8	-7.0	+6.5	-3.8	0.8	-1.2	+1.6	2.2	-1.1	-2.4	-2.4
in non-convertible currencies	+0.4	-8.8	-2.1	-3.0	-2.3	-1.8	-1.1	-3.9	-3.2	-2.7	-2.2
	billion forints										
Balance of foreign trade, total	-24.7	-38.5	-23.5	-28.4	-59.8	-25.0	-18.2	-12.9	+1.4	+13.2	+25
in convertible currencies ^b	-28.0	-23.6	-14.7	-23.6	-42.8	-10.3	-0.9	+1.1	+19.7	+27.8	+29
in non-convertible currencies	+3.3	-14.9	-8.9	-4.8	-17.1	-14.7	-17.3	-14.0	-18.3	-14.6	-4

Source: Hungarian Statistical Yearbooks

^aPreliminary data, partly estimated

^bIncluding data of trade with socialist countries accounted in convertible currencies

A few years ago the 1970s were called by a quite a few prominent Hungarian economists the golden age of the Hungarian economy. By now it is generally acknowledged *that our present troubles go back to the early 1970s*. A look at Table 3 first shows the marked fluctuation in the growth and domestic use of national income. In 1974 and 1975 the Hungarian economy suffered grave losses in its terms of trade, and the balance of foreign trade showed substantial deficits year by year after 1974, the biggest one just in 1978. The use of the national income nevertheless increased at a higher rate than its production—on the account of foreign credits. In another paper [4] I showed in detail how our economic policy lagged behind in the *learning process* in the adjustment to external conditions. Not before 1978 did it realistically face our situation and chances; that was the time when an economic policy of new orientation, reckoning with all that, was commenced. The accomplishment of the objective set in the first place: the restoration of external economic equilibrium was successful after 1978, but at a rather high price. Full employment was maintained, even some growth was achieved, however, inflation intensified, investment and real wages had to be strongly curbed and, through the many operative interferences, the functioning of economic control as a system and, consequently, the confidence and initiatives of companies were weakened.

Employment in material production has decreased as a lasting tendency, i.e., labour productivity has been growing faster than the national income itself. But this alone does not tell us much. The growth rate of productivity fluctuates, it is below its previous value, and up to now it has failed to produce the surplus whereby, with the sacrifices made for the sake of equilibrium a sensitive restriction of consumption and investment could not be avoided. The plan for 1985 and some variants of the 7th five-year plan for 1986–1990 under elaboration promise this, but their foundation is not ensured yet.

Before attempting to draw up a final balance of the post-1974 performance of the Hungarian economy, it is needed to consider a few methodological problems, too.

All the post-war indicators quoted in this paper with respect to the Hungarian economy are based on official and published statistical data. Some corrections were only made by myself in the time series of active earners (see [5] pp. 242, 243).

Since the 1970s the Hungarian Central Statistical Office has published data beside the national income also of the GDP. The differences have increased in recent years but are not essential if a longer period of time is considered. For example between 1972 and 1982 the annual growth rates were 3.9 percent for national income and 4.1 percent for GDP. In order to maintain the continuity of the time series, I continue to use in this paper the index numbers of national income with respect to the Hungarian economy.*

* The difference between sectoral gross and net output indexes is increasing, usually in favour of the net indexes, which needs *in depth* analysis for an explanation.

Indicators showing the development changes in total factor productivity "complex efficiency" are not published regularly, but they have been lately computed and periodically published by the Statistical Office. The weights used for the combination of labour and capital inputs are somewhat different in their computations from those applied by me (there a coefficient of similar order of magnitude is used for weighting not the gross but the net value of fixed assets, and this results a smaller impact of the changes in capital inputs in the aggregate index). This is worth noting because, when the difference between the growth rates of labour and capital inputs increases (as it can be observed in the present stage, owing to the decrease of labour inputs), then the selection of weights becomes more significant. (It can produce significantly different results, capital-intensive sectors.) As I believe that the capital input weights employed in by the CSO are underestimated (by the way, this is now a point of debate), I have not changed my original weighting method.

There are two further questions which deserve thorough consideration. The first one is the following: the growth and productivity indexes will be calculated by definition, at constant prices and, therefore (as long as we do not change over to the price base of another year), our indexes do not reflect the occasionally important and broad impacts of changes in relative price. I mean first of all the losses and gains originating from changes in the terms of trade. For the moment, it is an open problem how such losses could be recorded in growth and productivity accounting. The significant terms-of-trade losses suffered in the past decade decrease the annual average growth rate of the Hungarian national income by 1 to 1.5 percentage points and similarly affect the values of labour and total productivity indexes.

The worst terms-of-trade losses were suffered in 1974 (-7.5), 1975 (-7.1) and in 1977 (-3.4 percent). A correction corresponding to these values would decrease the growth rates of the respective years by 2 to 3 percentage points and would *corroborate the conclusion that the problems manifest in the growth appeared not in 1978 but several years earlier*, and their effects have been felt since that time. The roots of our contemporary problems go back to those years, to forced growth and to delayed adjustment to world economic changes. The above correction of productivity indicators would also modify the data quoted for the periods before and after the reform (in Table 2), in favour of the pre-reform subperiod. It would, however, be unreasonable to make any inferences from this: external changes have no relationship with the reform, moreover, the delay of internal adjustment can partly be deduced from economic political causes and partly from the controversial implementation of the original principles of the reform.

These corrections of growth rates also concern international comparisons, especially when the changes in the terms of trade are of opposite signs or of strongly different degrees in the countries compared. Either by correcting the growth rates or by

taking these changes separately into account (in the framework of an analysis based on a *system* of index numbers), the negative implications for the evaluation of the performance of the Hungarian economy in the last decade are not negligible. All the more, as we know very well that (even if it is difficult to quantify) that a considerable part of the terms-of-trade losses derived not from the higher energy and raw material prices but from the fact that, owing to the poor competitiveness of the Hungarian products, we could not achieve but lower export prices.

It is a further factor to be taken into consideration that, describing the development of labour inputs with the data of active earners, the change in per capita working hours was not taken into account. In the period after World War II there was a significant decrease in Hungary in both the number of per capita legal working hours and in the working time spent on household work, while labour inputs increased in the secondary economy. On a longer range these changes mostly compensated for each other, on the *average*, however, leisure time actually increased, whereas in recent years the activities in the second economy are found to have increased (and also unregistered employment has gained ground).

The number of active earners decreased in agriculture, according to statistics, from 2.13 million to 1.04 million between 1950 and 1980. At the same time, however, a) about one-third of those employed in agriculture perform non-agricultural activities, b) more than 40 percent of the population live in households engaged in auxiliary (complementary) agricultural activities. According to a study of the Central Statistical Office the number of working hours spent on agricultural activities by non-agricultural employees and their dependants was in 1976–77 more than the working hours of the *total* number of agricultural employees. The article by V. Nyitrai, [7] quotes that in 1.5 million household plots and auxiliary farms 4.5 million persons spend a total of yearly 2.7 thousand million working hours which is equal to the activities of 1.2 million full-timers. As far as the building industry is concerned, most of the dwellings and family homes are built by the families themselves. Lately, a particular form of activity, performed after official working hours, namely, the enterprise business partnerships (“intrapreneurial groups”, workteams), has gained ground also in industry. In the (state-owned) industry already some 120,000 people participate in this system. Their share in the total performance is also raised because, according to all estimates, their productivity is far above that of work done in full-time work (our study [8] shows it to be by about 50 percent higher on the average).

The output of work performed in the second economy is recorded by statistics within the given limitations, but there is much more uncertainty about the labour inputs in this field, especially with respect to agricultural and construction industrial activities. Simultaneously, the industrial activities of non-industrial organizations also increase (and have already reached 12 percent). Thus records based on the sectoral

classification of the different enterprises show increasing differences from records according to activities. In more than 10 percent of the agricultural cooperatives not only the bigger part of profit, but also more than 60 percent of the income originate from non-agricultural activities. (These are in fact conglomerates.) All the above warn that great caution is required in computing and assessing sectoral productivity index numbers activities. It also suggests that, in periods when activities in the second economy markedly increase, the growth of productivity might be overestimated in our indicators—unless this is balanced by a decrease of the legal working hours in such periods; furthermore, by the poorer utilization of working time and lower labour intensity in full-time work. This is a relationship deserving further research and, in the meanwhile, due consideration.

What do international comparisons reveal?

In the 1950s and 1960s the growth rate of labour productivity was higher in the Hungarian economy than in the average of advanced industrial countries, but it fell below or showed little difference from a good many advanced countries (in Europe: Austria, France, the FRG, Italy), and the South-European countries. As shown by the analysis of the Secretariat of the Economic Commission for Europe [9], pp. 35–38) from 1973 on the trend line of productivity shows a break. In the 12 countries studied the growth rate of productivity decreased by 1.5 to 4.3 percentage points in the years between 1960–1973 and 1973–1981. (See *Table 7*). In the Hungarian economy the slackening of productivity growth only amounted to 0.3 percentage points (according to the traditional indexes) between these two periods of time. (Indexes corrected for terms-of-trade changes would conform better to the above data series.) However, the slackening growth of the economy and productivity could not be prevented in the Hungarian economy either. Similarly to the other European socialist countries, this occurred after 1978. While between 1973 and 1978, productivity was rising by 5.9 percent in this economy, between 1978 and 1984 this value was a paltry 2.3 percent.

Continuing the comparison with the advanced industrial countries: considering the whole period from 1960 to 1981, the growth rate of the Hungarian productivity was lower than in Italy (and in Japan for which no data have been quoted), the same as in Austria, and not much higher than in France and the FRG. 1982 still was a year of recession in the advanced industrial countries, in 1983 however, the revival of their economies already began and continue in 1984, with a 2 to 3 percent of increases in productivity.

Part 2 of *Table 4* gives data of 12 developing economies, most of which belong to the newly industrialized group of countries. In these countries the slackening of

Table 4
*Growth rate of labour productivity in 25 countries
 between 1960–1981 (percent)*

	1960–73	1973–81	1960–81	Difference between the two periods
U.K.	3.0	0.5	2.0	–2.5
Austria	5.6	2.7	4.5	–2.9
Belgium	4.7	2.8	4.0	–1.9
Finland	4.7	3.0	4.0	–1.7
France	5.2	2.6	4.2	–2.6
The Netherlands	4.2	1.9	3.3	–2.3
Norway	3.8	2.3	3.2	–1.5
Federal Republic of Germany	4.8	3.0	4.1	–1.8
Italy	6.5	2.2	4.9	–4.3
Sweden	4.1	1.3	2.7	–2.8
United States	2.4	0.3	1.2	–2.1
Canada	3.3	0.3	2.2	–3.0
<i>Hungary</i>	4.6	4.3	4.5	–0.3
Argentina	2.6	0.1	1.6	–2.5
Brazil	4.6	3.1	4.0	–1.5
South Korea	5.7	5.0	5.4	–0.7
Egypt	2.8	5.8	3.9	+3.0
The Philippines	3.5	3.8	3.6	+0.3
Hong Kong	7.1	5.6	6.6	–1.5
Columbia	3.0	2.6	3.0	–0.4
Malaysia	4.4	4.3	4.4	–0.1
Mexico	3.9	3.5	3.8	–0.4
Thailand	5.7	6.6	5.6	+0.9
Turkey	4.4	2.6	3.7	–1.8
Singapore	6.9	6.4	6.7	–0.5

Note: Data of OECD countries cover the “business sector” (without non-market services), and the data of the developing countries cover the total GDP. Source for the first ones: [9] p. 37, for the latter: UNIDO data bank. The Hungarian data show changes in national income per one employee.

productivity was of smaller rate and also not general. From the 12 countries between 1960–1973 (and also in the whole period of 1960–1981) four achieved higher rates and another three (in the whole period one) achieved growth rates of productivity similar to those of the Hungarian economy. In addition, a steep increase of employment, not shown in *Table 4*, was typical (by 1.7 to 3.5 percent p.a. in the case of the countries quoted), and this, too, helped them in substantially increasing their shares in production. The years after 1981 affected these countries in different ways; the Latin American countries, in particular Brazil and Mexico, faced grave financial difficulties

Table 5
*Growth rate of labour productivity in the European
 socialist countries (percent)*

Country	1950–1970 ^a	1970–1978 ^b	1978–1983 ^c	Difference between periods	
				2 and 1	3 and 2
Bulgaria	9.3	7.0	4.2	–2.3	–2.8
Czechoslovakia	4.7	4.1	1.2	–0.6	–2.9
Poland	4.4	6.3	–3.0	+1.9	–9.3
Hungary	4.7	5.7	2.1	+1.0	–3.6
GDR	6.7	4.8	3.5	–1.9	–1.3
Romania	8.4	10.2	3.1	+1.8	–7.1
Soviet Union	7.2	4.2	2.8	–3.0	–1.4
Yugoslavia	4.2	1.7 ^d	1.0 ^d	–2.5	–0.7

Source: ^a[5] p. 383, Yugoslavia 1953–1972

^b[11] p. 835, [12] 107

^c[12] p. 107

^d[13] p. 175

while others could carry on their fast growth undisturbed. In most of the developing countries the average level of productivity is below (often much below) that of the Hungarian economy,* still they are our strong competitors in the world market. They are namely better established in the market through transnational companies and other financial relations, in quality and technical parameters surpass ours in several fields, and their wage levels are much lower, by degrees in excess of the differences in productivity! While Hungary draws nearer to most of the advanced countries, numerous developing countries are approaching us, closing up, and showing performances in more than one field already better than ours.

From the European socialist countries (see *Table 5*), the growth rate of labour productivity in the 1950s and 1960s was somewhat below that of Hungary in Yugoslavia and Poland (By 0.5 and 0.3 percentage points, resp.) while it was identical in the ČSSR and much higher in Bulgaria, Romania, the Soviet Union and the GDR (by yearly 4.6 to 2.0 percentage points). Between 1970 and 1978 it increased in Poland, Hungary and Romania and decreased in the other four countries, while from 1979 on the growth of productivity slackened in every country of this region. The decrease of

* The productivity of the Japanese economy is on average more than the double of the Hungarian one. According to a recent study [10], p. 148) labour productivity relative to the Japanese economy can be estimated at 64 percent in Singapore, at 46 percent in the Korean PDR, at 28 percent in the Philippines, at 20 percent in Thailand, and at 17 percent in Pakistan.

the rate thus started in different years, to record the lowest values between 1979 and 1981 (in Yugoslavia in 1983). In 1983 and 1984 growth was already accelerating in most countries. The durability of this acceleration is hard to estimate. Between 1978 and 1983 productivity decreased in Poland, and increased in Yugoslavia and Czechoslovakia by about 1 percent a year, in Hungary by approximatively 2 percent, and in the other four countries by 3 to 4 percent.

According to the *officially published* indexes, Hungary's productivity position improved as against Czechoslovakia, Poland and Yugoslavia, and deteriorated as against Bulgaria, the GDR and Romania relative to the years 1950, 1970, and 1978; it only shows a change of placement as against the Soviet Union where productivity increased less between 1970 and 1978 but more between 1950 and 1970 as well as after 1978 than in the Hungarian economy. Taking into account also qualitative components that cannot be quantified, the control computations of some research workers as well as the control opportunities provided by the comparison of growth rates and relative levels, one can assume that the productivity differences between Hungary and these latter four countries did not increase at the extent as shown by the data quoted.

Comparable index series on total factor productivity are more difficult to find; however, according to my experience in the case of large aggregates [5, 11] they seldom affect the conclusions derived from the comparison of the dynamics of labour productivity. The growth rates of total factor productivity are by necessity much below that of labour productivity since "capital productivity" incorporated by the first one always changes by less but it "pulls down" the aggregate indicators. In the Hungarian economy the slackening of growth was accompanied by an unfavourable decrease of the output/fixed capital ratio, but that was the case in every other country too. According to an EEC report ([13], pp. 37 and 42) between 1973 and 1981 the output capital ratio decreased in the manufacturing industries of all the ten western countries for which data were published, and by 1.6 to 5.0 percent a year* except for Finland and Italy. The data indicate a downward trend of this ratio also for the European CMEA countries, through 1977–1983 for the whole of the material production ([12] p. 110), and also separately for industry and agriculture, too. As to the whole of material production this decrease was between 1.2 percent (GDR) and 5 percent (Romania) and of about the range of 8 percent in Poland.

* According to another source ([14] p. 196) the output/capital ratio can also be computed for 10 advanced industrial countries for the "business sector" without agriculture, for the period 1973–1978. This ratio decreased in every country by 1.0 to 5.3 percent and according to the weighted arithmetical mean by 2.6 percent.

The causes of the slackening growth of productivity

Many studies and conferences analysed the decelerating growth of productivity in the advanced industrial countries at the turn of the seventies and eighties. The study of the Secretariat of ECE [9] traced back 10 percent of the decrease to the shifts in the sectoral pattern of the economy and assigned great importance to—but could not dependably quantify—the impacts of the rise in energy and raw material prices. It indicated the cardinal role of diminishing aggregate demand and production—however, this in itself (“the end of the golden age”) is a resultant of several factors and requires further clarification.

A representative conference held by the American Productivity Center in April 1980 also covered this problem [15]. The known economic historian, Ch. P. *Kindleberger*, supposed that the marked decline in the growth rate of productivity was a durable tendency and attributed it to the “arteriosclerosis” of the American economy. At a conference held in Edgartown, Massachusetts in June 1980 [16], W. D. *Nordhaus* deduced 1.5 percent of the yearly 2.5 percent decline between 1948–1965 and 1973–1979 from different factors (cyclical effect 0.3, capital 0.3, labour 0.1, energy 2.0, regulation 0.2, R + D 0.1, structural changes 0.3 percent), and could not account for 1 percent. E. F. *Denison* made a comparison between the periods 1948–1973 and 1973–1981, with the usual thorough method of his, however, he had to attribute 1.7 percent from the 2.3 percent decline to the “increase of knowledge and other factors” (that is, a “residual” that cannot be further explained) ([15] p. 60). He reported about this study to the conference of the Royal Economic Society held in July 1981. Beside him A. *Lindbeck*, H. *Giersch*, then, at the International Productivity Symposium held in Japan in 1983, John W. *Kendrick* [18] also tried to answer this question.

Despite of the keen interest paid to the problems of productivity in the last years in western countries, in government policy, at companies and in research, an adequate explanation for the slackening growth of productivity has not been found. In most cases, and with good reason, the *combined impact of many factors* had been recognized. A group of these factors is the *discontinuation* of several *favourable circumstances* that were effective in the fifties and sixties. Another group of factors lies in the *functional disturbances* of the national economies and of the world economy. The investment cuts are attributed to inflation and to growing capital costs; overregulation and to much state subsidies are meant to weaken competition; in many opinions, the welfare state diminishes the motivation and the mobility of the workforce. Explanations associated with stages of innovation and the long-term Kondratiev-waves have come to the fore, too. However, one of the characteristics of this recession is precisely that technical

progress did not halt but has continued and in many fields it has accelerated. This suddenly increases the productivity potential, but the employment of the labour released (and who could still be released) is an ever bigger problem.

Advocates of a given school of economic policy (like the Keynesians or the monetarist's) seek the roots of troubles in deviations from the principles they assume to be correct. However, the considerable differences between conditions in different countries as well as the role of external factors also changing over time reduce the power of comparative analyses much. These studies and discussions have nevertheless given impetus to economic policy as well as to company work. We cannot establish nor can we deny that all these have contributed to the invigoration of the economy and of entrepreneurship in some countries (for example in the United States where particularly much attention was paid to the loss of their superiority in productivity, on presidential level, in the frameworks of employer-trade union cooperation, and also in the mass media).

As if there were some reluctance in the socialist countries to face the slackening growth of the economy and of productivity. We are usually satisfied with the stereotypical explanation i.e. that the extensive sources of growth, have been depleted and we have not yet managed to make satisfactory use of the intensive sources. There are too many differences between the situations of countries (especially between the Soviet Union and the other smaller countries) for finding an equally valid explanation for this slackening, nevertheless country. In my opinion the following most important factors, though of different weight, duration and impact, can still be regarded to be general enough. (The order of enumerating these factors does not mean a ranking by significance.)

1. Lack of former positive effects, as primarily (i) the high growth rate of employment and output, the resulting economies of scale (as formulated in the Verdoorn-law) and (ii) large-scale shifts of employment from agriculture to industry.
2. Negative consequences of the forced growth in the previous years, as e.g. unbalances in the infrastructure of the economy.
3. The sluggish development of the CMEA cooperation and integration.
4. Unfavourable changes in the world economy: first of all the worse climate for East-West trade and economic relations for all of these countries and losses of terms-of-trade for the 6 Eastern European countries. These losses in 1975-84 amounted to about 15 percent for this group (in case of Hungary nearly to 30 percent) while the Soviet Union gained by the changes of the terms-of-trade appr. 30 percent.
5. Lower rates of investments which will have an impact for the coming years, too. At the same time an increasing share of investments had to be allocated to extracting industries and electricity generation, due also to the factor N° 6.

6. Worse conditions for the extracting industries, additional costs of the territorial reallocation of these branches in the Soviet Union.

7. Relatively slow technological progress in all centrally planned economics and slow structural adjustment is particular needed in the 6 Eastern European countries with an increasing share of foreign trade.

Among the factors explaining the slow-down in productivity growth last but not least should be listed the

8. problems in the motivation of people and enterprises, in the functioning of the system of economic guidance.

From the 8 factors enumerated above 5 (factors N^o 1, 2, 4, 5, and 6) are external constraints for the economic policy. Only 3 factors can be changed and used to have new momentum to the growth of productivity. These 3 factors are

- The faster development of the CMEA cooperation and integration (N^o 3),
- The acceleration of technical progress and structural adjustment (N^o 7) and as prerequisite to this change
- the better motivation of people and enterprises, reforms of and/or improvements in the system of economic guidance (N^o 8).

Many of these factors were effective even before 1978, and this explains why the slackening growth of productivity could already then be observed in several countries. It must not be forgotten either that the impacts of numerous factors are combined, often with some time lag, in shaping the changes in productivity. This lag may be particularly long in a closed and centrally controlled economy. In an open market economy growth is namely braked in a relatively short time by the lower technical standards and poorer quality of products, by their non-correspondence with demand and their inadequate competitiveness in the world market. On the other hand, in a closed and centralized economy these impacts can be delayed—although not without consequences—in many respects and even for a long time in domestic consumption (technical standards, quality, up-to-dateness). In the decelerating growth of productivity after 1978 the problems and shortcomings of previous years are also present and, of course, the question above all is whether the new driving forces gather momentum and assert themselves (and when) behind the current smaller rate of productivity growth.

The slackening of the growth of productivity could have been probably smaller had the requirements of *full and effective* employment been coordinated more successfully. If the fall in demand had produced bigger reductions of staff at the enterprises concerned, then, with appropriate mobility, this could have diminished the labour shortages elsewhere, and would have prompted structural adjustment, along with an adequate overbridging of temporary unemployment.

The "opening" on the part of socialist countries and intensified economic relations with western countries actually helped (even if not as much as expected) the transfer of new know-how, the keeping abreast with global technical progress, and also the expansion of exports in this direction encouraged their economic growth (in particular in the smaller socialist countries). At the same time, *three countries were made more sensitive by the above to being measured in the world market and to world economic changes*. The said symptom of "closed growth" is thereby marred and is no longer tenable durably; in the smaller socialist countries this became manifest among other things, in the post-1978 slow-down of economic growth. The index of productivity became a better indicator, yet, it still only provides a base of reference (to be completed with other indicators) for an evaluation of the performances and capacities of the economies. The increasing capability of income production, a term now proliferating in Hungary, correctly points out that output per unit of input should be increased not simply in physical terms or at unchanged prices but with a standard and composition of the output that guarantee sufficient revenue from sales. The term national income is thus enriched with a new content which is better satisfied by computations corrected for the impacts of terms-of-trade changes than by traditional methods.

The Hungarian economy is rather (although, in the true sense of the word, by far not completely) open: the markets are not negligible in their functioning beside central planning, and cast a considerable role in foreign trade. Still, the first oil price explosion and the subsequent world economic changes radiated through the economy with many years of delay, moreover, I suppose that they have not radiated it all through even in our very days (to the point to impose accelerated structural adjustment, or the total remodelling or winding-up of industrial establishments and enterprises). The growth-restricting impacts of the inadequacy of world market competitiveness are, on the other hand, already felt and may be regarded to be the main reason for the slow-down in the growth of productivity. The forced restriction on raw material and energy imports (together with the quantitative limits of shipments arriving from the Soviet Union) were necessitated in the first place by the failure to achieve the required increase in Hungarian exports, selling for convertible currency.

Weakness in the world market competition and the inadequate quality and up-to-dateness (technical standards) of the Hungarian commodities are attributable to detrimental features of the country's slow structural adjustment to demand and also to difficulties in access to the markets mostly owing to causes beyond our power. Improvement of quality and updating of products are also hindered by the backwardness of manufacturing technologies, this could, however, be compensated to some extent by greater labour input. Although extra input necessitated by poor labour productivity is another disadvantage in competitiveness, in a stage when efficiency

postulates are pushed back by quantitative requirements (at no small price), this is not an obstacle to sales, temporarily.

In short: the main cause of the slow-down of productivity growth can be found in the Hungarian economy in the increasing gap in quality and technical standards, in the delay of structural adjustment, and in the inadequacy of market competition. The problems of competitiveness and structural adjustment are also reflected in the asymmetry of Hungarian industrial exports (see *Table 6*), in the symptom that we are

Table 6

The pattern of the Hungarian exports in convertible and non-convertible currencies, 1982 (percentages)

Group of industries	Exports in convertible currencies	Exports in non-convertible currencies
Raw material based industries	36	15
Traditional industries	40	34
New industries	14	28
Progressive industries	10	23
Total	100	100

Source: Calculations of the Research Institute of Industrial Economics.

unable to sell bigger volumes of more sophisticated, qualified labour intensive products in the developed industrial countries. In these markets Hungary offers mostly such products of material and (simple) labour intensity which do not represent comparative advantages and in which the developing countries with low wage levels are competitors.

External impacts also contributed to the development of this situation, namely: recession, protectionism, new and strong competitors, rising interest rates, troubled credit market, development of CMEA cooperation below the anticipated rate, deceleration also in the growth of the other CMEA countries etc. All the above created unusually complicated conditions for implementing the correct redirection of the post-1978 economic policy: the updating and improvement of the system and the practice of economic control were sluggish and the change that was to correspond to the new "development path" could not be attained in the acceleration of structural adjustment either.

Naturally, also the other factors mentioned above for the group of the CMEA-countries played significant roles in the slow-down growth of productivity here too, such as:

— when employment increases, this usually entails the creation of many new workplaces with more up-to-date equipment, the expansion of production, and economies of scale; unlike in previous years, such an impact has not asserted itself;

— the macrostructural shifts in employment proportions, unlike in previous years, has not produced now a growth in the *average* productivity of the economy;

— the mobility of the workforce is low, employment changes follow the reduction of capacity utilization as well as of production inelastically;

— the emergency curbing of investment sets limits to the updating of production machinery, products and technologies; its demand-restricting influence penetrates through the entire economy;

— chances of investment projects that could help updating and structurally adjusting other fields are further limited by the big share in the total of investment projects in energetics with long gestation periods;

— owing to the postponement, and neglect in previous years bottlenecks have developed in the infrastructure and obstruct the functioning of the productive sphere;

— there are many indications of a decreasing utilization of working time, of declining labour intensity and constructive energies in full-time work, owing to the weakening motivation and to efforts at earning different kinds of complementary incomes;

— there are many indications weakening enterprise motivation—because the amendments of regulations are incalculable, frequently effected retroactively, and because of organizational and managerial uncertainties and other reasons.

On the other hand, favourable changes have commenced in the field of saving materials and energy, strengthening of entrepreneurial spirit, and the carrying on with the reform of economic control and management. The special positions and problems of industry, building industry, agriculture and other sectors, and the impacts of the said factors as they assert themselves with similarities and dissimilarities would require a detailed analysis. This goes, however, beyond the scope of this paper. The major achievements of the post-1978 period are the maintenance of international liquidity and improvement of the external economic equilibrium, the preservation of full employment and prevention of any definite worsening in the living circumstances of the population. At the same time, however, a great deal of troubles and tensions have accumulated in the economy and society, international competitiveness has weakened, and the way of solutions is just getting outlined.

The acceleration of productivity growth

According to the resolution of the 13th Congress of the Hungarian Socialist Workers' Party in 1985, the 7th five-year plan for the years 1986–1990 “should be the programme of well-founded economic development at a steadily increasing rate”. The drafting of the plan has been carried on for a longer while in this spirit but facing extraordinary difficulties. The coverage of debt service burdens, the continued reduction of debts and the intended renewed increase of consumption and investment would require yearly increases of 3–4 percent of the national income, 3–5 percent of labour productivity, and 2–3 percent of total factor productivity. This task asks for radical increase in productivity and income producing capacities of the Hungarian economy and the Hungarian enterprises and for a coordinated strategy of external economic policy, technological development policy, structural policy, as well as a productivity policy backed by the faster development of economic control and management.

After having focussed on growth till 1978 and on equilibrium between 1979 and 1984 productivity and efficiency, quality, technological development and structural adjustment should be put to the focus of economic policy now. In the planning work countless studies, so called partial concepts, sectoral and block concepts etc. have already been elaborated; there is no facet of productivity and efficiency that has not been dealt with in them. Nevertheless there is a lack of a complex program for improving quality for increasing productivity and efficiency.

The agrarian policy already declares to have taken this line and, in my opinion, this ought to guide the industrial policy as well. The main task to be set to industry in my opinion must *not be the speeding up of growth or the improvement of equilibrium but a kind of reconstruction also affecting its bases*. This can bring about stronger dynamism and export performance. A similar programme would also be required for the building industry which only testified in recent years that its poor quality performance was not caused by stepped-up quantitative tasks; but its shifting to another working style necessitates more profound changes.

On the factors that explain the slow-down of growth in productivity we might construct a more or less parallel but fuller list (e.g. completed with education) also about the tasks of *accelerating the growth of productivity*. Since we do not have much chance to expect any substantial improvement in external conditions we cannot hope results but from the mobilization of the domestic driving forces. The concept of the 7th five-year plan which has become generally known in public discussions expects the fundamental improvement from the already decided development of the system of economic control and management and from a number of central programmes. However, the two are mutually conditional. The system and practice of economic

control (e.g. the conditions of market competition [19]) cannot be improved but in a powerful step-by-step manner, without that, however, the *effective* implementation of the centrally launched projects is also doubtful. Resolving the contradictions between the first and the second economy—increasing the performances in full-time work and their corresponding higher remuneration, advancing and producing the resources of investment, more imports in the interest of enhancing exporting capacities, halting the proliferation of poor quality and cooperation disturbances, profound readjustment in the industrial organization and conditions, in the structure of employment and production, in the methods and style of work and management—all the above seem to be rings of vicious circles more and more weakening the performance of the economy.

I am convinced that the above could only be broken through by means of a well-devised strategy which focuses on quality, efficiency and productivity and, in adjustment thereto, fits together and synchronizes each element of the system, and especially of the practice of economic control and management. With adequate institutional conditions, the carrying on of the reform of economic control should be put in the centre also of the industrial policy in a way to assess the pace at which the consecutive steps may follow upon each other and support and *complement* this with temporary or longer-range operations and programmes. We can safely presume that:

1. in the majority of enterprises there still are countless chances to improve the quality and up-to-dateness of products and production; to enhance efficiency and productivity; to improve organization and working circumstances; to introduce more up-to-date ways of organization and management; to enhance production in accordance with market requirements and to boost exports;

2. most employees of the enterprises nowadays do not fully exploit the working time nor use their creative energy at the workplace, moreover, they often use them definitely at a low degree—owing to disproportions of staffing and/or uneven occurrence in time of productive and other tasks as well as to the weakness of motivation;

3. a great majority of enterprises, managers and employees would prefer honest work to half-work; if they do not lose or if they gain whatever little benefit by doing honest work; if this is given acknowledgement, they will be able and willing to give far bigger performance; if they have the chance they would prefer to earn extra income through full-time work and not through extra work done elsewhere.

Provided that the above assumptions are correct, we must find the strategy and programme suitable for the mobilization of these reserves. For this purpose conflicts must be risked; however, along with the confronting of interests, common interests and compromises, implied by the coordination of interests, must also be given greater acknowledgement. Partnership relations between enterprise management, trade unions and state administration representatives should be relied on to greater extent. Most probably, we can achieve results in a relatively shorter time in the upgrading of

quality and organization, and it will take more time and graduality to shape the structure of production and to accelerate the follow-up of technical progress. The latter, namely, requires additional resources and come up against strong barriers in many respects. On the other hand, there is no obstacle whatsoever to turning reliable quality and faster follow-up of innovations into characteristics of Hungarian work. In order to implement this change a national programme, matched to the further development of the reform of economic control and management, is needed as the backbone of the 7th five-year plan.

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РОСТ ПРОИЗВОДИТЕЛЬНОСТИ ТРУДА И ЕГО ЗАМЕДЛЕНИЕ В ВЕНГЕРСКОМ НАРОДНОМ ХОЗЯЙСТВЕ

З. РОМАН

Согласно данным, приведенным в статье, рост производительности труда в венгерском народном хозяйстве начиная с 1979 года значительно замедлился аналогично тому, как это происходит в других социалистических странах. Автор анализирует объясняющие это явление факторы и указывает на то, что проблемы накапливались с 1974 года (сигналом этого также служит ухудшение индексов условий торговли).

Из сопоставления с развитыми капиталистическими, развивающимися и европейскими социалистическими странами явствует, что за последние 10—15 лет темпы роста производительности труда в Венгрии соответствовали средней международной величине показателя, но с 1979 года они упали ниже среднего уровня. К тому же технический уровень изделий и производства, а также структурная адаптация промышленности складывались неудовлетворительно, поэтому международная конкурентоспособность венгерского хозяйства, в первую очередь промышленности, ослабела. Это основная причина замедления роста производительности труда.

В статье подробно анализируются также и прочие причины замедления этого роста и возможности его ускорения. Ликвидация нерентабельных или малорентабельных предприятий и упразднение ненужных рабочих мест повела бы к быстрому и заметному росту производительности труда, однако в интересах сохранения полной занятости желателен более замедленный процесс. Преодоление противоречий между так наз. первой и второй экономикой, целенаправленная программа по повышению производительности труда, увеличению добавленной стоимости, более быстрая структурная адаптация, и осуществляемая с помощью централизованных мер могут содействовать повышению конкурентоспособности венгерской экономики и постепенному ускорению ее роста при сохранении полной занятости.

INCOME FORMATION, ACCUMULATION AND PRICE TRENDS IN HUNGARY IN THE 1970s*

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The sectoral pattern of the Hungarian economy remained practically the same in all aspects during the 1970s in spite of extremely strong world market effects and declared efforts within the country towards structural transformation. The article investigates the macroeconomic motives of this immobility, analysing, in their mutual contexts, processes of accumulation and production, and prices and incomes.

The most important statement of the present paper is that in Hungary, as a result of being mutually determined, the *sectoral income, accumulation, and price patterns*, as developed by the early 1970s, grew *rigid* and *self-reproducing* in the course of the decade. These mutual determinations have survived in several of their elements in the 1980s, therefore, their reactive power to resist changes must also be as effective as before.

Our analysis is exclusively macroeconomic, so we shall not discuss actual investment, income redistribution, and price mechanisms.

Another peculiarity of our method is the use of the means of *input-output* analysis or, in a more general sense, of the *equilibrium approach*. From this aspect, our article is divided into two parts. In the first part actual accumulation and income processes are examined and one of the propositions of equilibrium models are used, although our concept-formation and way of approach derive from them; the second part is based on a series of computations carried out with the aid of an equilibrium model. The contents of the two parts are organically linked. In the first part of the article we turn our attention to a few such phenomena which cannot be analysed by the simplifying premises of the model. These examinations render it probable that the conclusions drawn from the model computations are valid in spite of the simplifications. In the second part, considering the calculated prices and calculated production received in the course of modelling as a basis for comparison, the actual processes investigated in the first part are placed in the "system of coordinates" indicated by them. That is, for the evaluation of the changes that took place in the 1970s, a base of comparison entailing some kind of uniform approach is necessary. It is emphasized that the *calculated prices* and *calculated production* are considered *aids of analysis* and a

* Based on the study [1] made on commission of the Methodological Development Division of the National Planning Office.

deviation from them does not in itself qualify the actual processes. However, analysing the direction, changes in time, and mutual relations of the deviations, such conclusions can be drawn which will, of course, imply qualifications.

First we shall examine the time change in the sectoral pattern of accumulation. With a view to the comparability of the sectoral patterns of income and of accumulation, and to the measuring of the extent of income redistribution, the concept of *gross sectoral income* is introduced and then its pattern calculated. In the course of comparing the gross sectoral income and accumulation, the concepts of *income flow*, *income providing* and *income recipient sectors* will be defined.

The first part will be closed by an analysis of sectoral accumulation as compared with the fixed capital of the various sectors.* Accumulation preferences are interpreted accordingly; we shall try to demonstrate their presence in the Hungarian economy of the 1970s.

The model used in the second part of the article is a version of the Leontief-Bródy closed, linear model taken from András Bródy's book [3]. Others have also made price calculations on this basis [4, 5]. We are concerned with the production side of the model, using a specification which helps to interpret both the primal and the dual side of the model. Details of the applied specification are to be found in our study [6], which also contains more detailed computations than the ones published here.

The time-span of our analysis is basically 1971–1979 in which period model prices and production values were computed for each year. We examine the time change of the computed prices and compare it with the change in actual prices. We analyse the effect of computed prices on the patterns of income and accumulation.** The computations for 1981 are given separately.

The paper will close by summing up the most important conclusions.

The data

The data base of our computations is composed of the input-output tables and of the matrices of accumulation and capital.***

We should remark at this point that it is only for lack of sufficient data that our examination is limited to the period between 1971 and 1979. For later years no input-output tables have been drawn up yet, except for 1981, and that is why our examination of 1981 is given separately.

* Mária Augusztinovics also applied this method [2]. To use the fixed capital of the various sectors as a basis for comparison is, however, directly rooted in the dynamic input-output modelling.

** Earlier, Zsuzsa Dániel made similar examinations [7].

*** These data were prepared by members of the Methodological Development Division of the National Planning Office.

In our computations we used mainly current prices. However, the current price data of the national wealth statistics, to which the matrices of fixed capital are linked, do not reckon with real assets as the prices of the given year, but at prices valid when putting them into operation. Therefore we produced the matrices of fixed capital to be used by us from the data in constant prices, making use of the price indices of investment output. All tables in the paper contain current price data.

The sectoral pattern of accumulation

In the 1970s, industry's share in accumulation amounted to 31.9–38.3 percent, that of the material sectors to more than 70 percent (see *Table 1*).

Between 1971 and 1974 the changes in industry's share were accompanied by changes in the opposite direction in the non-material services. After 1975 the share of material services, so far relatively stable, begins to change, thus joining non-material services in counterpoising the change in the industrial share.

The accumulation share of the various sectors and the growth rate of accumulation showed a peculiarly parallel movement during the 1970s.

When accumulation decreases or is hardly growing, the share of industry is low, and that of services (especially of non-material services) high. This is observed in 1972, 1973 and 1979. When accumulation grows considerably (1971, 1974, 1977, 1978), the accumulation share of industry is high or increases, while that of services, especially of non-material services, decreases. 1975 and 1976 are exceptions to the rule. Simplified, this is to say that, as a rule, services have a larger share in a smaller amount of accumulation, while industry's share is higher in a greater amount. If, therefore, changes in the sectoral growth rates or sectoral pattern of accumulation are used as argument or counterargument separated from each other in the course of analysis or formation of macroconceptions, it must by all means disguise an intention of developing (or reducing) one or another sector.

The concept of the gross sectoral income and its production

For our further inquiries we need a concept of income which can be counterposed to the gross accumulation of sectors. Looking at it on the national economy level, if consumption and foreign trade balance are subtracted from the value added, we shall receive the gross accumulation, or, using the category of income, the income that can be spent on gross accumulation.* In the preceding part, we examined the distribution

* This is what *Kalecki* calls gross profit [8].

Table 1
The sectoral pattern and growth rate of accumulation
 (percent)

Sector	1971	1972	1973	1974	1975	1976	1977	1978	1979
Industry	38.3	33.9	31.9	34.4	32.2	34.2	37.4	37.1	32.6
Building industry	3.9	2.4	2.3	2.6	2.4	2.9	3.7	4.7	3.0
Agriculture ^a	13.8	14.6	15.3	15.0	14.1	13.4	13.8	13.7	14.9
Material services	21.2	21.9	20.8	21.2	24.6	23.7	19.2	21.4	22.2
Material sectors	77.3	72.8	70.4	73.3	73.3	74.3	74.2	76.9	72.7
Non-material services	22.7	27.2	29.6	26.7	26.7	25.7	25.8	23.1	27.3
Services	44.0	49.1	50.4	47.9	51.2	49.4	45.0	44.5	49.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Growth rate of accumulation (previous year=100)	121.1	90.7	102.6	126.4	113.5	105.5	113.2	120.1	90.4

^aHere and in the following, forestry is included in agriculture if not shown separately.

of this volume of income by user sectors, and now we turn our attention to distribution by originating sectors. By analogy with the foregoing, we start from the sectoral value added, from which the share of consumption and foreign trade balance falling to each sector will be subtracted. The volume of income thus received is called *gross sectoral income*. The attribute "gross" indicates that depreciation is included in the concept, that is, the amount of gross sectoral income is identical with the gross accumulation of national economy. In the following, by sectoral income gross sectoral income will always be understood, and the concepts related to income redistribution will be also formed on this basis, therefore, for an easy style, we shall omit the attribute "gross" in most cases. It remains to be clarified, how we should break down consumption and foreign trade balance into sectors. As for consumption, the breakdown was made in proportion to wage costs (wage + wage contribution), and as for foreign trade balance, it was related to each sector in proportion to imports (imports used for intermediate input and for accumulation, handled separately). This procedure means that sectors share the import surplus of a given year in proportion to their intermediate import inputs, or, that they contribute in such proportion to financing export surplus.* It is stated in advance that this same sectoral income will be used in the course of the model computations.

The pattern of the gross sectoral income

The income spendable *at actual prices* on accumulation is earned completely in industry, the building industry, and in material services (more exactly, in trade). The share of agriculture and forestry, and of non-material services varies about zero (see Table 2).

There are years when no income is earned in these two sectors, nothing for the financing of accumulation, not even for replacement. Even for the maintenance of the capital income redistribution is needed.** It will be seen, later on, that the situation changes quite considerably when examined at computed prices. so much is, however, already clear that *with a price system distorted sector-specifically* to such an extent,

* For a different procedure, a central budget and foreign debt and a debt service encompassing time aspects should have been introduced. We could not do this for lack of data. Within the given framework, it is the import-proportional breakdown that best reflects the fact that primarily the import-intensive sectors benefited from credit grantings.

** This is not to say, of course, that income spendable on accumulation is not earned on the micro-level, for example, in agricultural production units. This is, however, counterbalanced by levies and subsidies granted in widely different forms. In our study, we shall disregard the specific mechanisms of income redistribution and examine only the income balances of sectors. It is in this sense that we can say that agriculture does not contribute to financing the accumulation.

Table 2

Sectoral pattern of gross income (percent)

Sector	1971	1972	1973	1974	1975	1976	1977	1978	1979
Industry	59.1	58.1	58.1	58.0	62.1	64.9	60.5	62.5	63.6
Building industry	7.0	7.7	7.7	8.0	7.3	7.0	8.2	8.0	8.6
Agriculture	1.1	-0.9	-0.2	-0.3	-1.2	0.8	2.2	2.2	0.3
Material services	29.5	33.4	34.5	33.0	30.8	27.5	28.5	26.8	27.4
Material sectors	96.7	98.4	100.2	98.7	99.0	100.1	99.4	99.4	99.9
Non-material services	3.3	1.6	-0.2	1.3	1.0	-0.1	0.6	0.6	0.1
Services	32.8	35.1	34.3	34.3	31.8	27.4	29.1	27.4	27.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

income earning ability cannot be identified with efficiency. The fact, for example, that agriculture needs subsidy should not lead to the conclusion that its production is less efficient than that of industry. (Of course, the opposite conclusion should not be drawn, either.)

A relatively high stability is characteristic of the sectoral pattern of income. Nevertheless, a certain trend of change can be observed.

The share of industry and building industry is increasing: the relatively stable share of 1971–1974, together amounting to about 66 percent, goes up to above 70 percent by the second half of the decade. As a mirror image of this dynamics, the share of services falls from the 33–35 percent level characteristic of the first four years to below 30 percent. The stability of sectoral income, and in it the characteristically different level of each sector is found also in the industrial sectors. This can be made more tangible by analysing the computed prices, therefore, the question will be treated in detail later.

Gross sectoral income and gross accumulation counterposed

In our analysis domestic credit granting is disregarded, being only a technical tool in effectuating income redistribution. It is further disregarded that an income earned in a given year may finance accumulation of another time. It is assumed that the amount of income “unused” by some sector in the given year is paid into a common cash-box so as to be used by sectors in which less income has been earned, than what is needed for accumulation. All this is based on rules of taxes, subsidies, and accumulation financing. For our argument, however, what is important is only *input*, i.e. *gross sectoral income*, and *output*, i.e. *gross accumulation* realized by the sectors. The macrolevel measuring of income redistributions enables us to reveal such interrelations which would not be revealed by an analysis of the actual subsidy and tax system.

Sectors can be divided into three groups relying on the relative sizes of the gross sectoral income and gross accumulation. Some sectors are able to cover accumulation through the whole period from their income earned within the sector; for example: metallurgy, chemical industry, mechanical engineering, light industry, building industry, domestic trade, or foreign trade. We will call these *income providing* sectors. The second group is constituted by sectors whose accumulation is larger than their income all through the period such as agriculture, forestry, water management, personal and business services, health, social and cultural services, communal, public administration, and other services. This is the group of *income recipient* sectors. The third group is that of sectors in which both cases occur during the period, such as mining (income recipient till 1974, after which income providing), building material

industry (income recipient in 1971 and 1973, in other years income providing), electric energy industry (income providing till 1972, after which income recipient), food processing industry (income providing till 1974, after which income recipient), transports and communication (income recipient except for 1971). It should be emphasized that whether a sector is income recipient or income providing depends mainly on the price system. The preceding list indicates the direction of the flow of income at actual (current) prices, which will turn at calculated prices, as we shall see in several cases.

Looking at the relative sizes from a more aggregate level, it is found that in the industrial sectors 51–65 percent of income earned is left there for accumulation, in the building industry this rate is 30–59 percent, and in the sectors of material services it is 60–86 percent. The remaining part covers the total accumulation of agriculture and non-material services.

What weight has each income providing or income recipient sector in income redistribution?

The difference of income and accumulation is called *income provided* in the case of sectors in which income is larger. 24–29 percent of the total income provided comes from mechanical engineering, 5–22 percent from chemical industry, 11–24 percent from domestic trade. Agriculture, personal and business services, and health-social-cultural services have the highest share in the total income provided (26–34, 24–27, and 15–19 percent, respectively). The total income provided (or received) fluctuates between 36 and 54 percent of the income spendable on gross accumulation* and, for example in 1979 when the total income provided amounted to Ft 124 thousand million, the contribution of mechanical engineering to this amount was Ft 35 thousand million, that of chemical engineering 25 thousand million, that of light industry 14 thousand million, and that of domestic trade 20 thousand million, while agriculture received Ft 33 thousand million, personal and business services 29 thousand million, and health-social-cultural services 23 thousand million.

Accumulation and capital

The high intensity of the flow of income, and the permanent and not decreasing difference between income and accumulation of a great number of sectors can be explained equally from the aspect of prices or of accumulation. At actual prices,

* István Hagelmayer's results show similar proportions [9]. Hagelmayer compared the grand total of the budget incomes less credits with the GDP and, for this ratio, he received an increasing value up to 1974 and then a value fluctuating at a somewhat lower level.

Table 3

Gross income and total income provided

Denomination	1971	1972	1973	1974	1975	1976	1977	1978	1979
Total income provided (thousand million Ft)	48	56	64	74	87	88	101	109	124
Total income provided gross income (percent)	36	46	52	47	49	47	48	43	54

income is not formed where assets are enlarged in the course of accumulation and, conversely, a great part of the accumulation does not take place where income is earned.

On first approximation, one might conclude that the income earned in the sector does not play a role in the size of accumulation. The relation between them is, indeed, not very close, however, we shall demonstrate that the income providing sectors enjoy certain advantages in the course of accumulation. This interrelation will come out clearly first in the model, however, because of the strictness of the presumptions of the model, the accumulation trends will also be examined by other means.*

In Hungary, the 1950s and the 1960s were both clearly characterized by a dominating industrial development. In the 1950s this took place mainly to the disadvantage of agricultural accumulation. In the 1960s agricultural development accelerated and made up successfully for some of its lag, which then implied a strong regression of services, especially of non-material ones, as well as of transports and communications.

Finally, by the early 1970s, a quarter of the capital was fixed in industry. This rate increased further during the decade: from 25 to 28 percent between 1971 and 1979. The share of agriculture practically did not change during the same period: it remained at 13–14 percent. Accordingly, more than half of the capital was fixed in services; its rate fell from 60 to 56 percent. Within services, the rate of material services fell from 25 to 24, and that of non-material services from 35 to 32 percent. Except for mining and metallurgy, each industrial sector had an increasing share in accumulated and fixed assets alike. How then is the quantity change of fixed capital related to accumulation?

In case of identical equipments/buildings ratio and modernity, the capital of that sector can grow faster, which receives more development resources in comparison with the fixed capital there. Let us consider the deviation from the national economic average of the investment/fixed capital ratio as the specific measure of development preference characteristic of a sector.** If a sector receives more investments in comparison with its fixed capital than the national economic average, it is considered preferred in the development aspect, and if it can have less, it is not.*** In the case of different equipments/buildings ratio, the different rate of depreciation also has an influence on the investment/fixed capital ratio of the various sectors, therefore, we shall examine preference in respect of buildings and of equipments separately.

* Iván T. Berend's [10] and Mária Augusztinovic's [2] relevant statements have been used, with much simplification.

** Stockpiling is left out of consideration here. From the aspect of our analysis, it would not change the picture, while its rhapsodic fluctuation would impair clarity.

*** The preference or dispreference of a sector in this sense is not necessarily the result of a central economic policy intention. This question is not going to be studied at all, but we will say whether a sector became preferred or not in the period under examination.

The value of investments in building amounts to 5.6–6.0 percent of the building stock, and that of investments in equipments to 12.4–15.5 percent of the equipment stock.

In the case of buildings, industry was preferred and, to a minimal extent up to 1975, agriculture. Dispreferred are both the material and the non-material services, as well as agriculture from 1976. In respect of equipment, industry is dispreferred, while agriculture preferred all along. Material services are also dispreferred in this respect, while in non-material services equipment investments are preferred. It has to be added, however, that the weight of equipment is slight both in stock and in investments.

It is also worth looking at the global result: in a more detailed sectoral breakdown we shall do only this, for the sake of brevity, since the separation buildings-equipments shows a similar picture.

It is characteristic of the whole economy that between 1971 and 1979 7.0–7.9 percent of the value of capital was invested. Globally, *industry*, the *building industry*, and *agriculture* were clearly preferred, while the entire sector of *services* was dispreferred throughout the period.

There is not one industrial sector of which the investment/fixed capital ratio would be either above or below the industrial average all along. Metallurgy and mechanical engineering were below the industrial average with the exception of one year each (1979 and 1977, respectively). In the same way, with the exception of one year (1979), the chemical industry was preferred all along, first strongly, than to a decreasing extent, in relation to the industrial average. At the beginning of the period, the building material industry and light industry were preferred sectors, while mining and food-processing industry were dispreferred. In the second half of the period the situation was just the reverse.

Within material services, domestic and foreign trade were preferred all along, while transports and communications are dispreferred, as also, from 1973, is water management.

The dispreference of non-material services all through the period is clearly attributable to the sectoral value of personal and business services at least 2 percentage points lower than the national economic average. (In this sector, housing carries decisive weight.)

Our preference indicator does not make it clear, how all this related to the existing situation, or what the cumulated result of the preferences in different periods is. It is therefore worth examining the ratio of net (depreciated) and gross (nominal) value of fixed capital, too, which measures modernity, between certain limits. On the macro level, the net/gross ratio grows from 60.9 to 67.1 percent with buildings, and falls from 56.3 to 55.2 percent with equipment.

In industry, the net/gross ratio computed for buildings remains above the national economic average all along. The difference is, however, decreasing: it is still 5 percentage points in 1971, but only 1.9 percentage points in 1979. With equipment, the net/gross ratio is consistently somewhat below the national economic average. In the building industry, the value of both indicators is higher than the industrial, as well as the macro average.

In agriculture, the net/gross ratio computed for buildings is above 76 percent until 1975 and then gradually decreases to 74.6 percent, which is still a value well above the average. With equipment, the ratio rises from 54.3 to 57.0 percent by 1976, and then falls to 51.1 percent, which is 4.1 percentage points below average.

In material services, the net/gross ratio computed for buildings remains above the national economic average all along, in 1975 it reaches the industrial average, and then moves parallel with it to the end of the period. With equipment the net/gross ratio is somewhat above both the national economic and the industrial average; the initial 2–3 percentage point difference decreases a little by the second half of the period.

In non-material services the net/gross ratio of buildings increases by almost 10 percentage points: from 53.7 to 63.1 percent. As a result, the 14 point lag in comparison with material sectors goes down to 8 percent by 1979.

From the point of view of our inquiry, what is most interesting is the time change of the net/gross ratio. Its level is influenced, beside age composition, also by the size of the depreciation coefficients.

With equipment, average depreciation in relation to the net stock amounts to 13.0–14.5 percent. In comparison with this, the relative deviation in industry (11.2–12.5 percent) and in the whole sector of services (12.4–14 percent) is not considerable. Agriculture is an exception with its relatively high, 19.1–23.9 percent depreciation rate. With buildings, the relative differences are greater. The national economic average amounts to 2.4–2.6 percent; as compared with it, the ratio of industry is 3.8–4.5 percent, that of agriculture 3.0–3.5 percent, that of material services 2.1–2.3 percent, while that of non-material services 1.8–2.1 percent. What is most conspicuous is the 100 years expected lifetime, on the basis of the rate of depreciation, from the fixed capital of the sector of personal and business services—using mainly residential buildings as fixed capital. There it is by all means a biased deviation, which must be taken into consideration when evaluating processes.

Based on the above, we can surmise that in the 1970s industry continues to be preferred in relation to the national economy average, and so is, to a smaller extent, agriculture, while services, mainly the non-material ones, are dispreferred. At the same time, the differences in preference have considerably decreased as compared to the initial situation, even though the absolute differences in supply with capital continue to be increasing—which resulted in that the growth of the relative backwardness of

services stopped and even decreased somewhat. As a consequence, the differences in modernity also decreased, first of all in regard to the non-material services, while industry lost some of its advantages enjoyed in the early 1970s. It is a peculiar phenomenon that the relatively more equipment-intensive industry is more preferred in respect of buildings, while services, making use mainly of buildings, are preferred in respect of equipment. Within industry, a permanent and unambiguous preference is found only in the case of chemical industry.

We can also say, that depreciation is largely a means of financing accumulation, less apt for measuring the actual process of depreciation.*

Computation with uniform rates of gross accumulation and profit

In the above, costs, income processes, and the time change of accumulation and of fixed capital were examined somewhat separately. Now, taking into consideration their interdependencies, we set forth the results of computations which make clear the way, in which an idealized price system with a uniform rate of profit transforms the pattern of gross sectoral income, or, how a uniform rate of accumulation—containing no preferences—would change the production pattern. The model applied presumes, in the first place, that the capital of the economy is steadily growing or, that capital accumulation takes place in an identical pattern to the capital fixed in each sector, and to an identical extent in relation to the fixed capital. (We remark that the permanence of the pattern of capital fixed in the various sectors was not a particularly strong constraint, contrary to its appearance, in the Hungarian national economy of the 1970s. A few such computations were made in which the input-output coefficients of each year were associated with the capital coefficients of other years, and the results thus obtained hardly differed from the original ones, which clearly shows the comparative unchangeability of the composition of the capital.)

The production-material consumption (primal) interrelations produce such results of production dimensions and rate of accumulation (accumulation/capital), at which the growth needs of the products of each sector (including imports) and of labour are covered, without lack or surplus, while the price-cost (dual) interrelations produce the price indices and rate of profit—identical with the rate of accumulation—which provide for the financing of such capital accumulation in each sector without

* János Hoós discusses among other things an adequate depreciation policy and determination of rates of depreciation as an element of regulating investment volumes on the side of financial resources.

income redistribution, that is, for that the rates of income earned in the various sectors should be uniform in their relation to the capital fixed in the relevant sector.*

The primal and dual problems are solved separately which often tempts us to construct the actual specification in a way that only one side of it will be interpretable without contradictions. We did not follow this way, for we think that the primal and the dual problems are closely correlated; what is involved is the two sides of the same system of presumptions: steady capital enlargement of a self-financing character. It is entirely in accordance with this concept which we described in "the concept of the gross sectoral income and its production", treating the labour-consumption sector and foreign trade, therefore, we shall proceed in a similar way also in carrying out the model computations.

The result of the primal problem is called calculated production indices, that of the dual calculated price indices. The sectoral accumulation, i.e. income of the model to be produced from the preceding are to be interpreted as gross accumulation or gross sectoral income, which makes it comparable to the corresponding actual values.** The theoretical growth rate, or rate of profit will be interpreted in our computations as the rates of gross accumulation or of income spendable on accumulation to the gross value of assets, and will be called rate of accumulation, or rate of profit.

As for the interpretation of results, we do point out that we do not think that all sectors should develop at the same rate, nor that income redistribution is wrong from the outset. We do think, however, that the computed prices and production provide such a base of comparison for the analysis, in relation to which development preferences and dispreferences can be interpreted on the one hand, and profitability differences originating in differences in efficiency and in market position (and not in price deviation), on the other.

Computed prices

It is most characteristic of the computed prices that they show high stability all through the period under examination, while considerable differences are found among the sectors (see *Tables 4 and 5*). The same sectors are over- or undervalued***

* For a detailed specification, see [6]. The general form of the model applied: $Ax + \lambda Bx = x$, i.e. $p'A + \lambda p'B = p'$, in which x and p are the vectors of production and of prices, respectively, to be computed, A and B are the given coefficient matrices of current inputs and of fixed capital, and λ is the unknown growth rate, or rate of profit.

** Let us recall that in producing the sectoral income, the wage cost raised to consumption level was subtracted from the value added, thus the fact that income is formed in proportion with the fixed capital does not exclude the formation of wage-proportional income.

*** A sector is 'overvalued' if its computed price index remains below 1, that is, the computed price is lower than the actual one; and 'undervalued', if the computed price index is above 1, that is that the actual price is lower than the computed one.

Table 4
Computed prices^a
 (actual price=1)

	1971	1972	1973	1974	1975	1976	1977	1978	1979
Mining	0.977	1.022	1.090	1.135	0.938	0.860	0.828	0.817	0.844
Electric energy industry	0.809	0.789	0.819	0.843	0.923	0.878	0.904	0.845	0.864
Metallurgy	0.786	0.856	0.873	0.766	0.823	0.855	0.882	0.810	0.801
Mechanical engineering	0.784	0.815	0.830	0.766	0.779	0.796	0.775	0.771	0.786
Building material industry	0.876	0.852	0.872	0.864	0.872	0.869	0.877	0.886	0.887
Chemical industry	0.713	0.755	0.806	0.822	0.730	0.687	0.706	0.689	0.728
Light industry	0.840	0.891	0.920	0.902	0.845	0.873	0.872	0.853	0.887
Food-processing industry	1.030	1.031	0.979	1.041	1.080	1.059	1.099	1.090	1.107
Industry	0.853	0.883	0.893	0.875	0.860	0.858	0.865	0.844	0.863
Building industry	0.901	0.902	0.906	0.891	0.909	0.924	0.905	0.909	0.909
Agriculture	1.176	1.168	1.144	1.183	1.194	1.167	1.152	1.167	1.170
Transport and communication	1.132	1.138	1.109	1.142	1.139	1.123	1.121	1.135	1.107
Domestic Trade	0.818	0.791	0.789	0.788	0.856	0.882	0.884	0.894	0.882
Foreign Trade	0.695	0.597	0.632	0.534	0.505	0.592	0.521	0.502	0.617
Water management	1.926	1.644	1.744	2.141	2.280	2.114	2.233	2.272	1.916
Material services	1.002	0.958	0.955	0.972	1.010	1.027	1.020	1.038	1.018
Material sectors	0.945	0.951	0.953	0.950	0.948	0.947	0.947	0.941	0.948
Personal and business services	2.036	1.820	1.767	1.840	1.903	1.854	1.819	1.919	1.743
Health, social, cultural services	1.324	1.304	1.311	1.352	1.369	1.392	1.398	1.433	1.382
Communal and administrative services	1.189	1.221	1.245	1.216	1.202	1.253	1.257	1.240	1.207
Non-material services	1.482	1.428	1.424	1.449	1.474	1.490	1.487	1.519	1.436
Services	1.201	1.154	1.148	1.166	1.202	1.219	1.213	1.242	1.200
Consumption	1.117	1.099	1.082	1.104	1.112	1.116	1.123	1.136	1.119
Accumulation	0.929	0.946	0.953	0.943	0.953	0.945	0.933	0.927	0.935
Exports	0.894	0.915	0.926	0.909	0.905	0.892	0.894	0.883	0.887

^aweighed with gross production at actual current prices, the producers' price level as unit.

in 1979 which were so in 1971. What is more, there are only two sectors which change their character in the intervening years of the period: mining, undervalued between 1972 and 1974, in other years overvalued, and the food-processing industry, slightly overvalued in 1973, and in all other years undervalued. All the other sectors are either over- or undervalued throughout the period. The comparative levels hardly changed either. If, omitting mining, sectoral price indices were arranged in a row for 1971 and 1979, the position of the sectors would be identical, two changes of position excepted. Comparing only the initial and the closing year and applying computed prices for a measure, practically no change is found in the sectoral price and income relations. At this point, it would be useful to stress that under- or overvaluation express, as a matter of course, the same thing as the earlier demonstrated disproportion in the sectoral pattern of gross income, only in another system of measures.

Table 5
The computed rate of accumulation or profit (percent)

Year	1971	1972	1973	1974	1975	1976	1977	1978	1979
Rate	7.2	6.2	6.0	6.8	7.1	6.8	6.8	7.3	6.3

It follows, clearly, that prices permanently deviated from costs during the 1970s, on the one hand, yet were in some way related to the latter, on the other hand, since they moved "parallel" with them in a certain sense. With a relative stability, the computed price indices changed between the two extreme points of the period. With a few exceptions, these changes began by decreasing the under- or overvaluation, and then price indices went back to near their initial value.

Let us see, in a few specific cases, the course of this wave-motion. the *chemical industry* is the best example to demonstrate the rearrangement into the old position. The overvaluation of the chemical industry fell by 11 percentage points between 1971 and 1974, and then went back to near the original level within a year. At that time the chemical industry was again the most overvalued sector, if foreign trade, of peripheral importance, is not considered. In 1976 overvaluation grew further, and then mildly fluctuated around the level that had been reached.* Decreasing overvaluation between 1971 and 1973 can be explained mainly by the fact that the import surplus of the national economy level was transformed, in both relations, into export surplus, therefore the chemical industry, with the highest intermediate import coefficient, lost

* The question is justly asked, how is the overvaluation of the chemical industry affected by its preferred development? A less than the actual preference would have increased overvaluation.

some of its comparative advantages over the other sectors. The further rise of the computed price index in 1973–1974 was the consequence of the rising costs of import materials because of changes in prices. In one year the rate of intermediate import input in the production value of the chemical industry rose from 30.6 to 40.2 percent, that of dollar imports from 18.5 to 29.3 percent.**

There were, in the same period, also some factors that acted against the decrease of overvaluation. Fixed capital coefficient (capital output ratio) reduced considerably, and the actual chemical industrial price grew by 3.6 percent from 1973 to 1974.*** All in all, the profitability of the chemical industry came to a “trough” in 1974, but even so, it was still among the highest. The ratio of accumulation to income rose in the chemical industry to 70 percent, a strikingly high value, which is to say that the size of income to be taxed from the chemical industry for accumulation in other sectors fell to an unusually low value. To this the large-scale upswing of accumulation in 1974 was further added. This is followed by a considerable 17.7 percent price increase from 1974 to 1975 which restores, at one stroke, the initial overvaluation level. The changes in the rest of the period are of much smaller dimensions: they are related to fluctuations in prices and import surplus.

The overvaluation of *light industry* is similar to that of chemical industry, even its motivating factors are the same. *Metallurgy* runs the same course, with the difference that one more wave-motion takes place after 1974. Because of falling metallurgical prices and increasing costs, overvaluation first decreases: in 1977 it reaches only 12 percentage points. In 1978 metallurgical accumulation grew by more than the double of the industrial average, while the metallurgical price also grew by 7.4 percent. In 1979 the metallurgical price grew further and, as a result, overvaluation returned very close to the 1971 level.

Mechanical engineering is the second most overvalued sector after the chemical industry. The fluctuation of its computed price index is much lower than that of the other sectors, mentioned above. From 1971 to 1973 its overvaluation decreased a little. In 1974, as a result of an upswing of national accumulation, output of mechanical engineering increased and its capital coefficient improved largely, whereby the original level of overvaluation was restored. In the rest of the period, no more important changes took place; the mid-fluctuation came from changes in the import surplus and in capital coefficient.

Mining, slightly overvalued in 1971, went down, through a steady decrease, to be undervalued by 13.5 points by 1974. The change was mainly due to a decrease in

** Note that this rise in import prices did not really affect the chemical industry directly, since the budget absorbed it in the form of a price subsidy. In working out the computed prices, however, we considered actual costs, independently of whether they are paid directly by sectors, or by the budget.

*** Here and in the following, actual price means the value of the sectoral implicit price indices (ratio of production values calculated at current and at constant prices) deflated by the macro implicit price index.

mining prices that had begun already before the period under examination, and was further promoted by increasing current costs, especially of wage costs, as well as by a deteriorating capital coefficient. Parallel with it, accumulation in mining was decreasing over two years and in 1974 it was still growing at a rate much below average, however, in 1974 accumulation already amounted to 2.4 times income. At that point an extremely high, 23.6 percent price increase followed, as a consequence of which mining at once surpassed the 1971 overvaluation level. At the same time (in 1975) mining accumulation grew by more than double the industrial average. The rest of the period shows a special feature, seen only in mining. Actual prices grew further, overvaluation increased, except for the last year, even though to a smaller extent than would be justified by the rise in prices, since costs also increased.

In the rest of the overvalued sectors, the extent of overvaluation is also influenced by the factors described earlier.

Let us now turn our attention to the analysis of the undervalued sectors. The least undervalued one is the *food-processing industry* which, owing to a 5.2 percent rise in prices in 1973 became even overvalued for a year. Then the prices of the food-processing industry fell, while its costs, mainly the intermediate import costs, rose considerably. Thus it became undervalued once again, and this undervaluation only grew until 1979, with just a few breaks. The prices of the food-processing industry were on the whole decreasing, while in 1977 its cost grew again because of the 1976 price increase in agriculture. Meanwhile, accumulation was dynamically growing; as we have seen, the food industry became an important income recipient sector.

The undervaluation of *agriculture* fluctuates about 18 percent. By 1973 its undervaluation decreased a little, partly owing to a small price increase, and partly to reduced wage costs. In 1974 its intermediate import costs grew suddenly, still not reaching up to the half of the industrial average (and compensated by price subsidy). In the following year, however, its prices did not grow—as was the case with the majority of the industrial sectors—but decreased by 4.7 percent. And yet its undervaluation hardly grew further, since it succeeded in adjusting itself: it reduced its intermediate import coefficient. At the trough of 1975 its sectoral income per unit of output was 3.1 percent. The price increase of 1976 restored the earlier level. (Some of the price subsidy was also stopped.) The slight price decreases of the rest of the period were neutralized by the technological change which was characteristic not only of these three years, but of the whole decade. The rate of wage costs fell from 45 to 37 percent in the course of nine years, the rate of intermediate input costs grew from 55.4 to 63 percent, while both wages and the prices of inputs used in agriculture grew faster than agricultural prices.

As it happened also in the food-processing industry, accumulation in agriculture grew faster than the average, and both sectors had an increasing share in the capital

fixed in the national economy. It is to be recalled, however, that this was so only because the share of the non-material sectors in the capital stock also largely decreased.

The computed price index of *transport and communication* is rather stable; its undervaluation fluctuates around 13 percent. Considerable changes are found only between 1972 and 1974; then the input coefficients from mechanical engineering, building industry, and itself and from rouble imports were first growing and later on reducing. In 1974 also the rouble import capital coefficient grew considerably. The overall capital coefficient was sinking all through the decade. Since the undervaluation of the sector did not change, it is clearly an accompanying phenomenon that current inputs grew to a considerable extent. Between 1971 and 1979 the total (direct + indirect) coefficients of mechanical engineering grew by 19 percentage points, that of chemical industry by 26 points and that of agriculture by 16 points. Total intermediate rouble and dollar import and wage coefficients grew by 14, 24, and 29 percentage points respectively.

If there is no investment in sector, current inputs will grow, which does not necessarily change the level of undervaluation.

Apart from water management, which is not very important from the point of view of our survey, the *most undervalued sectors* are the *non-material services*, among them mainly the personal and business services. It is worth, however, examining jointly the three connected sectors. Namely, their aggregate computed price index is the mirror image of the industrial price index. If overvaluation of industry decreases, so does the undervaluation of non-material services, and vice-versa. Thus the undervaluation of non-material services decreased somewhat until 1973 and then grew almost every year up to 1978. Finally, by 1979, undervaluation was again decreasing. A similar relationship, though not so regular, is observed between industry and non-material services also regarding shares in accumulation. In the case of health, social, and cultural services, as well as of transport and communication, a sinking fixed capital coefficient was accompanied by considerably rising intermediate input and wage costs.

To sum up the analysis of the computed price indices, we can state that, *at the beginning of the period discussed, the overvaluation level of the overvalued sectors*, as well as *the undervaluation level of the undervalued sectors fell generally*, that is, the price scissors closed. *In the ensuing years the process turned around* and the computed prices became stabilized on a level characteristic of the early period. We assume that the underlying cause is as follows. The income production of sectors providing large incomes decreased. In 1974–1975 accumulation suddenly started to grow and parallel with it import prices grew. Both factors were mostly felt in the most overvalued sectors, since they are the greatest intermediate import customers, or, it is in these sectors that accumulation grew at the fastest rate. If the price scissors narrow, while at the same time import prices grow, and in addition, accumulation starts increasing, the income

redistribution system gets into a difficult situation. In such a case either this system has to be flexibly adjusted to the new conditions or, more simply, the price scissors must be opened again, i.e. the prices of the overvalued sectors raised. It is the latter that had been put into practice. In this interpretation, it was the maintenance of the trends and proportions of the income redistribution that represented the cause that led to raising the prices of the overvalued sectors in the given situation. Thus the pattern of sectoral income, accumulation, and price held closely together, as we have seen, by income redistribution, reproduced itself, resisting changes, making every effort at structural transformation aimed at one or another component of the complex system fail from the outset.

The effect of the computed prices

Taking into account the way we obtained the computed prices it is not surprising that they exert the greatest effect on the distribution of income formation. To illustrate, a few figures, at actual prices, 56–65 per cent of income spendable on accumulation is formed in industry, at computed prices only 22–25 percent. The sectoral income of about zero in agriculture at actual prices will rise to 14–15 percent of the total income at computed prices. With non-material services, the rate changes from 0–3 to 30–33 percent. The rate of trade falls from 17–22 to about 5 percent. An even more illustrative picture may be obtained if gross sectoral income and output ratio reckoned at actual and calculated prices is compared: 15–20 and 7–9 in industry, 0 and 11 in agriculture, 0–5 and 27–33 percent in non-material services. Finally, two extremities: the income of personal and business services grows from 21–27 to 53–52, while that of foreign trade falls from 38–57 to 4–7 percent at computed prices.

Computed prices have, on the other hand, only a slight effect on the pattern of accumulation. The accumulation/capital ratios do not change, either, in switching over to computed prices since, as has been mentioned, the pattern of current accumulation and that of fixed capital according to producing sectors differ only to a slight extent. The importance of this statement for us lies in that what was said when analysing the accumulation/capital and investment/fixed capital ratios remains valid also in respect of computed prices.

Let us now see, how the relationship between income and accumulation develops at computed prices (with production at actual current prices). As with the case of the actual price, let us compute the difference of gross sectoral income and of gross accumulation at computed price and from there, the extent of the yearly income redistribution. At computed prices, the total income provided amounts to 9–18 percent of the income to be spent on accumulation, what is more, the result is below 14 percent,

with the exception of only one year. As shown in *Table 3*, this rate fluctuates between 36–54 percent in case of actual prices and, except for one year, it is always above 43 percent. The extent of income redistribution falls to about a quarter at computed prices.

This means that the actual pattern of accumulation is much nearer the pattern of incomes at computed prices than the actual pattern of incomes. In other words, the pattern of incomes produced by the functioning of the actual prices is transformed by the redistribution mechanism into such a pattern of accumulation which comes relatively near to the computed i.e. capital-proportional pattern of incomes.*

Another important change in the relationship of accumulation and income: at computed prices, the direction of the flow of income usually turns around, since the pattern of accumulation does not change much at computed prices, while the pattern of incomes is identical with that of the fixed capital in the various sectors.

At actual prices, the relationship between accumulation and fixed capital is closely followed by the relationship between accumulation and income at computed prices. If the rate of accumulation of a sector at actual prices surpasses the average, its accumulation at computed prices will surpass its income at computed prices, and conversely. In this case, therefore, relying on the results of the model computation, we can only confirm what we have said already concerning the investment/fixed capital ratios and the pattern of fixed capital, which is that in fact it is not industry that finances agriculture and services but through investments below the average, it is mainly the non-material services, transport and communication that finance industrial development projects.

The computed production pattern

At our computed prices, the sectors earn a capital-proportional income, which enables them to enlarge their fixed capital steadily. In order that this can be carried out, the pattern of accumulation has to be transformed, too. The computed production pattern obtained as a result of solving the primal problem indicates the direction and dimensions of this transformation. The difference of the pattern of accumulation from that of the fixed capital has already been discussed, our model analysis provides, however, further information, since it becomes possible also to observe indirect effects.

* It is on the basis of this statement that we suppose that the weak relationship between enterprises' income and accumulation demonstrated in János Kornai's and Ágnes Matits' article [12] is partly the consequence of the price system or, more exactly, of the sector-specific under- or overvaluation. In the course of microlevel examination, the said article disregards this relationship. What exactly we wish to demonstrate by our analyses is that the relationship between income and investment, i.e. income redistribution cannot be adequately analysed without taking prices into account.

If a sector's share in accumulation grows, the pattern of accumulation output will change, and production will increase, as a consequence of which demand will grow for its inputs, and so on.

For a simple formulation, sectors the actual production of which is larger than the calculated production, with an index below 1, are called overproducing sectors, and those whose production is smaller, are called underproducing sectors.

The most overproducing sector is *mechanical engineering*, and the most underproducing one, apart from water management, is the *building industry*. Further overproducing sectors are, in the whole or in a considerable part of this period: *metallurgy, chemical industry, light industry, food-processing industry, foreign trade*; and permanently underproducing sectors: *building material industry, agriculture, transport and communication, water management, and non-material services*. The index of the *electric energy industry* and of *domestic trade* fluctuates around, pointing more towards overproduction, while the formerly underproducing *mining* and *forestry* became, after 1975, overproducers. The majority of indices fluctuate rather sharply from one year to another. The fluctuation is mainly influenced by the changing ratio of the accumulation demand and the fixed capital from the output of the given sector, of course, only where there is at all such an output, and this ratio is highly changeable, for several reasons. In the case of sectors with a considerable output of such products (equipment, buildings), and of sectors closely related to the former, the relative extent of the accumulation demand is determined by the investment cycle, which is to say, that if, for example, machinery output for investment purposes highly increases, the production index of mechanical engineering will largely fall. In the sectors where output for accumulation consists mainly in changes in stockpiling the products of the sector concerned—sometimes resulting even in a negative accumulation demand—, there, obviously, fluctuations are even more rhapsodic.

What interests us primarily is, however, not the changing of the production indices, but their level which, similarly to the price indices, though to a lesser extent, is rather stable in most sectors. The picture drawn up of the production indices agrees in several of its features with what we found in analysing the relationship between accumulation and fixed capital. *Non-material services, transport and communication, and water management*, i.e. all services apart from trade, are permanently and to a considerable extent underproducing, or, their accumulation is dispreferred. There are also important differences, observed when indirect interrelationships are taken into account. Most conspicuous is the great extent of underproduction in the *building industry*, which is because in the neglected sectors of services more than three-quarters of the fixed capital on average consists of buildings (in non-material services more than 90 percent), while in industry this rate is below one third. If therefore, *services* were developed proportionally, demand for output of the *building industry* would suddenly

grow, and demand for output of *mechanical engineering* would fall. That is why the production index of *mechanical engineering* is so very low.*

It is mainly the growth of consumption that renders *agriculture* considerably underproducing and carries the *food-processing industry's* index near 1, which appeared to be in a position better than the average in the course of analysing the investment/fixed capital ratio. The difference is in the opposite direction in *metallurgy*, which is here overproducing, though in the late 1970s it received less than the average accumulation. This is because, in spite of smaller accumulation, its actual production is judged too much by the model. The computed production pattern consumes less imports and more labour than the actual production pattern.

Computation for 1981

As for the early 1980s, data were available only for one year: 1981. One year is not enough to analyse, in its process, the effect of the change-over to competitive price formation. Computation results may, however, not be without interest; therefore, we shall present them in rough outlines.

The computed prices do not much differ¹¹ from those computed for the 1970s. They show that *industry* and *building industry* are still overvalued in comparison with *agriculture* and *services*, and not even the extent of the overvaluation has changed.**

Within industry, the overvaluation of *mechanical engineering* and *light industry* decreased considerably under the influence of competitive price formation, while that of *mining*, the *electric energy industry*, and the *chemical industry* greatly increased. The computed price of the *building industry* coincides with the actual price. The undervaluation of *agriculture* and *forestry* lessened. So did the undervaluation of *services*, outside of trade, as a consequence of the rather low, 5.1 percent, profit rate.

The intensity of income redistribution grew in comparison with the 1970s. In the computed production pattern, four sectors came away from the 3 percent interval of

* For the sake of precision, it should be noted that the difference between the production index of mechanical engineering and that of the building industry has one more component: the rate of scrapping, i.e. of depreciation, different on account of the different duration of machinery and buildings. Control computations were made to measure the effect. These have shown that only a small part of the difference can be attributed to this factor.

** Ágnes Matits and József Temesi analysed, relying on data of industrial enterprises, income processes and found that industrial incomes which fell in 1980 were increased by 1981 by the necessity to return to the normal path of economic growth [13]. The results obtained for 1981 and the analyses covering the 1970s teach us that, on the one hand, the changes in industrial incomes cannot be understood without the changes in other sectors' incomes and, on the other hand, that prices and accumulation pattern play an important part in the trends of income processes, and the return of 1980-1981 can be better explained on the basis of the interactions of prices, incomes and accumulation, than on the basis of control by norms.

actual production: *mechanical engineering, building and building material industry, and water management*. In comparison with the computed production pattern of 1979, the difference between *mechanical engineering* and the *building industry* grew by two percentage points; *mechanical engineering* is overproducing with 8.5 points, while the *building industry* is underproducing with 8.1 points. The *building material industry* and *water management* have remained underproducing, similar to their state in the years 1971 to 1979.

Summary and conclusions

We would like to sum up the results of our study as follows:

1. In case of a fast increasing accumulation, the share of industry is relatively high and that of services low within accumulation, for most of the years discussed. In the case of decreasing, or only slightly increasing accumulation, the situation is quite the reverse. Therefore, if accumulation prospects improve in comparison with the earlier situation, there will be a real risk of overcompensating the relative lag of industry. This is what happened in the course of the 1970s.

2. Our analysis of accumulation and capital reveals that in the 1970s, industry and to a lesser extent agriculture were preferred sectors in comparison with the average in respect of accumulation, while services, with the exception of trade, were dispreferred. During the same period, the differences in preference lessened as compared to the initial situation; the relative lag of services stopped growing. Also, differences in modernity became less significant. Within industry, in comparison with the industrial average, only the chemical industry could be demonstrated as enjoying preference in the long run. As a result, the pattern of accumulation and of production remained basically unchanged during the ten years we have examined.

3. Although it does not fit in with our train of thought, it is a remarkable phenomenon that the relatively equipment-intensive industry was preferred only regarding investment in buildings, while it was dispreferred in respect of equipments. As for the mainly building-intensive non-material services, the situation was the reverse.

4. At actual prices, the income producing capacities of the various sectors show extremely high differences, while each sector's income fluctuates at about the level characteristic of it during the entire period. The same thing is found in analysing prices computed with the uniform rate of profit, which considerably differ from actual prices, while the computed prices of the individual sectors are comparatively stable. With a price system which is to such extent sector-specifically deviated, the income producing capacity is not to be identified with efficiency in any sense. It follows, too, that the mediating mechanism which is to provide for efficiency on the enterprise and on the national economy level is dysfunctional.

5. Price computations have shown that the prices of industry—within industry, mostly of chemical industry and of trade—are overvalued, while those of agriculture and of services outside trade are undervalued.

6. The uniform rate of accumulation demonstrates a production pattern, in which the actual production of mechanical engineering is exaggerated, while that of the building industry is insufficient. If the services having a large stock of buildings at their disposal were carried on at a rate identical with that of industry, more output of building industry than the actual one and less mechanical engineering output would be needed. Such a production pattern would increase labour utilization in comparison with the present, while it would reduce imports.

7. At actual prices, the pattern of income and accumulation shows a wide difference which was apparent throughout the full ten years. The surplus income of industry and trade not used for their accumulation is diverted through redistribution, to finance the other sectors' accumulation. The size of the income approaches, and sometimes even exceeds, half the income to be spent on accumulation. This rate grew further in the early 1980s. In our opinion, this extensive and increasing income redistribution is an obstacle to the spreading of microlevel efficiency, since the connection between production and use of income grows ever looser.

8. At computed prices the pattern of income goes through a considerable change: as compared with the pattern at actual prices, the redistribution following from the difference of the pattern of accumulation and income falls to about a quarter. The pattern of income showing at actual prices is transformed by redistribution into a pattern of accumulation which comes relatively near to the pattern of income at computed prices. In other words: in the financing of accumulation a double twist is asserted; the effects of a distorted price system are partly compensated by income redistribution. If this compensation did not take place, the economy would cease to function.

9. The compensation mentioned above is only partial. That is to say, at computed prices, it is first of all non-material services, transport and communication that finance industrial accumulation. In another approach, the same is proved by what has been said of preferences (see par. 2), as well as by the fact that, with only a few exceptions, overvalued sectors coincide with the overproducing sectors, and undervalued sectors with the undervalued ones. Thus we can draw the conclusion that the income providing sectors enjoy a more favourable situation than others as for accumulation prospects. In this, there is the illusion that industry "keeps" agriculture and services, "grants" them developments resources, i.e. it is functioning "more efficiently". If, for example, economic management wishes to give preference to the development of services, more will have to be taxed from industry within the given system of price and income redistribution. Thus it will seem that we "sacrifice" more than the average for the

development of services, even when it is only the growth rate of the lag that is reduced. This effect may be intensified also by the phenomenon described in par. 1.

In considering the above, development preferences can be judged realistically only if the distorting effect of the price system can be eliminated, and the extent of income redistribution which is to compensate for it can be lessened.

10. In the course of the 1970s, computed prices made a wave motion, at a comparative stability. At the beginning of the decade, the overvaluation of the overvalued sectors, and the undervaluation of the undervalued ones both reduced, later on this process turned around and by 1979 the initial state was restored.

The turning-point coincided with the rise in import prices, as well as with the upswing of accumulation, first of all industry. As a consequence, the redistribution system was pressed heavily, and, within the given system of price and income redistribution, the only way out of this could be the increase of industrial prices and thereby also of industrial incomes. This was partly the response to the changes in world market prices, as well as the obstacle to a structural transformation of the economy. It is therefore clear that the patterns of sectoral income, accumulation and price are closely intertwined and mutually determining. None can change or be changed to any considerable extent, since it would trigger off such a reaction on the part of the other two, as would carry the first one back towards the original state.

11. Our computations for 1981 have shown that no significant change has occurred in the order and dimensions of under- and overvaluation. The "competitive" price formation has led, within industry, to a lessening overvaluation of mechanical engineering and light industry, and to an increasing overvaluation of mining, electric energy industry and chemical industry. For lack of computations for 1980, this is difficult to interpret. Nonetheless, it seems likely that our conclusions are valid not just for the 1970s.

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ФОРМИРОВАНИЕ ДОХОДОВ, НАКОПЛЕНИЕ И ЦЕНООБРАЗОВАНИЕ В ВЕНГРИИ В СЕМИДЕСЯТЫХ ГОДАХ

Л. ГАЛЬПЕРН—Д. МОЛЬНАР

В статье рассматриваются некоторые аспекты взаимосвязей между формированием доходов, накоплением, перераспределением доходов, ценами и затратами. В первой части статьи дается анализ структуры накоплений в венгерском народном хозяйстве в семидесятых годах и его отклонения от отраслевой структуры доходов, финансирующих накопление. Авторы отмечают, что расхождение двух структур носит постоянный характер, оно не уменьшается. Одна из главных причин сохранения этого расхождения кроится в наличии прочных приоритетов развития в венгерской экономике. В минувший период ясно прослеживаются предпочтения развития промышленности, строительства, сельского хозяйства в ущерб всей сферы услуг. Рассмотрев эти секторы по отдельности, авторы попытались во второй части объединить в единых рамках линейной модели, предполагающей единые темпы роста и норму прибыли. На основе цен и производственных пропорций, полученных из расчетов на модели, авторы заключают, что в результате взаимообусловленных и взаимоусиливающих эффектов соблюдения приоритетов развития и действия системы цен, обеспечивающей финансирование такого развития, те же самые отрасли пользуются как предпочтениями в развитии, так и служат источниками дохода, изымаемого в порядке перераспределения доходов.

В начале семидесятых годов амплитуда перераспределения доходов начала сужаться, но вследствие форсирования процесса накопления и роста цен на импортируемые товары, повлекшему к росту оптовых цен в промышленности, восстановилось первоначальное положение. Из своего анализа авторы сделали вывод, что изменение хотя бы одного элемента данной отраслевой структуры системы ценообразования, доходов и накопления, а также системы перераспределения доходов, служащей сохранению этой структуры, почти неминуемо вызывают усилия, направленные на восстановление исходного положения. Опыт семидесятых годов показывает, что в этом процессе чаще всего преимущество на стороне тех отраслей, которые дают источники для перераспределения доходов.

Обширная и растущая система перераспределения доходов препятствует повышению экономической эффективности на микроуровне, потому что оно ослабило бы связь между созданием и использованием дохода.

INVESTMENT CYCLES IN CENTRALLY PLANNED ECONOMIES: AN EXPLANATION INVOKING CONSUMER MARKET DISEQUILIBRIUM AND LABOUR SHORTAGE

L. PODKAMINER

The interpretation of cyclicity in the productive investments' growth rate under central planning focusses on the labour market situation. The investment expansions (which are to some extent caused by the authorities' preference for full employment) are shown to accelerate the deterioration in the consumer market situation (deepening disequilibrium). There are five mutually reinforcing mechanisms which transform market disequilibria into a declining quantity and quality of work performed by consumers. The ensuing acute shortage of labour finally paralyzes the investment expansions (and much of the current activity of the whole economy). At the same time it dispels authorities' anxiety about future unemployment. To avoid instability of investment a much more flexible wage and price policy is needed. In particular, a sustained investment expansion requires a measure of open (and not merely repressed) inflation.

The study of the fluctuations in the productive investments' growth rate under central planning has aroused the interest of many authors (for comprehensive bibliographies see [1], [2]). Leaving aside papers attributing the fluctuations to a mechanical cyclicity inherent in the renewal processes with respect to capital equipment, we have many partially competing economic explanations of the phenomenon. Basically, there are two alternative hypotheses about the reasons why the investment growth rates accelerate quite rapidly after the periods of "recessions". The first hypothesis (e.g. [3], [4]) points to the microeconomic foundations of unlimited demand for investment. The second one considers investment upswings to be manifestations of the central authorities' (planners') preferences (compare [5], [6], [7]).

Any specific theory on the causes of the accelerations may be combined with any specific theory about the causes of the decelerations. Deceleration theories, too, can be divided into two classes. The first one (e.g. [8], [9]) stresses the importance of tensions on the production side, shortages of investment goods and intermediate inputs caused by overextended and poorly scheduled medium-term investment programs. For the second school (e.g. [10], [11]) the impulse to curb investment projects already under way and to abandon many projects comes from the consumer markets at a time when stagnating standards of living and (or) disequilibria become too painful and produce social tensions and popular discontent.

It would probably be inappropriate to assume that there is exactly one "pure" theory of investment cycle explaining all historically recorded cases of fluctuating investment rates under central planning. Actual fluctuations must have been simultaneously animated by all sorts of mechanisms visualized by various authors—and many more not studied so far.

The main hypothesis advanced in this paper links the depending disequilibria of the consumer market with a slowdown (and then an absolute fall) in the investment growth rate. However, it is not the consumers' discontent which is seen as having that effect. Instead, it is suggested that the consumer markets' disequilibrium (caused by additional investment) reduces the labour supply to such an extent as to block the fulfilment of the investment programs and to force a contraction.

Investment expansion and consumer market situation

While accepting the view that under central planning enterprises tend to overdemand investment inputs (just the same way as they do intermediate ones and labour) in order to reduce the risks of not fulfilling the production targets imposed by the central economic administration, I think that the latter is ultimately responsible for the investment expansions. First, the planning commissions know the rules of the game very well. They are quite experienced in telling the truth from empty promises which the existing enterprises attach to the petitions for investment permits. Second, the bulk of the "expansionist" investment is usually concentrated to a limited number of entirely new projects initiated by the planners themselves. Not infrequently these top-priority projects are growing at the expense of the existing enterprises which are administratively deprived of the investment goods urgently needed for the replacement of the worn-out equipment, or even of the necessary intermediate inputs for their current production.

The motives for the planners' decisions on speeding up investment have been studied extensively by others. There is little need now to discuss these motives in detail. However, one particular motive seems worth of reconsideration. This is a concern about the creation of enough work places for the cohorts of young people entering the productive age.*

*Any textbook or manual on central medium and long-term planning available in socialist countries seems to include—as an indisputable imperative—the requirement that the development of the productive capacity should outpace the growth of population. Indeed, as far as full employment is concerned the socialist countries seem to have practised what they preach (to the extent that the shortage of labour quite often compels the authorities to introduce harsh penalties for "parasitism", i.e. preference of leisure over being employed).

Whatever mix of reasons underlies the decisions on accelerating the investment rate, some economic consequences follow by necessity.

First, acceleration necessitates a substantial rise in the employment needed for the construction of the new projects. However, even if the new projects get started to prevent unemployment in the future, at the time of their realization there is no reserve labour force to draw the manpower from. Thus, manning the new projects requires a reduction of employment—and hence of output—in the existing enterprises. If the labour force is reallocated through administrative procedures, some additional losses must ensue (owing to inaccurate discrimination between more and less important enterprises). Things go from bad to worse if the priority projects are allowed to pay higher wages or to grant extra benefits in kind so as to attract a sufficient number of workers. Under such circumstances the existing enterprises also lose employees and have to restrict potential production. Yet, at the same time, the higher wages of the newly recruited workers of the priority projects inflate the demand for consumer goods. What makes things worse is that the managers of the existing enterprises, threatened with mass “desertions” of their workers, try to compete for them with means fair and foul. They offer higher wages (or lucrative overtime compensations), try not to annoy the employees with formal discipline, too strict quality control, intolerance to theft. (Because of the “soft budget” constraint they do not risk too much even if in a financial “trouble”). In effect, higher nominal wages of the whole workforce sooner or later follow the attempted reallocation of labour. The demand for consumer goods increases accordingly. It is worth noting that there is an alternative method of labour reallocation that does not entail wage inflation. That method would stipulate falling nominal (or at least real) wages in the existing enterprises or sectors of the economy. For obvious reasons that method is not very popular. However, the early stages of industrialization under central planning combined massive successful waves of investment in new projects with little or no upward movements in nominal wages. Of course, that was possible because the economic policies towards the then existing private agriculture aimed at a relative (or even absolute) impoverishment of the peasants—causing thereby sufficient emigration from agricultural occupations.

Second, acceleration requires a substantial rise in the production (or imports) of capital goods and an expansion of the industrial construction sector. Because the production capacity of the domestic industries is fully utilized, acceleration of investment implies a fall in the production of many consumer goods. Housing construction is likely to be especially affected. Certainly, an absolute fall in per capita consumption of major sections of the population happens quite rarely. Many industries producing consumer goods cannot be geared to the production of investment equipment. Also, new factories serving the consumer (the construction of which had started much earlier) may be entering the markets irrespectively of the

current investment expansions. Besides, imports and domestic inventories of consumer goods may help to postpone and mollify the inevitable decreases in the supply of many specific goods. Nevertheless, the growth in the supply of major aggregates of the consumer goods (excluding possibly food, tobacco and alcohol) is to be checked. In effect, excess demand for most aggregates of consumer goods is likely to rise—and so is the aggregate excess demand. Of course, such a proposition holds only true with rigid consumer prices. If prices rose in accordance with falling supply, excess demand would not rise. However, the initiation of the “expansionist” investment is always accompanied by a developmental euphoria unnecessarily propagated by mass media. This excludes significant adjustments in consumer prices.

Both tendencies, described above (rising wages and demand, flagging supply) contribute to increasing excess demand for most consumer goods, i.e. to generating disequilibrium.*

Consumer markets' disequilibrium and the supply of labour

It is useful to distinguish two forms of the consumer market's disequilibrium, depending on the presence of inflationary overhang. Under the former, virtually all goods are in short supply (while the freely available ones in fact do not possess any properties appealing to the consumers). Under the latter only some goods are in a short supply (while the consumption of the freely available goods is actively restricted by the consumers' budget constraint). Alternatively, the latter form of disequilibrium is caused solely by a wrong structure of consumer prices whereas the former by a wrong (i.e. too low) level of consumer prices (which may or may not be accompanied by a wrong price structure).

It is important to note that the latter disequilibrium may also occur with a too high general price level. Under such circumstances restoration of equilibrium would require a fall in the price level.**

*The structure of rising excess demand may be predicted in advance. Because of the Engel law, the rising incomes (wages) induce only a slight rise in notional demand for foodstuffs. The demand for industrially produced consumables, services and housing is, however, increased quite dramatically. Yet, the supply of the latter goods is severely affected by the investment acceleration. Thus, one should expect deepest disequilibrium in the markets for the non-food goods. Nevertheless, consumers, unable to satisfy their notional demands, would increase the consumption of foodstuffs—especially meat products—and alcoholic beverages. On the mechanism of forced substitution see [3], [12].

** To R. Portes [17] the consumer market disequilibrium is synonymous with a monetary overhang. This follows his “macroeconomic” approach to the study of centrally planned economies. Yet, as J. Kornai

The former disequilibrium (one with involuntary savings, inflationary overhang) is accompanied by excessive monetary assets held by consumers. These assets represent the intended expenditure which the consumers are unable to spend because of the shortages of goods containing any "utility".

Under both forms of disequilibrium, there are four mutually reinforcing mechanisms, adversely affecting the quantity and quality of work performed by the consumers.

First, shortages engender queues and necessitate time-consuming hunting for "attractive" goods. In effect, much more satisfaction is to be obtained from investing more time in shopping activities (at the expense of working efforts). This fact underlies many phenomena such as increased absenteeism, reluctance to accept overtime work, proliferation of professional speculators quitting productive work altogether.

Second, the administration of the rationing schemes (when these prove necessary to curb speculation and limit the lengths of queues) absorbs additional manpower. Likewise, "fighting" the black market and corruption through increased police surveillance and legal repressions distracts significant amounts of effort from more productive services.

Third, because the disequilibrium is likely to increase abnormally (*via* the involuntary substitution), the consumption of foodstuffs, alcohol and tobacco, the health standards of the population are adversely affected. Thereby the intensity, quantity and quality of work is reduced. (Induced overconsumption of alcohol additionally diminishes labour supply through deteriorating moral standards.)

Fourth, under disequilibrium the private sector is able to make extra profit without any particular effort. (Consumers do not value their money too much and tend to spend large sums on goods and services which they would never consider seriously under general equilibrium in the consumer market.) Hence, many employees quite rationally quit productive work in the state-owned sector and start their own lucrative businesses offering rather easy money.*

Each of the four mechanisms described above has a logic and a momentum of its own, forms habits and institutions that persist even when the original cause (market disequilibrium) is curbed or eliminated. For instance, the bureaucracy created to administer the rationing schemes has every reason to resist the abolition of rationing

[16] rightly insists, the composition of partial disequilibria seems more important. It is so indeed because there are disequilibria implying all macroeconomic consequences, yet not accompanied by any monetary overhang.

*In Warsaw there are more registered privately owned taxis than in Paris. Of course, it is much more difficult to catch a taxi in Warsaw. Taxi drivers there may work 3 hours a day—and earn enough income, well in excess of the average wage in the socialist sector.

even when this is in fact no longer necessary. Some lags may prolong the operation of the mechanisms in questions, make them resemble the long-run ones. Yet, in all probability, they are cyclical: they gain or lose importance in line with the pulsating severity of the basic factor, i.e. disequilibrium.

Of course, there is yet another—and possibly the most important—mechanism transforming market disequilibrium into a falling quantity and quality of work performed by the consumers. As early as 1951–52 it was observed that a disequilibrium in the consumer goods market reduced incentive to work, i.e. labour supply (see [18], [19]). Later, the mechanism of falling labour supply under disequilibrium was formalized and extensively studied theoretically (see [13], [19], [20]). None of the four processes we described earlier is referred to in these studies. Instead, the mechanism in question is derived directly from a “fix-price” analysis of a neoclassical rational consumer’s behaviour under rationing. The behaviour involves the allocation of available time (between work and leisure) and money (between purchase of consumer goods and voluntarily held money, i.e. stocks of savings). It is demonstrated that under inflationary overhang the usefulness of money is reduced—and so is the incentive to work, i.e. to earn money. Similar effects can also be deduced when there is no monetary overhang and the disequilibrium is caused solely by the wrong price structure. It is worth quoting the following mathematical result: if the consumer’s utility is a function of leisure and (aggregate) consumption, then the rationing of goods increases the amount of leisure “demanded”—and hence reduces the intensity and quantity of work. Again, forced substitution enters the picture. Certainly, if the neoclassical notion of utility defined over leisure and total consumption is discarded (as János Kornai [21] seems to have done) then labour supply and disequilibrium need not be linked. On the other hand, despite doubts about the wisdom of the neoclassical approach many authors continue to rely on it. (For a relevant discussion and bibliography see [17].) Of course, the final solution of this controversy must await extensive and rather difficult empirical studies. We shall return to this question in the last section of the paper.

Having presented five cooperating mechanisms transforming market disequilibrium into growing shortage of labour (and, hence, reinforcing the tendencies towards higher wages, dwindling effort, deeper disequilibrium) it is probably obligatory to comment on some other related factors which, according to popular beliefs, also contribute to a decline in the quantity and quality of work by the consumers. Thus it is sometimes suggested that the labour supply is adversely affected by rising prices, i.e. inflation (e.g. [11]) or stagnating living standards (e.g. [10]). These opinions cannot be deduced from the contemporary disequilibrium theory (e.g. [13], [15]). The decisive factor is disequilibrium—which may, but need not, be accompanied by inflation or falling per capita consumption. A simultaneous rise in living standards and the

nominal purchasing power of money is highly unlikely to encourage any higher quality and quantity of work—if, at the same time, consumers are unable to satisfy their needs simply because of shortages.

It seems more reasonable to expect that—if there is an inflationary overhang—the restoration of equilibrium (involving a rise in prices) would promote an improvement in the quantity and quality of the labour offered for sale. Of course, if the restoration of market equilibrium involves deflation (market disequilibrium is caused by a wrong price structure, no inflationary overhang actually exists), then, indeed, it may look as if falling prices contributed to the labour market's recovery.

The proposition about a negative correlation between inflation and/or stagnation in the living standards on the one hand and labour supply on the other is also contradicted by the experience of the market economies. Inflation—or even hyperinflation—are accompanied there by growing labour supply leading to increased labour productivity (quality of work) and, in effect, to an excess supply of labour: unemployment. Similarly, living standards may be falling dramatically (like in post-war Japan, West Germany, Italy) only to increase the volume of labour offered for sale and investment. Again, the most likely basic factor behind those developments is the absence of disequilibrium in the consumer markets.*

Falling labour supply and stoppage of the investment expansion

The unfolding investment expansion is accompanied by a growing shortage of housing and other commodities which brings about a decline in the quantity and quality of work performed. In effect, labour productivity decreases (in the existing enterprises) or does not approach the levels originally designed (in the newly completed factories). So, there is a further rise in the demand for labour—and a manifest excess demand for it. Under these circumstances enterprises tend to compete for employees. Those which offer the highest wages and most "liberal" terms of work may hope to solve their employment problems. This is a dangerous illusion. Overpaid workers have even less motive for hard work. Besides, the outcompeted firms have to

*The positive effect of price rises (relative to wages and monetary assets held by consumers) on the growing labour supply under inflationary overhang has virtually nothing to do with the question whether or not falling real wages under equilibrium (save under overproduction of goods) somehow regulate the labour supply. Thus we do not have to know whether the Marshallian labour supply functions are "foreward" or "backward" sloping. Even if under equilibrium the labour supply is reduced by falling real wages, as long as there is consumer market disequilibrium a fall in real (and nominal) wages is expected to induce bigger labour supply.

“strike back”. Macroeconomically, such competition among the enterprises increases the monetary assets of consumers (i.e. workers) and, hence, inflates the demand. Thus it leads to a further deterioration in the consumer market situation, less motivation for hard work for anybody and a development of labour shortages felt by the whole economy.

Let us consider possible actions which the central authorities may take to avert the difficulties.

First, they may impose a freeze on wage-rises throughout the economy. This may certainly help, at least in the short run. However, under frozen wages it is impossible to implement any reasonable allocation of labour force within the economy. Also, raising consumer prices while keeping wages constant seems politically haphazard. Most important, this policy is incapable of restoring equilibria in both the consumer and labour markets.

Second, they may try to balance the consumer markets through changes in consumer prices. In principle, this would be a correct thing to start with. Under equilibrium in the consumer markets the workers' budgets are again “tight”: an incentive to earn money is revived while speculation or private production of trifles no longer yield profits. Also, the socialist enterprises producing consumer goods, when confronted with market equilibrium for their products, are at last vitally interested in a more efficient use of inputs in economizing on wages paid to the employees. However, restoration of the consumer market equilibrium may imply significant open inflation (if there is an inflationary overhang). Besides, it may be rather difficult technically to calculate the correct price structure balancing the consumer market.* Moreover, even if it is approximately known what changes in the price structure are necessary, the authorities may hesitate to implement them for various social (i.e. political) reasons.

Third, they may try to curb the investment expansion and thereby to ease the labour market tension. Again, this policy seems rational—and the most likely to be implemented. By giving up some of the most labour and capital consuming new projects this will release labour which can be re-employed in the existing enterprises without creating a new wave of wage rises. The industries producing capital goods may start supplying more consumer goods. By the same token, a rise in the supply of housing may be expected. Moreover, the authorities may have learnt that the economy actually suffers from an acute labour shortage while the dangers of unemployment are still rather immaterial. Hence, the need to create a sufficient number of new jobs for the young generations may no longer be felt.

*As demonstrated in [14], the computation of equilibrium prices involves particularly time-consuming mathematical calculations, even if the consumers' preferences are known and only a few goods are considered. In practice the consumers' preferences (or demand functions) are seldom known with any certainty and the number of goods to be allowed for is by far much greater.

Concluding remarks

The presented interpretation of the instability of productive investments in the centrally planned economies focusses on the labour market situation. First, the investment expansions (which to some extent are caused by the authorities' preference for full employment) are shown to be responsible for the deterioration of the consumer market situation (i.e. deepening disequilibrium). Second, there are many reasons why growing tensions in the consumer markets definitely reduce the quantity and quality of work performed by the consumers. This reduction accelerates, through a competition among enterprises, the growth in nominal wages and hence further inflates the excess demand for both consumer goods and labour. Acute shortage of labour finally paralyzes the investment expansion—and much of the current activities of the whole economy. At the same time it (temporarily) dispels the authorities' anxieties about impending future involuntary unemployment.

That investment instability in the centrally planned economies involves tremendous social, economic and political losses seems quite obvious. However, the elimination of that instability may not be a realistic task as long as the planners do not see any correlation between the disequilibrium in the consumer market and the falling quantity and quality of work performed. If such a correlation were clearly perceived, the investment expansions would be accompanied by falling real wages, rising labour productivity—so that a genuine unemployment could emerge. (Under such circumstances the investment expansions could be stopped because of insufficient demand for the consumer goods—just like in a typical Keynesian recession.)

Towards empirical verification: a note

The statements contained in this text are supposed to somehow apply to any economy characterized by the tendencies towards persistent consumer market disequilibrium and investment expansions. Certainly, the centrally planned economies that exist today display both tendencies. Probably, also the war-time economies can be described similarly. In the latter case the role of the investment "offensive" is played by the massive drafts.

The validity of the explanations tying up various factors into a hypothetical cyclical behavioural pattern seems evident to some extent. However, the relationship between the intensity of disequilibrium and the labour market situation has induced some controversy among the leading experts in the field. Under these circumstances the statistical verification is rather essential. Now, some sub-hypotheses seem quite open to an empirical enquiry.

First, the concern about full employment as a motive for investment expansions would require the study of the official demographic forecasts and their links with the five-year—and longer—programs accepted by the Party Congresses.

Second, the effects of the investment expansions on the growing excess demand for consumer goods and the reallocation of the labour force, etc., are usually evidenced by the existing—though not always publicized—statistical reports.

Third, the first four mechanisms transforming market disequilibria into growing labour supply may be illustrated by ample economic, legal and social statistics—at least with respect to the Polish situation. Elaboration on these statistics may be expected to produce many meaningful doctoral theses.

Really serious problems start with an empirical analysis of the data related to the quality and quantity of labour supplied under market disequilibrium (i.e. to the questions whether disequilibrium makes leisure more valuable). First, it is only in some narrowly defined occupations where the quality of work can be adequately measured. In aggregate terms it is hardly separable from the effects of technical change, organizational rearrangements, etc. Second, the available statistics on total employment, average number of hours worked, overtime work, vacancies, etc. tend to be notoriously unreliable. Third, the data generated by the quantity-constrained economic processes are inherently useless as the basis for statistical reasoning. To begin with, it is impossible to observe directly the level (save the composition) of the market disequilibrium and the size of monetary overhang. It is rather difficult to expect reliable estimates from econometric models with a quantity-constrained labour supply function—as even the values of the explanatory data needed for estimation and testing cannot be observed and, in fact, must be guessed.

The spillovers (forced substitution) destroy the legitimacy of the econometric approach when studying rationing (see [12]). Of course, in principle it is still possible to gain some knowledge on these systems, provided widely accepted, “universally valid” systems of demand and labour-supply functions have been revealed by the econometric models operating with the relevant data on the equilibrium economies. Thus, if we knew numerically the unconstrained (Marshallian) labour supply functions proven to be empirically adequate under market equilibrium, we would be in a position to assess the extent of the spillovers from the consumer goods into the labour market.*

However, no such widely accepted “standards” encompassing labour supply, consumer demand, saving formation have so far emerged from empirical studies applied to the equilibrium economies. The most advanced attempt, by W. Barnett [23], accepts the US data covering the period 1890–1955. His systems do not describe simultaneous behaviour of labour supply, consumer demand and savings. Instead, he

*In [12] I conducted such an *ex-post* appraisal of the spillovers between various consumer goods and savings with respect to Poland. I. Collier [22] realized a similar research program for the GDR.

“only” considers the systems comprising either demand for goods and labour supply, or demand for goods and savings. Moreover, the systems estimated by Barnett are theoretically quite plausible, yet not necessarily complete. Also, their statistical accuracy is far from fully satisfactory. In effect, we are still rather powerless as concerns the empirical verification of the theoretical hypotheses about the labour markets under the consumer markets’ disequilibrium. The only verification still left to us is of a more abstract character.

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**ИНВЕСТИЦИОННЫЕ ЦИКЛЫ В ПЛАНОВОМ
НАРОДНОМ ХОЗЯЙСТВЕ:
ИНТЕРПРЕТАЦИЯ, ССЫЛАЮЩАЯСЯ НА НЕРАВНОВЕСИЕ
РЫНКА ПРЕДМЕТОВ ПОТРЕБЛЕНИЯ
И ДЕФИЦИТ РАБОЧЕЙ СИЛЫ**

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В объяснении цикличности темпов роста производственных капитальных вложений в плановом народном хозяйстве автор сосредотачивает свое внимание на рынке труда. Инвестиционная экспансия (которая до некоторой степени вызывается стремлением к полной занятости) обостряет товарный дефицит на рынке предметов потребления (зависимое неравновесие). Существует пять взаимоусиливающих механизмов, посредством которых рыночное неравновесие приводит к понижению качества и количества труда, исполняемого потребителями. Из этого следует острый дефицит рабочей силы, который в итоге парализует экспансию капиталовложений (а также значительную часть текущего функционирования всего народного хозяйства). Одновременно он развешивает опасения плановиков относительно будущей безработицы. Чтобы избежать инвестиционных колебаний, необходима более гибкая политика цен и заработной платы. В частности, продолжительная инвестиционная экспансия требует определенной степени открытой (а не скрытой) инфляции.

AN OUTLOOK OF FOOD SUPPLY AND DEMAND IN THE CMEA COUNTRIES

Results of the IIASA/FAP Model System

CS. CSÁKI

The Food and Agriculture Program (FAP) of the International Institute for Applied Systems Analysis (IIASA) has invested substantial effort in the investigation of the agricultural system of the CMEA* countries. As an element of the agricultural model system of the Institute, the CMEA Agricultural Model was constructed and has been used for various investigations. In the present study the results of the most recent exercise, namely the results of computations with the CMEA/2 Model are summarized, together with a brief description of the methodology and a short assessment of the most recent developments in East European agriculture. In the analysis special attention is paid to problems related to livestock in general; however, in the study the whole agriculture of the respective countries has been investigated.**

The methodology of the study—the CMEA/2 Model of IIASA/FAP

In 1980 9 percent of world population lived in the European member countries of the CMEA (including the whole territory of the Soviet Union), representing 18 percent of the area of all countries of the world. This region possesses at least 20 percent of the world's agricultural production potential. The European member countries of the CMEA produced 16.9 percent of all grain and 17.5 percent of all meat produced in the world in 1980. In 1983 these countries had to import agricultural products in the value of 17.9 billion dollars (net import value), thereby influencing the world market for several important products to a considerable extent. These facts explain the vivid interest arisen in recent years for the agricultural problems of the European CMEA countries.

The Food and Agriculture Program (FAP) of IIASA has been engaged in the development of a set of linkable national models for agricultural policy analysis since 1976, with the help of a network of collaborating institutions around the world. The

* CMEA = Council for Mutual Economic Assistance known as Comecon in Western countries.

** About previous results with the IIASA/FAP CMEA Model see Cs. Csáki (1982).

purpose of the FAP is to study the effect on the domestic food situation in given countries of alternative policy measures as taken by their own governments, by the governments of other countries and by international organizations which operate under specified international agreements. The basic elements of the FAP model system are *the national policy* models developed on the basis of a common methodology. A special linkage methodology was developed in order to create the global food system.*

The *FAP global agricultural model system* called BLS: (Basic Linked System)** consists of twenty-one models linked together. Of these twenty-one models, 18 refer to individual countries, two refer to the EEC and the CMEA each and one to the rest of the world. These models have been developed at IIASA in cooperation with scientists of the respective countries. The BLS describes the international trade at *10 sector levels* (wheat, rice, coarse grain, bovine and ovine meats, dairy products, other animal products, protein feeds, other food, non-food agriculture, non-agriculture); however, some of the national models have a different sectoral breakdown.

Within the FAP a *specific modelling framework* was developed to represent the *centrally planned food and agriculture systems* in the global investigations. This modelling approach

- incorporates the basic features of the CMEA member countries' economies,
- offers opportunities to include the country-specific features,
- is detailed enough to be used as an experimental tool for actual planning and forecasting purposes.

IIASA's modelling framework for centrally planned food and agriculture systems was first applied for the development of the Hungarian Agricultural Model (HAM). The aggregated *CMEA Agricultural Model* has been constructed by using experience gained with HAM and with the first version of the BLS country models. Actually, two versions of the CMEA Agricultural Model have been developed.

CMEA/1 Model was built in 1980–81 with a detailed commodity coverage (22 food and agricultural commodities) consistent with the commodity classification of FAO's "Agriculture Toward 2000" Project. The model is divided into two major parts: the first submodel describes the agricultural system of the Soviet Union and the second includes the smaller European CMEA countries (Bulgaria, Czechoslovakia, GDR, Hungary, Poland and Romania). The two submodels have a completely identical structure and can be operated independently of each other. The CMEA/1 Model has never been linked to BLS, it was used in a stand-alone mode for medium

* About the structure of the FAP national models and the linkage methodology see M. Keyzer (1980).

** About the Basic Linked System see G. Fischer and K. Frohberg (1981).

and long range projections on limits to and potentials of agricultural development in the CMEA countries.*

The *CMEA/2 Model* represents the CMEA region in the current version of BLS. The model is designed along the same principles as CMEA/1 Model and also fully consistent with the other elements of the BLS. The commodity classification follows the one used in BLS and the production model block is constructed by using the overall methodology and based on the same data base (FAO) as other country models. Owing to the specific features of the centrally planned food and agriculture systems of the CMEA, the model has several specific features as well. (Figure 1 shows the structure of CMEA/2 Model.)

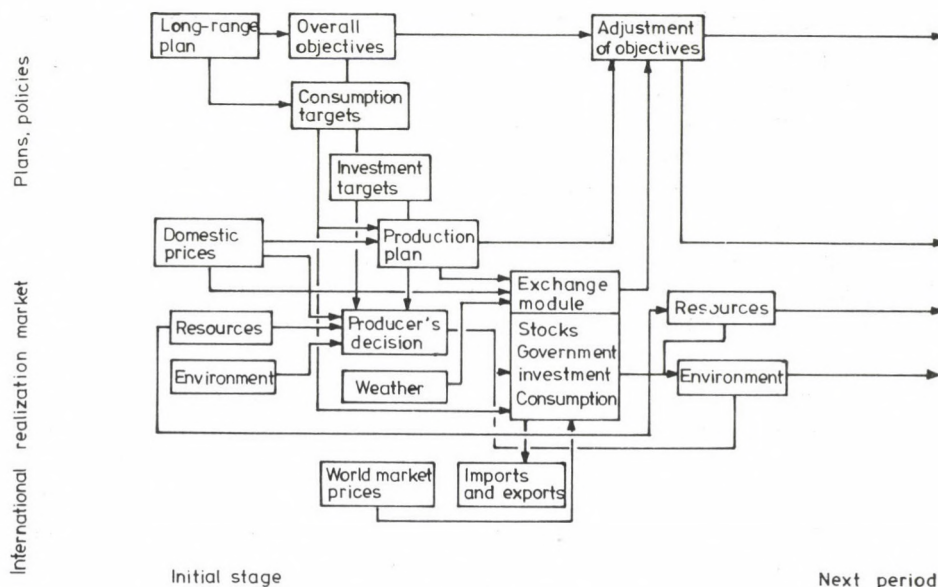


Fig. 1
The structure of the CMEA agricultural model

In the CMEA member countries agricultural policy and policy goals are determined by the fact that they are integral parts of the central plan for the whole national economy. The targets for production and consumption are fixed in the national plan and are realized by a coordinated system of sectoral (industry, agriculture, etc.) regional, local and enterprise plans. Though the indirect policy instruments of price, market, tax, credit and interest policy are used to an increasing

* A detailed account of CMEA/1 experiments is given in Csáki (1982).

extent to realize targets, their role and the way in which they are implemented are rather different from those in market economies. First of all, one should point out the following characteristics:

- The agricultural and the domestic markets of CMEA countries are not directly related to the world market. Protection is implemented not by price and tax policy instruments but mainly through administrative measures (e.g., government foreign trade monopoly, central decisions on export and import of agricultural products).
- Decisions on the desired growth of personal consumption and on investment allocation to agriculture are made within the framework of the five-year national plans.
- Domestic producer prices are not directly related to international prices, they are generally fixed for a given year and changed mainly to adjust to changing production expenses.
- Producing firms have no direct contacts with world market. Exports and imports are transacted by government foreign trade agencies.
- Availability of foreign currencies and labour flows are controlled by the central planners.
- Consumer prices are set with a view to central income and wage policy targets and they do not reflect the actual supply and demand relations.

The CMEA/2 model in the BLS is constructed to reflect the above-mentioned conditions. Thus,

- Domestic prices are not endogenized and are expressed in roubles.
- In the model the desired growth of the overall economy (a_1), the desired growth of consumption (a_2) and the desired share of food and agriculture in total investment funds (a_3) are taken exogenously with lower and upper bounds determining the desired path. An adjustment mechanism is also built in to achieve these targets as much as possible.
- Lower and upper bounds are introduced in the production models to assure self-sufficiency requirements or to limit production growth in certain commodities.
- Modelling of consumption is based on FAO trends ("Agriculture Toward 2000" estimations) and targets on private consumption published in CMEA countries.
- The exchange model built into the model expresses present practice and an assumed preference ordering of areas where adjustment to changes in the conditions of the world market takes place. In the present version the preference ordering of adjustment is stated as follows:
 - adjustment of stocks of the non-agricultural commodities;

- stock adjustment of agricultural commodities;
- modification of government expenditures;
- modification of investment in the rest of the economy;
- modification of investment in agriculture;
- adjustment of private consumption of the non-agricultural products;
- modification of food consumption.

Scenarios of the CMEA/2 agricultural model

Several scenarios have been developed for the CMEA/2 model. The three major exogenous parameters are identical in each of these scenarios, as follows:

- the desired annual growth of the overall economy (a_1): 5 percent
- the desired annual growth of private consumption (a_2): 4 percent
- the desired share of food and agriculture in total investment funds (a_3): 15 percent.

Similarly, the same major resources (labor, capital) are considered in every case. Owing to lack of information, land is not yet considered independently in the production function of the production block.

For CMEA-related investigations and to represent the region in global investigations, the following scenarios of the CMEA/2 Model have been developed:

Scenario A: Low import scenario:

We assume that agricultural development in the CMEA area will be faster than in the 70's, especially concerning grain production. The faster growth combined with improvement in feeding efficiency, will lead to a nearly 100 percent self-sufficiency in major agricultural products by the end of the century. In this case, an increasing fertilizer availability is considered and feed-use parameters have a downward trend.

Scenario B: Medium import scenario:

It is assumed that CMEA agriculture will develop along the trends of the past 15 years. At the beginning growth in animal husbandry will be somewhat higher than that in crop production. Feeding efficiency stays at the level of the early 80's. As a result of these trends, the annual grain import of the area will remain at a 30–34 million metric tonnes level except for the last few years of the century, when it goes down to 25 million metric tonnes due to the growth in the grain sector. Fertilizer availability is less favourable than in the case of Scenario A.

Scenario C: High import scenario:

Only moderate development is assumed in crop production, combined with limited fertilizer availability. Conditions for animal husbandry stay as in Scenario B. As a result of these conditions the projected annual grain import at the end of the century is around 55 million metric tonnes.

Scenario D: Meat-import-oriented development scenario:

By modifying production lower bounds for grain production, it is assumed that the region moves toward meat import instead of importing grain for feeding purposes. Otherwise as Scenario B.

Each of the four basic scenarios has two versions. First we use *unchanged domestic prices* for the whole run, while in the second case it is assumed that if a world market price changes strongly in a persistent way over a long period of time, this will result in *changes of domestic prices of CMEA countries*. A logistic function proposed by O. Gulbrandsen is used, where the transmission of the world market price change is very limited with small changes and grows with large persistent changes. (The transmission rates with this function are, for example, 11 percent with a 10 percent change and 22 percent with a 20 percent price change.)

The CMEA-related analysis of this paper is based partly on the comparison of these scenarios computed on a stand-alone mode and partly on BLS runs with the previous scenarios. BLS runs are compared to the so-called Base Scenario or Reference Run.* The primary role of the reference runs is to serve as a "neutral" point of departure, so to speak, from which policy scenarios take off as variants, with the impact of the policy showing in the deviation of that policy run from the reference run.

During the last year several sets of BLS runs have been made. *The CMEA-related runs* available so far are as follows:

- RØ: Reference run with CMEA Scenario B
- C1: Low import for CMEA (CMEA Scenario A), otherwise RØ
- C2: High import for CMEA (CMEA Scenario C), otherwise RØ
- FØ: Free trade run with CMEA Scenario B
- F4: Free trade run with high import of CMEA (CMEA Scenario C) and China.
- RR: Reference run with low import of CMEA (CMEA Scenario A) and China.

These runs were made in 1984 by using CMEA/2 model with unchanged domestic prices. At that time some elements of the non-CMEA components of the BLS

* About the Reference Run see K. Froberg-Fisher, G. (1985).

have still been in the phase of final tuning. However, we believe that concerning relationships between the CMEA and the rest of the world the results of these runs are already within the bounds of credibility.

Results and conclusions

In *Figures 2-4* some of the results of the CMEA/2 model runs are summarized.* In our study we do not intend to cover all the problems of agriculture in the CMEA countries. Each of the respective countries follows an independent agricultural policy, the development in agriculture of the region has a great deal of country-specific features. We try to identify those issues which are equally relevant for each of the countries and focus our CMEA-level study on these problem areas.

The agriculture of the European CMEA countries experienced a rapid growth during the early seventies, while later the rate of growth diminished and balanced development of the preceding years changed to stagnation accompanied by sharp

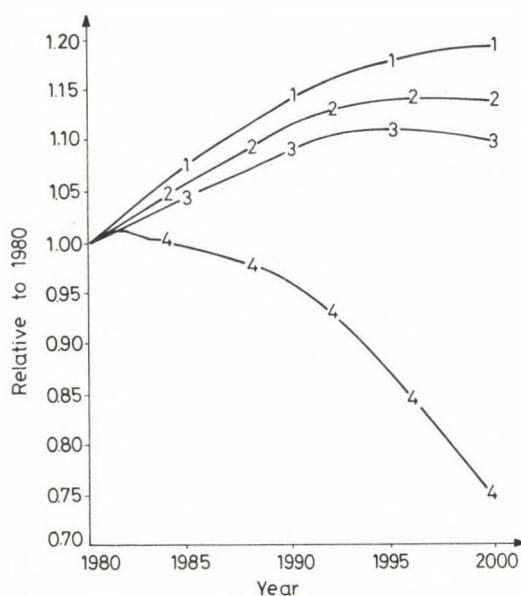


Fig. 2
CMEA production, Coarse grains

* Computations were made at IIASA by László Zöld of FAP.

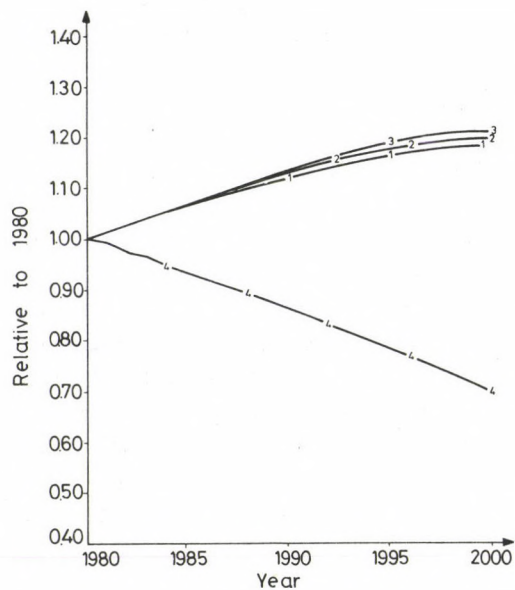


Fig. 3

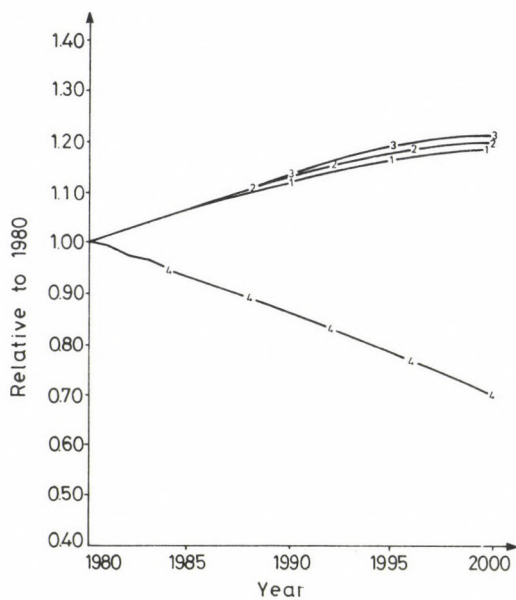
CMEA production. BOV + OV meat

Fig. 4

CMEA production. Dairy

fluctuations (See *Table 1*). During this stage of development the overall yearly rate of production growth was about 4 percent, diminishing later to 1.5–2.5 percent, with the countries showing considerable differences in this respect. Resulting from its relative importance, changes with the greatest impact were experienced in the Soviet agriculture. In the Soviet Union the performance of plant production, especially that of grain production, lags behind expectations and this, together with the objective of stabilizing livestock production, has led necessarily to increased grain imports. The negative influence of this has been amplified by the economic and political crisis in Poland, leading to a decline in agriculture, too. Therefore, *further growth and growth potential* seem to be one of the major issues concerning the further development of CMEA agriculture. The actual results in this respect will to a large extent determine the behaviour of the region on the world market of agricultural commodities.

Table 1
Development of gross agricultural production
in European CMEA countries

(1970=100%)

Country	1975	1980	1983
Bulgaria	116	121	125
Hungary	126	141	150
GDR	114	121	124
Poland	120	108	113
Romania	137	165	173
Soviet Union	103	111	123
Czechoslovakia	112	122	130

Source: Statistical yearbook of CMEA, Moscow, 1985.

All of our scenarios reflect substantial growth potentials in agriculture (2–3 percent per annum on a long-range basis), in contrast with relatively moderate growth in recent years. This projected growth expresses the fact that *substantial production reserves exist in the area*, especially in the USSR. In our opinion, the significant investment allotted to agriculture in recent years will bear fruit in the future, and a moderate food surplus can be forecast by the beginning of the next century.

Related to growth the *development of crop production* and, especially, the results of grain farming *are of outstanding importance*. In the last decade livestock production has developed at about the planned rate and crop growing at a slower rate of growth than planned. Only in Hungary has plant production been able to keep in step with the expansion in livestock production. *Disequilibrium between livestock production and*

crop growing (especially grain production) has been basically attributable to low and slowly improving yields in plant production and, especially, to very poor feed utilization. In order to guarantee the necessary supply of meat, however, *most countries opted for feed imports instead of meat imports*. Consequently, the improvement of feed utilization now presents one of the greatest potentials which can be rapidly realized in order to diminish grain imports.

During the seventies and the eighties, in spite of considerable effort, *there has not been any significant advance in grain production* of the CMEA countries: from 230 million tons in 1969/71 production rose to 252 million tonnes in 1979/81 (See Table 2).

Table 2
Grain production in the European CMEA countries

	Bulgaria	Hungary	GDR	Poland	Romania	Soviet Union	Czechoslovakia
<i>Production 1000 metric tonnes</i>							
1969-1971	6636	9051	7050	18251	12670	168788	8021
1974-1976	7580	11997	8921	21112	16211	178248	9627
1978-1980	7790	13146	9425	19093	19508	195526	10288
1981-1983	8787	13858	9649	20995	—	—	10239
<i>Area, 1000 ha</i>							
1969-1971	2183	3132	2319	8489	6211	114822	2656
1974-1976	2197	3157	2499	7907	6164	122088	2689
1978-1980	2131	2941	2520	7857	6396	122204	2598
1981-1983	2132	2860	2513	8036	—	117491	2565
<i>Yield, t/ha</i>							
1969-1971	3.04	2.89	3.04	2.15	2.04	1.47	3.02
1974-1976	3.45	3.80	3.57	2.67	2.63	1.46	3.58
1978-1980	3.66	4.47	3.74	2.43	3.05	1.60	3.96
1981-1983	4.12	4.85	3.84	2.61	—	—	3.99

During the period between 1975 and 1981 it fluctuated between 207 and 311 million tonnes, showing a trend of stagnation especially in the Soviet Union, having a dominating importance in this field. Therefore, the increase of grain production and decrease of grain imports are considered the most important objectives in agricultural development. *Our scenarios reflect the four major possible outcomes in this respect* with their possible impacts upon overall agricultural development.

The growth of meat production surpassed 30 percent between 1970 and 1980. Within production patterns of the meat sector the importance of livestock branches

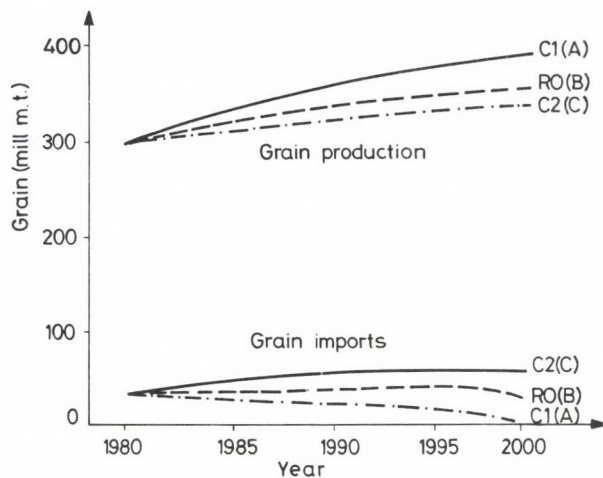


Fig. 5
Grain production and import of CMEA

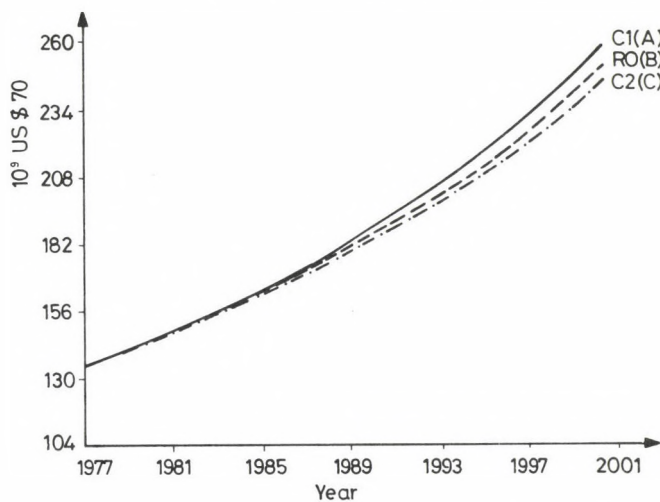


Fig. 6
GDP-agric-70

with a high fodder grain consumption has increased independently from the development of domestic feed production.

Tables 3 and 4 show recent developments in the cattle sector. Considerable increases in cattle inventories—by 25 to 35 percent—occurred in Bulgaria and Romania from 1970 and 1983, while in Hungary the cattle stock remained at the same

Table 3
Livestock in CMEA countries

(1000 pieces)								
Countries	1970	1975	1980	1983	1966— 1970	1976— 1980	1981— 1983	1983 as a percentage of 1970
Cattle								
Bulgaria	1353	1725	1843	1814	1405	1817	1829	134.1
Hungary	1912	1904	1918	1907	1973	1934	1925	99.7
GDR	5190	5532	5723	5768	5081	5582	5736	111.1
Poland	10220	12764	11337	11085	10232	12054	11191	108.4
Romania	5216	6126	6485	6752	6183	6433	6434	129.4
Soviet Union	99225	111034	115057	119558	96878	113456	117554	120.5
Czechoslovakia	4288	4555	5002	5190	4331	4843	5141	121.0
Of which: cows								
Bulgaria	628	703	723	711	627	729	719	113.2
Hungary	763	760	765	735	763	776	748	96.3
GDR	2163	2155	2138	2096	2176	2142	2114	96.9
Poland	5829	6138	5666	5687	6921	5820	6399	97.6
Romania	2276	2561	2670	2583	2111	2614	2579	113.5
Soviet Union	39762	41917	43389	43862	40842	42845	43762	110.3
Czechoslovakia	1881	1903	1902	1896	1910	1902	19000	100.8

Source: Statistical yearbook of CMEA, Moscow, 1985.

Table 4

The gross production of the principal products of animal husbandry

Countries	1970	1975	1980	1983	1983 as a percentage of 1970
<i>Total meat</i>					
Bulgaria	476	657	788	837	175.8
Hungary	1040	1422	1541	1789	172.0
GDR	1348	1837	1899	1873	138.9
Poland	2182	3062	3141	2500	114.6
Romania	888	1373	1769	—	201.1*
Soviet Union	12278	14968	14981	16450	134.0
Czechoslovakia	1098	1349	1654	1487	135.4
<i>Of which: beef</i>					
Bulgaria	108	112	153	165	152.8
Hungary	204	229	196	205	100.5
GDR	385	476	431	421	109.4
Poland	642	870	846	779	121.3
Romania	224	267	304	—	129.0*
Soviet Union	5393	6409	6673	7011	130.0
Czechoslovakia	362	431	436	435	120.2
<i>Milk</i>					
Bulgaria	1632	1803	2212	2530	155.0
Hungary	1726	1835	2557	2825	163.7
GDR	6867	7458	7243	7266	105.8
Poland	14988	16395	16499	16093	107.4
Romania	3912	4581	5480	5242	134.8
Soviet Union	83016	90804	90630	96450	116.2
Czechoslovakia	4978	5562	5966	6554	131.6

Source: Statistical yearbook of CMEA, Moscow, 1985.

*1980 as a percentage of 1970.

level as 12 years before. In the other countries a 10–20 percent increase has been achieved. Within the dynamic development of meat production *beef production showed a medium rate of growth*. In general, pork and poultry have been the driving forces of growth in meat production. Except for Hungary, Bulgaria and Romania *milk production rose at a modest rate*.

Results of our model in the area of livestock also represent probable alternatives for the future. *Scenario D* reflects a very interesting option for the region, especially for the Soviet Union, namely *importing meat instead of grain*. With the present

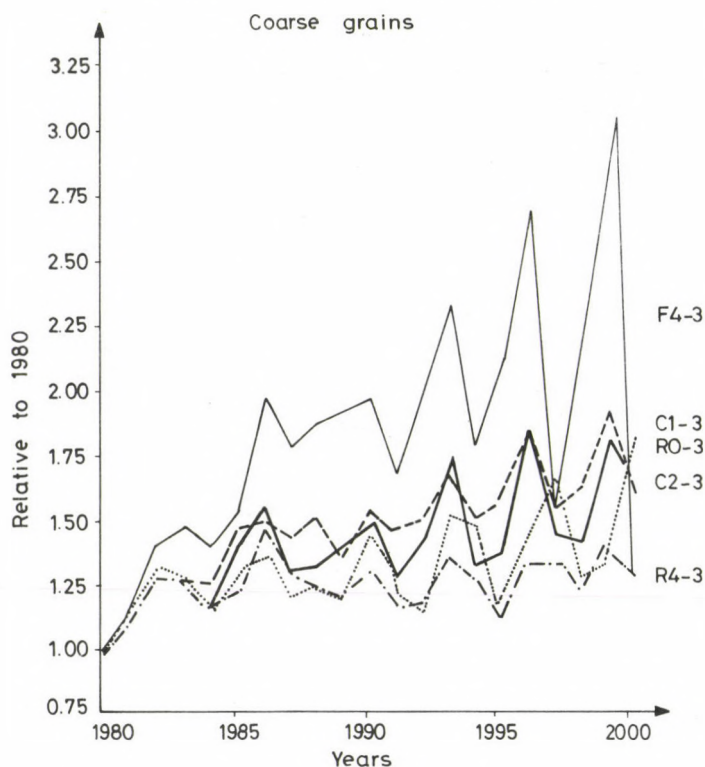


Fig. 7

World price compared to non-agricultural price

international prices of meat this option seems to be rather efficient concerning hard currency expenditures, and the low feeding efficiency in these countries should not be forgotten in this context, either. However, the lack of infrastructure limits the moves toward this direction.

Both in crop growing and livestock production *intensive varieties/species*, demanding care, found more use and likewise *intensive and large-scale methods of production* have been introduced. On the other hand, this went only partly together with the establishment of appropriate conditions of production. Over a greater part of the agricultural areas of CMEA countries the use of insecticides and fertilizers is poor and the lack of machinery of good quality in appropriate numbers leads to losses in harvesting. Deficiencies of agrarian infrastructure (storage and transport capacities) primarily affect the efficiency of Soviet agriculture, but they are characteristic more or less of all countries of the region. Feed concentrates, essential for efficient feed utilization, generally constitute a bottleneck.

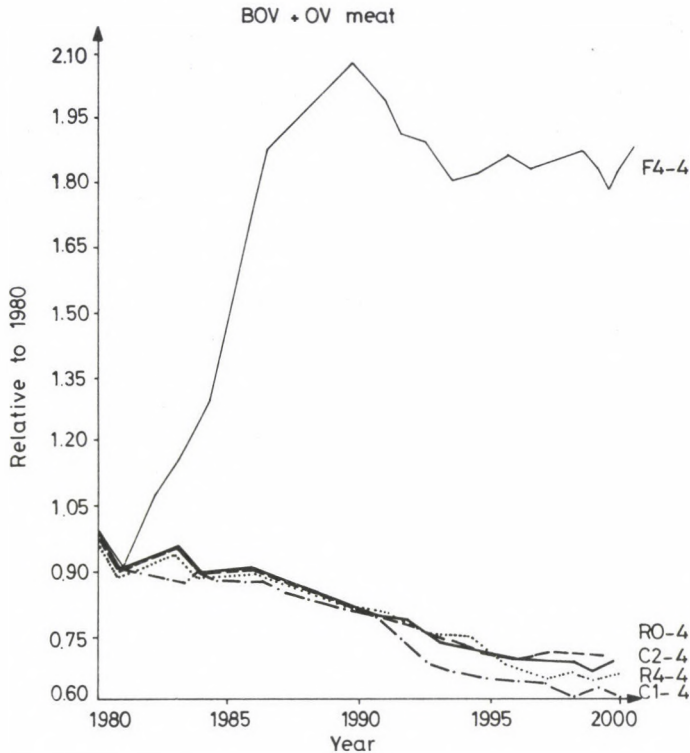


Fig. 8

Export in percentage of production

The community of socialist countries possesses a natural potential to produce food for a much greater population than the actual one. For the utilization of this potential it has enough labor but less technological equipment and, above all, less capital than necessary for a rapid development of the technical background. *Agrarian investments were diminishing* in the agriculture of Czechoslovakia, Hungary, and the GDR, all with relatively good technological standards, while they were severely diminishing in Poland with an agriculture of poor technical level. *Investments are somewhat growing* in the Soviet and Romanian agriculture, while they are stagnating in Bulgaria. Though the agriculture of the socialist countries is not expected to receive higher investments in the near future, the share of agriculture in total investment is still a very important element of decisions about agriculture.

Food consumption levels in the socialist countries are closely related to the level of domestic production per inhabitant and to its changes. The structure of alimentation has been improving in the course of the last decade everywhere. Animal protein intake

increased, and so did the consumption of vegetables and fruits; on the other hand, the consumption of cereal products decreased. Trends to increase food exports and to reduce imports are somewhat felt in the consumption of Bulgaria, Czechoslovakia, the GDR and Hungary, while it is strongly felt in the countries experiencing shortages in some instances. In our model demand trends are based on FAO projections.

In close connection with social and income policies the countries of the region are characterized by *low-level food prices including subsidies*. In order to restrict demand which in many cases surpasses supply and to restore market equilibrium socialist countries (except the GDR and the Soviet Union) also increased prices from 1980. Within economic policies in Poland and Hungary consumer price policies have played an important role and similar trends have been appearing in recent years in most other countries, too. Price increases are aiming basically at reducing subsidies and have hardly any direct influence on producer incomes. Food rationing introduced in some countries may be regarded as a provisional but inevitable measure, because consumer

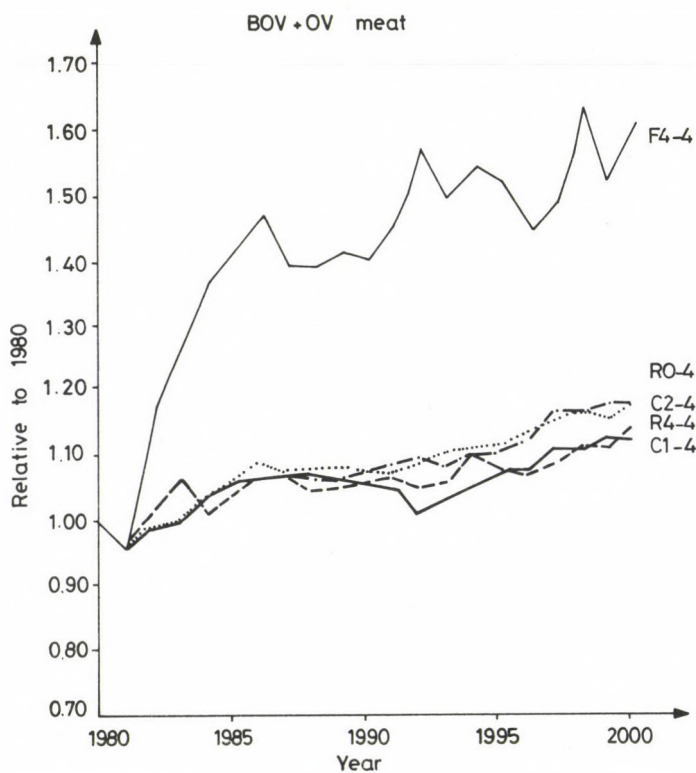


Fig. 9

World price compared to non-agricultural price

prices are able to exercise their balance-creating role only if a sufficient amount of commodities is available.

Between the seventies and the eighties the community of socialist countries increased *both its exports and imports of food* (per capita exports rose 2.5-fold while per capita imports 5 times). In view of the fact that the increase of imports was double of that of exports, the earlier balance has changed to a *clear importing position*. At present, only Bulgaria and Hungary have a net exporter position while in the case of Romania exports and imports are balanced. Net import surplus is the highest in the GDR and Czechoslovakia (85–95 percent) and it amounts to 80 to 100 US \$ per capita in the Soviet Union and Poland. (The balance of agricultural foreign trade can be seen on Table 5.) The bulk of food imports is made up of products bought from Western

Table 5

Foreign trade turnover in agricultural products in CMEA countries (1983)*

Country	Export	Import	Balance	Export	Import	Balance
	million US \$			US \$ per/capita		
Bulgaria	1241	712	+529	139	79	+60
Czechoslovakia	540	1775	-1235	35	115	-80
Poland	801	1334	-533	22	36	-14
Hungary	2032	790	+1242	190	74	+116
GDR	374	2066	-1692	22	124	-102
Romania	830	889	-59	37	39	-2
Soviet Union	2386	18560	-16174	9	68	-59

*Without fish and fish products.

Source: FAO trade yearbook. Vol. 37. Food and agriculture organization of the United Nations, Rome 1984. 42 and 44. p.

developed nations (above all grain and feed concentrates). Trade in food between CMEA countries and developing nations continues to be insignificant.

Each of the net importers and those with heavy food imports have set the *objective of establishing food autarky* not only in terms of the whole nation but in many cases also for regions within the country. Trends towards autarky were amplified by external economic conditions (such as the change of financial and credit conditions, strong protectionism in developed countries and food embargo measures motivated by political considerations), as well as by internal supply tensions and by a desire for economic independence. In our opinion, however, this reaction does not serve the interests of the community of socialist countries nor the national interests of the member countries. Giving up a part of international division of labor in food

production is a factor which reduces economic efficiency. Therefore, the question of a so-called "*free trade*" policy vs. *autarky* should also be investigated further both within the CMEA region and in respect of outside countries.

In the countries of the region the character of management systems of the agricultural sector, has not changed significantly in recent years, in spite of doubtless endeavours toward reforms. *Agrarian planning and management systems of CMEA countries continue to be characterized by a management relying on central and obligatory plan targets.* There is a growing interest for new methods and the expectable impacts of any modifications in the economic management systems. The role of economic instruments (such as prices, interest systems, markets etc.) is still secondary (except practices in Hungary) but increasing in importance. Concepts for reforming management systems are elaborated in increasing numbers. In the area of planning there is a general endeavour to reduce the number of obligatory plan targets for farming enterprises. In spite of all this, no radical changes are to be expected in management systems of the countries in coming years, though modernization of management practices is going to continue, relying more on the interests of the enterprises and individuals.

Current producer prices are characterized by centralized price determination, mostly independently from international market prices and by frequent differences from real cost and value relations as well as by an insufficient income component. During recent years important producer prices have been increased in most countries several times. They were aimed at compensating rises in the prices of production means (fuel and fertilizers) and also at providing incentives for producers. Nevertheless, the role of the price system and the domestic market in managing agricultural production has remained marginal. The impact of changes in the domestic price systems of the CMEA countries upon internal and external relations has been another possible field for our quantitative studies. Our first results indicate that the foreseeable modifications in price policy (CMEA/2 Model with price adjustment) will not bring substantial changes in the behaviour of the system.

By the use of BLS the *international aspects of the agricultural policy of the CMEA countries* have also been investigated. Our results indicate that *the future course of agricultural development in CMEA countries will largely depend on national situations.* Efforts to satisfy growing consumer demands for food and to maintain or increase levels of self-sufficiency will be the main driving forces of future development but, of course, changes in world market conditions might also have some influence. High world market prices might represent an additional reason for saving foreign exchange by restricting imports and utilizing the export potential in a surplus situation. Low international prices first have an influence on exporting countries, which might then restrain agricultural development and invest more in other areas. However, the CMEA

countries' reactions to world market changes are much more moderate and lag behind those of other developed countries.

According to the results of our calculations, the *domestic agricultural policy of the CMEA countries has only moderate impacts upon world agriculture, especially upon the developing countries.* The actual impacts of these countries on the international markets of agricultural products can be derived from the universal foreign trade policy of the countries concerned and not from their domestic agricultural policy. It is indisputable that the CMEA countries import—practically independently from the world market prices—the necessary quantity of the basic food products (first of all cereals) for providing that level of consumption which is targeted in the plans:

- as regards the agricultural products of tropical origin their demand is rigid related to the overall state of the balance of payments of the given country and generally depends on the world market prices only to a small extent,
- because of the necessity of increasing convertible currency incomes the export supply of the exporting countries is also rather rigid,
- on the whole, the share of the region in the world trade of major food and agricultural products is rather low.

This specific behaviour may influence the world market and its prices.

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ПЕРСПЕКТИВЫ ПРЕДЛОЖЕНИЯ И СПРОСА ПРОДОВОЛЬСТВИЯ В СТРАНАХ СЭВ

Ч. ЧАКИ

В рамках продовольственной и сельскохозяйственной программы в Международном институте прикладного и системного анализа (IIASA), находящемся в г. Лаксенберг (Австрия), в качестве части системы глобальной сельскохозяйственной модели была разработана сельскохозяйственная модель СЭВ. В статье излагаются новейшие результаты работы на базе этой модели.

Система глобальной сельскохозяйственной модели состоит из 21 страновой или региональной модели. Каждая описывает продовольственное и аграрное положение в данном регионе на уровне 10 секторов. Специфическая основа моделирования — описательная рекурсивная стимуляционная модель была разработана для представления продовольственной и аграрной системы стран с централизованно планируемой экономикой в глобальном рассмотрении. Фактически были разработаны два варианта аграрной модели СЭВ. Модел СЭВ/2 была использована в недавнем глобальном исследовании для представления региона. Были разработаны четыре основных сценария модели СЭВ/2: варианты с низким, средним и высоким импортом зерна, а также сценарий с импортом мяса. В модели можно использовать неизменные внутренние цены, а также цены с умеренной корректировкой на мировые цены. Были просчитаны на ЭВМ 6 вариантов ориентированных на СЭВ глобальной модели.

В статье представлены данные модели СЭВ/2, а также результаты глобальной модели. Наряду с выводами моделирования дается краткая оценка последних итогов развития сельского хозяйства в странах Восточной Европы. Прежде всего анализировался потенциал роста сельского хозяйства. Все сценарии показывали значительные резервы роста производства в этом регионе. Однако существует диспропорция между продукцией животноводства и растениеводства в настоящее время. Подробно рассматриваются прогнозы урожая сельскохозяйственных культур, особенно сбора зерна, и тенденций развития животноводства в будущем. В статье рассматривается на основе результатов модели роль капиталовложений и новой техники в развитии сельского хозяйства. Наконец, анализировались международные аспекты аграрной политики СЭВ, а также адаптация этого региона к изменениям мирового рынка.

TRADE WITH THE SOVIET UNION: THE FINNISH CASE

G. OBLATH-P. PETE

Finno-Soviet trade is a special part of East-West economic relations. The magnitude of trade between the two countries is exceptionally large and its institutional system is similar to that of trade among socialist countries. The volume and pattern of Finno-Soviet trade is based on intergovernmental agreements containing quotas for exports and imports and payments between the two countries are accounted through a bilateral clearing system. The authors, after presenting the main characteristics of this trade, analyze its institutional system and try to answer the question how Finland has managed to adjust the special institutions of Finno-Soviet trade to the mechanisms of her domestic market economy.

Finno-Soviet economic relations form a special part of East-West trade and they deserve particular attention for two important reasons.

First, the magnitude of this trade is impressive indeed: in the early 80's the share of the Soviet Union in Finland's total trade was above one fourth, which is the highest share among all countries participating in East-West trade. Thus, one of the issues to be investigated is how Finland's small market economy is affected by the very intensive economic relations with her huge neighbour, who, in turn, has a centrally planned economy.

Second, the international framework, intergovernmental regulation, trade accounting and institutional system of Finno-Soviet economic relations display a remarkable resemblance to the framework of trade between socialist countries. This special kind of institutional system—built on long, medium and short term intergovernmental agreements containing lists (quotas) of goods to be exchanged in a bilateral clearing system—implies a rather active role of various government agencies. In this study, beyond presenting and describing the international framework and institutional system of this trade, we shall try to discuss how Finland has managed to adjust the special framework of this bilateral trade to her domestic market economy and to her overall foreign trade.

Background and preliminaries

The beginning of post World War II trade between Finland and the Soviet Union is inseparable from the \$ 300 m reparations which Finland was obliged to make between 1946 and 1952. To illustrate the size of this burden: in 1946–1948 reparations amounted to 4–5 percent of the net domestic product. [11]

The reparations, however, indirectly contributed to the diversification of Finnish industry, since they gave a strong impetus to the development of the metalworking industry. During the six years of reparations, the metalworking industry increased its output threefold, and the shipbuilding industry sixfold. [3] The relations between the biggest Finnish shipyards and their Soviet customers date back to the times of reparations.

The engineering capacities built up on the large volumes of reparations made it important for the Finns to keep the Soviet market even after switching over to normal trade, since the augmented output could not be placed (at least not immediately) on the Western competitive markets. It was therefore beneficial for Finland to sign a bilateral trade agreement with the Soviet Union for 5 years in 1949 for the period between 1951–55.

The interstate institutional framework and payments system established in the late forties which has hardly changed ever since is based on bilateral clearing accounts and quotas specified by commodity groups.

The currency of accounting is the clearing rouble; bilateral trade agreements between the partners determine the planned structure of trade and the magnitude of the overdraft valid for that period.

Good political relationship and mutual confidence play a fundamental role in straightening out economic problems between the two countries. Since World War II, Finland has avoided all foreign political moves which could have aroused the suspicion of its Eastern neighbour.

Since the Soviet Union regarded the European economic integrations with suspicion from the very beginning, Finland kept out of all the European integration processes up to 1957.

By the late 1950s, however, the dangers stemming from economic isolation had grown larger. Outside the integrations the country came into an increasingly disadvantageous position in comparison with its competitors on the Western export markets. Therefore the Finnish economic diplomacy changed its principle of “staying out of everything”. It tried, instead, to obtain the previous approval of the Soviet Union for approaching any Western integration—which was usually successful—and, parallel to her Western contracts, she signed agreements with the Soviet Union or with other socialist countries which demonstrated that an equal distance was being kept.

This was the way it acted when joining the European Free Trade Association and when signing an agreement with the EEC.

Thus Finland's special political and economic relationship with the Soviet Union did not prevent it from becoming a part of the Western European integration in the 1960s and 1970s.

The gradual and prudent trade policy of opening (liberalization) towards the Western markets had a considerable influence on Finland's domestic economic processes, as well as on the trend and nature of its development. From the turn of the 1950s and 1960s the Finnish manufacturing industry had to hold out both on the domestic market, where liberalised imports put up competition, and on the export markets, which were enlarged through the mutual elimination of tariffs. This opening, on the one hand, compelled the Finnish industry to structural transformation and modernisation, and, on the other hand, it brought enlarged sales possibilities and stimulation determining the trends of development.

Growth and commodity pattern of bilateral trade

Finno-Soviet trade has been growing very dynamically in the last 30 years. Between 1950 and 1970 the rate of growth had been about a yearly 8 percent at current prices (which corresponds to the average growth of world trade), and over the whole of the 20 years it had grown to more than fourfold. During the 1970s, mainly because of changes in world market prices, the growth of trade had suddenly accelerated: to more than 24 percent yearly, and from 1971 to 1981 it had grown to tenfold. By 1983 the value of Finnish exports was more than \$ 3.2 thousand million, and that of imports more than \$ 3.3 thousand million.

The Soviet share in total foreign trade developed along a special curve. In the early 1950s, when reparations were gradually replaced by normal trade, a good one quarter of the total turnover was transacted with the Soviet Union. Until the early 1970s this share had been more or less continuously sinking to 10–12 percent. This is not so much the consequence of a slower development of the Soviet turnover than before, but more of the larger dynamics of the Western trade, and of Finland's gradual joining the West European integration. From 1974 on again the Eastern trade was growing faster: by 1981 it had again reached a one quarter share. This is no turning back: the upgoing side of the wave is attributable to structural and price factors. About two thirds of Finland's fuel imports—mainly crude oil—come from the Soviet Union and the two oil price explosions multiplied the import bill and, since the two countries wish to keep their trade in balance, this also had its impact on the export side.

Behind the steady growth rate in the long run, there are rather wide yearly

Table 1
Soviet and OECD share in the Finnish foreign trade
(percent)

Year	Share in exports		Share in imports	
	Soviet Union	OECD	Soviet Union	OECD
1964	12.1	75.2	15.7	71.2
1965	15.9	72.0	14.0	74.6
1966	14.2	74.1	15.2	73.2
1967	17.5	71.5	15.5	71.9
1968	15.4	74.3	16.5	71.7
1969	13.9	75.5	12.7	74.7
1970	12.2	76.2	12.6	75.1
1971	10.0	78.0	14.0	76.1
1972	12.4	77.9	12.0	76.5
1973	11.8	77.8	12.2	76.3
1974	13.8	73.8	18.3	68.4
1975	20.5	67.8	16.7	69.2
1976	20.2	68.1	18.5	67.5
1977	19.4	68.8	19.7	64.8
1978	17.8	69.02	18.7	66.4
1979	13.8	74.2	19.5	64.2
1980	17.6	69.0	21.0	62.1
1981	24.8	62.9	23.5	62.4
1982	26.6	61.0	24.6	63.6
1983	26.2	62.1	25.7	64.0

Source: OECD data bank.

fluctuations. From one year to the next growth rate differences of 20–40 percentage points frequently occur.

This is explained by the fact that both countries try to balance their trade even in the short run, though this effort has often been unsuccessful. Thus any change in the trade balance induces correcting movements both in exports and imports. These fluctuations are illustrated by *Figure 1*, which is a graphic representation of export and import growth rates between 1964 and 1981, as well as of the relative state of the trade balance which is described by the extent to which Finnish imports are covered by exports.

The following regularity can be read from the Figure. If in some year the balance shows a considerable deficit on the Finnish side, exports will automatically speed up in the following period, and imports slow down, while if the Finnish deficit is considerably reduced or the balance shows a surplus on the Finnish side, import

dynamics will speed up and exports slow down. Slowing down means in most cases actual reduction. Up to 1971 this had been so in every year: export and import dynamics developed exactly opposite to each other, as it followed from the balance of the preceding year. From 1971 imbalances grew too large to be corrected within a year, so that in the last decade the restoration of balance lasted through several years, while the tendency remained the same.

The pattern of exports and imports is very different in Finno-Soviet trade. While 80–90 percent of exports consist of manufactures and they show a rising tendency, imports are characterised by a low and decreasing share of these products. Their share was hardly over 10 percent in the years from 1976 to 1980. *Table 2* shows the average share of commodity groups according to the one digit breakdown of the SITC

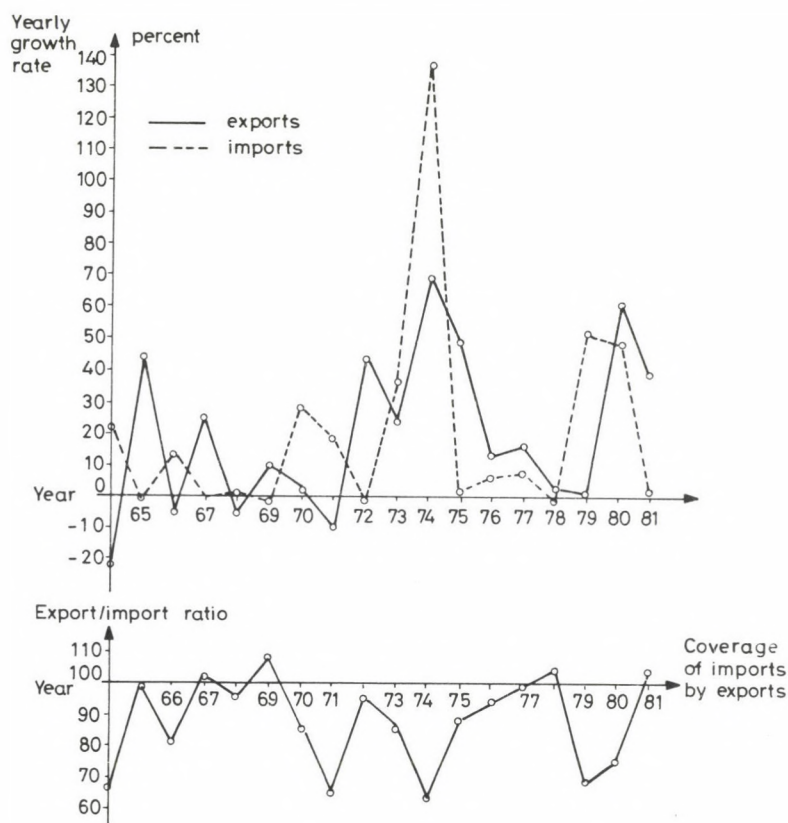


Fig. 1
The fluctuation of Finnish export to and import
from the Soviet Union in relation to balance of trade

Table 2
Commodity pattern of Finnish exports to and imports from the Soviet Union and the OECD based on five-year averages, according to the one-digit breakdown of the SITC, in percentage

		Year	Groups of products												Value in million \$ in five years
			0	1	2	3	4	5	6	7	8	0+1+4	2+3	5+6+7+8	
SU	exports	66-70	4.9	0.0	7.7	0.0	0.0	1.5	32.0	4.5	8.5	4.9	7.7	78.8	1289.5
		71-75	7.4	0.0	8.3	0.2	0.0	2.2	38.9	29.3	13.8	7.4	8.5	84.1	2955.1
		76-80	4.5	0.1	4.5	0.4	0.0	2.5	31.0	45.3	11.5	4.6	4.9	90.5	8335.6
	imports	66-70	5.1	0.1	16.8	54.7	0.0	1.9	10.6	6.3	0.3	5.2	71.5	19.1	1376.5
		71-75	1.9	0.0	14.1	66.3	0.1	1.7	7.3	6.4	0.3	2.0	80.4	15.7	3820.8
		76-80	0.3	0.0	8.0	79.9	0.0	1.5	3.1	5.9	0.3	0.3	87.9	10.8	9849.7
OECD	exports	66-70	3.4	0.2	33.6	0.6	0.3	2.2	45.7	8.8	5.1	3.9	34.2	61.8	6678.9
		71-75	3.2	0.3	22.2	0.5	0.1	2.9	44.9	15.6	10.3	3.6	22.7	73.7	14877.9
		76-80	2.7	0.3	20.3	4.1	0.1	4.2	41.4	15.9	11.2	3.1	24.4	72.7	33555.3
	imports	66-70	4.4	1.0	5.6	1.3	0.2	13.0	25.8	40.3	8.0	5.6	6.9	87.2	7112.3
		71-75	4.1	0.8	4.9	2.4	0.2	11.9	24.1	43.3	8.2	5.1	7.3	87.5	17790.2
		76-80	4.3	0.6	5.4	2.8	0.2	13.0	22.3	41.7	9.5	5.1	8.2	86.6	32161.4

Source: the authors' own calculations based on OECD data.

Nomenclature concerning Finnish exports to and imports from the Soviet and OECD markets.

In imports from the Soviet Union the share of mineral fuels was determinant even before the oil price rise, amounting to more than half of total imports. The crude oil and refinery products are delivered by the Soviet Union on the basis of long-term agreements. The quantity to be supplied is fixed in volume terms. The delivery of a 7–8 million tonnes (since 1980 8–9 million tonnes) pushed the share of primary energies up to 80 percent because of the multiplication of prices. (The are also natural gas and electric energy imports, but they are of little importance in comparison with the imports of crude oil and refinery products.) In the 1970s Finland bought about two-thirds of its total energy imports—within this one-third of its coal imports, 60–65 percent of crude oil, and 80–90 percent of refinery products—from the Soviet Union. [2] The price rises only helped to enhance the most characteristic feature of the bilateral trade: Finland pays for Soviet oil and energy deliveries with machinery and paper.

In exports group 7 is the most important one (30–50 percent); more than half of it usually consists of ships. About three-quarters of four fifths of group 6 consist of wood and paper products, which have traditions also in trade with the West.

Comparing the pattern of Finnish exports to the Soviet Union and to the OECD, it is found that in the latter it is also the manufactures that have the largest share and, though their weight fell a little between 1976 and 1980, this share is in fact increasing.

At the same time, in the country's exports to the West the raw material share is expressly higher, which is due to the greater role of the commodity group 2 (Raw and basic materials). The bulk of this consists of hardly processed wood and pulp. The other important difference is the distribution within manufactures. In Western exports group 6 has the leading role (40–50 percent in total exports, 55–70 percent within manufactures), while the share of engineering products is much lower, that of consumer goods a little lower.

Table 3
*Average share of the Soviet Union in total Finnish
exports of the most important groups of products, in
SITC one-figure breakdown, in percentages*

Year	Groups of products					Total exports
	0	5	6	7	8	
1966–70	20.1	10.1	10.5	45.3	26.9	14.6
1971–75	26.0	9.2	12.2	22.1	19.4	13.9
1976–80	27.3	9.2	14.0	35.9	19.9	17.8

Source: OECD data bank.

An examination of the share of the Soviet market, by groups of products, in Finnish exports gives us an idea of how much Finland's economic and export output depends on Soviet orders. In Table 3 only those groups of products are shown in which the Soviet share in exports is considerable and, because of the fluctuations explained above, we shall again examine five-year average figures.

The Soviet share is largest in the engineering exports. The role of ship exports is already known; in the average of the years between 1978–1980 Finnish shipbuilders exported 75.6 percent of their output, 39.5 percent of it (i.e. more than 52 percent of total exports) going to the Soviet Union. This industry is, therefore, largely dependent on Soviet orders. In the engineering industry less shipbuilding the Western share in exports is much higher; in its total output the Soviet share was less than 10 percent, in its total exports only 20–25 percent. [2]

In recent years, a fifth of the light industrial exports has been absorbed by the Soviet market. Finland's textile, clothing and shoe industries being highly export oriented, this takes up more than 10 percent of total production in the clothing industry and more than 20 percent in the shoe industry.

The balance of bilateral trade and the imbalance of the early 80s

The annual balance of bilateral trade showed Finnish deficits in most years. The extent of the deficit was widely fluctuating, but in the longer run Finnish exports covered around 80–85 percent of imports from the Soviet Union on average. The deficit in the trade balance was partly compensated by exports of "invisibles" registered on the current account.

The importance of invisible exports grew in the mid-1970s, as a result of Finnish firms' investment and building activities on Soviet territory: in East Karelia lying near the border. Among the largest and best known projects implemented with Finnish participation are the pulp and paper complex at Svetogorsk and the iron ore project at Kostomuksha (both are being enlarged). In the development of Kostomuksha into an industrial town, the Finnish firms participate by building infrastructure, and complete housing estates. These investments constitute a new and fast developing area of cooperation. The rate of this development has been the following: while exports connected with these projects only amounted to 3.5–4 percent of total exports in 1976 (about 190 m finnmaks), they rose to more than 13 percent by 1982 (about 2.2 thousand m finnmaks) and the related service exports have been growing parallel.

The large trade imbalance of 1974 and that at the end of the decade are consequences of the two big waves of oil price rises. Finland's oil bill from the Soviet

Union went up threefold in 1974, and another two-and-half-fold in 1978–1980, while the delivered volumes hardly changed.* Imports were covered by exports to 60.9 percent in 1974; to 69.2 and 75.9 percent in 1979 and 1980 respectively, thus the second big wave, starting already from a high level led to a much bigger, even twofold, trade deficit.

The increased Soviet oil bill could be compensated in both cases in a relatively short time, 2–3 years, by Finnish deliveries.

In the early 1980s the balance of the bilateral trade shifted, quite unusually, towards a Finnish surplus. And the shift of the clearing balance is quite unprecedented. On the 31st December the clearing account was closed with a 900 m finmark deficit because of the import price rises (157 m roubles, 240 m dollars), but the quickly rising Finnish counterdeliveries did not only counterbalance this by 1981 but at the end of the year already a surplus of over 1.8 thousand million finmarks was registered. This is already more than two-and-half-fold of the overdraft then permitted, and about 12.5 percent of that year's total exports. Owing to the big oil price rise and to the ensuing counterdeliveries, total trade had grown to two-fold at current prices in two years (1979–1981).

In the spring of 1982 the world market price of the biggest Finnish import item—crude oil—fell, and so did also the export price of Soviet oil. On the other side, Finnish exports, mainly investments, continued to grow. In October–November 1982 the Finnish clearing balance was up by nearly 5 thousand m finmarks (about 650 m clearing roubles), which made up almost a third of the previous year's total exports.

At the end of 1982 only a 1.3 thousand m finmark balance surplus was registered in statistics, however, the smaller surplus is mainly the consequence of the change in the accounting system. In the autumn of 1982 a part of the surplus: about 300 m clearing roubles (2.2 thousand million finmarks) were placed on a separate account yielding interest in roubles. This only serves to preserve the real value of the asset, since it cannot be converted.

Some special re-export transactions also had a part in reducing the surplus. It was first in the autumn of 1982 that Finland bought Middle Eastern oil from the Soviet Union. (Middle Eastern countries paid their debt to the Soviet Union in this way.) This transaction was followed by several others of the same type, which had an important role not only in decreasing the Soviet deficit but also in the fact that by the second half of 1984 the USSR managed to repay its previously accumulated debts.

* Finland buys oil at "world market" prices. The oil is refined by Neste, a monopoly state enterprise. Soviet oil costs about 7–9 percent less than Saudi oil at c.i.f. terms and by and large corresponds to the price of the North Sea oil. Sources are not unanimous on prices, it is, however, improbable that Finland should enjoy any considerable advantages in regard of prices of Soviet oil imports—irrespective of transporting costs. Advantages are of another nature, to which we shall revert later.

During the accumulation of the Soviet deficit some remarkable changes took place in the commodity structure of Finnish exports which date back to the early 1970s and became particularly marked in 1979–80.

The number of new exporters on the Soviet market suddenly grew by firms that had not sold there previously, and mainly in fields which had been less important before (food industry, light industry, chemical industry). Among the reasons for this must be that, when preparing for the Moscow Olympics of 1980, the Soviet party placed orders for public supply during the time of the olympic games in a large part with Finnish firms, which gave an opportunity to Finnish light, food, and chemical industrial firms (plastic consumer articles) to establish contacts, which the Soviet party expressly encouraged.

It strengthened the position of the new exporters and provided exporting possibilities for further firms to such an extent that the second big wave of oil price rises led to a much bigger Finnish deficit on the clearing account, so big that it could not have been settled in a short time by the traditional exporting sectors. It added to the Soviet orientation when in 1981, because of the recession on Western markets, Finland's Western exports fell by 10 percent in value and 4 percent in volume, and the Finnish food industry struggling with overproduction and its light industry having become export-oriented in a few years got into a very difficult situation.

Because of the factors set forth above, the pattern of Finnish exports to the Soviet Union had changed a lot between 1979 and 1980. Groups of products previously unimportant gained ground, and the Soviet share grew unusually high in exports.

As a result of efforts to reduce the Soviet deficit, the share of the above mentioned commodity groups has decreased in Finnish exports. Although they shall probably not reach their export ratio of the early 1980s, their share might stabilize at a higher level than in the previous decades. Thus, most probably the number of Finnish exporters to the Soviet Union will remain larger than it used to be before the mid-1970s.

Regulation of bilateral trade: institutions

The interstate framework of the Finno-Soviet economic and trade relations is a special mixture of elements of a centrally planned economy and a market economy. The interstate organisation of cooperation is very similar to the forms known from the mutual relations of the CMEA countries: a highly important role is played by agreements between government agencies or between inter-governmental administrative organs, which are to regulate economic relations in detail, in the long, medium and short run.

Trade is pursued on bilateral grounds: it relies on five-year trade agreements and the complementary payment agreements. The first such agreement covered the years 1951–1955; the basic principles and rules of procedures have not much changed. [6]

The five-year agreement specifies the volume as well as the structure of trade: by detailed quotas in terms of quantity and value. The agreement is prepared by inter-governmental committees and signed by the governments; on the Finnish side it is signed formally by the President of the Republic. The Inter-Governmental Standing Committee of Finno-Soviet Economic Cooperation has been working since 1967. Its subcommittees are formed upon the basis of the sectoral division of the cooperation fields.

Members of the committees and subcommittees on the Finnish side are representatives of government organs (Ministry of Foreign Affairs, Ministry of Trade and Industry, Bank of Finland), industrial and agricultural organisations, large enterprises, trade unions and the representatives and members of some political parties.

The yearly scheduling of the five-year plans is based upon annual trade protocols. They are negotiated and approved on government level: this agreement specifies the quotas valid for the following year. For big equipments, ships, engines, tractors, raw materials, and primary energies volume quotas, while for other products value quotas are usually stated.

An important objective of the regulation is to keep bilateral trade in equilibrium. This is to be achieved in the average of five years, however, the current position of the balance affects what is laid down in the annual protocols.

According to the supplementary payment agreements bilateral trade is conducted on the basis of ruling world market prices.*

As for finances, the parties settle accounts in bilateral clearing: no money moves between the two countries. The countervalue of deliveries is booked on a central account: at the Foreign Trading Bank in the Soviet Union, and at the Bank of Finland. These so-called clearing accounts have been kept in roubles since 1951. The clearing rouble is not only the currency of payment, but also that of the price agreement between enterprises.

Assets in clearing rouble can only be collected from the partner and are not to be converted into other currencies or relations.

The two countries' trade is considered as balanced when there are no receivables or liabilities on the clearing accounts. To keep the accounts in balance is one of the main tasks of the annual trade protocols.

* Whether this declared principle is asserted or not is difficult to say, since the Finnish firms make their agreements on the actual price conditions with the Soviet foreign trading enterprises quite independently. The price principle will be discussed later on.

Of course, a balanced clearing account is not the equivalent of the annual balance of trade. And not only because also "invisible" items are recorded on it, but also because certain flows of capital are recorded on the accounts. The terms of payment usually applied with the deliveries of the two parties are, namely, not identical: there is a tendency of passing Finnish receivables faster on the accounts than liabilities [5]. While with certain items of Finnish imports credit can be used, with exports immediate (cash) payments are made. In the case of expensive engineering equipment (mainly ships), or project exports the buyer even used to pay in advance. Prepayments—unusual in the international trade of expensive (and in the manufacturing process highly capital-intensive) equipment—was realised, for example, in the case of the Finnish ship exports in a way that the Soviet customer paid a considerable part (about 25 percent) of the sales price already at the signing of the contract, that is, years before delivery, and further remittances were made in certain phases of the shipbuilding process, so that by the time the ship was finished, it had been also paid for. Recently the Soviet Union changed this practice in order to help reduce her deficit. The new contracts do not contain the stipulation concerning pre-payments. Since ships and machines have a large share in Finnish exports to the USSR, the role of buyers' credits used to be rather important.

The reason why the parties wish to keep the clearing account in balance is, beside the inconvertibility of assets, that no interest is paid on the amount of the balance. Thus, a long outstanding balance is equal to an interest-free loan—or had been, up to the end of 1982. Naturally, it would be of no use to stipulate a strict zero balance, and it would not even be possible. Therefore, payment agreements prescribe an overdraft, within which the balance of the clearing account may fluctuate. This makes accounting technically flexible: it allows that payment be made, up to a certain limit, even if there is no net receivable on the account.

If the overdraft is surpassed, discussions are held and complementary quotas assigned in order to restore the balance. If this remains without success the payment agreements specify serious procedures, not applied, however, in practice. If the imbalance of an undesirable size cannot be eliminated through subsequent deliveries within six months from its registration, the party having the receivable is entitled to demand the part above the overdraft in convertible currency or in gold. In the final case, it could even stop exports to the indebted country.

The overdraft that had been allowed up to the mid-1970s was rather narrow: hardly 3 percent of the annual turnover. But after that time, because of the growing value of turnover, mainly owing to changed prices, and of the unusually grave imbalances the overdraft was raised considerably every two or three years.

The overdraft was already regularly surpassed during the 1960s, and the fluctuations of the 1970s even went beyond the increased limit. But so far neither party

has resorted to demanding convertible currency or stopping exports as specified in the payment agreements. They held discussions about the restoration of balance by means of additional deliveries as specified in the annual protocol (or the raising of quotas during the year in case of imbalances caused by the oil crisis).

Financial accounts are made by the Bank of Finland; the bilateral clearing account is held there on the Finnish side. In attending to this task, the Bank acts as a central bank, therefore it is not in direct contact with the firms interested in the Soviet trade, but only with those big banks which are authorised to settle clearing rouble transactions (SYP, KOP, Postipankki, etc.). The Finnish importers and exporters use the services of these banks to pay the finmark countervalue of imports, and to convert the clearing rouble assets—earned through exports—into home currency. For the firms, therefore, the effectuation of payments is practically the same as in case of convertible currencies.

The long-term and annual trade agreements provide the Finnish firms with fundamental information on the Soviet markets and buying intentions, but the actual trade materialises in inter-firm transactions; the above-mentioned government agreements are not obligatory for the Finnish firms. The Finnish firms conclude their sales contracts containing the specific terms of price, delivery and payment with the Soviet foreign trading enterprises in awareness of the above, but independently, according to their own viewpoints—no government organ interferes [2].

The laying down of five-year and annual quotas is the result of a planning process, in which each one of the above-mentioned organs has a part, some directly, and some through their work in the interstate commissions. The starting-point for planning the quotas of the current period is provided by the long-term agreements already signed between the Finnish producers and Soviet foreign trading enterprises for deliveries of Finnish products of heavy industry, ships in the first place, as well as by the effects of these long-term agreements on the period in question. Another important factor that influences the turnover of the year in question is the clearing balance of the previous year. Based on the foregoing, the imports of the year under discussion are estimated. The estimation relies on information gathered from firms regarding their envisaged imports. Since the overwhelming majority of imports consists of fuel and raw materials, and other purchasers are dwarfed by the state-owned oil company Neste, this estimation can be made with a good degree of accuracy at least as for the volumes.

The part of the long-term agreements that covers the given period, the clearing balance of the preceding year, and the estimated import volume indicate—because of the requirement of equilibrium—the volume of total exports that can be planned for the given year. The proposition for the export structure is formulated in the course of negotiations of industrial associations among themselves and with government

organs, as a result of bargaining and compromises, taking into consideration Soviet requirements agreed by the different intergovernmental commissions and through inter-enterprise discussions.

This process of breaking down and again putting together quotas by government organs and independent private enterprises infers the existence of certain information carrying and interest-reconciling institutions. These functions are fulfilled in Finland by sectoral and subsectoral organisations, industrial associations. Their role is by far not limited to the economic relations with socialist countries; on the contrary, it is exactly the general function they fulfil in the Finnish economy that makes them apt to attend to the task of establishing the quotas.

In Finland, firms of identical or similar activities gather in federations, subsectoral and sectoral organisations in both industry and agriculture. These associations often comprise the entire producing sector, in a way that the subsectoral organisations are members of associations of a higher level and, finally, the latter all belong to a central association both in industry and in agriculture.

It is mainly these organisations that collect the information necessary for establishing the quotas in Soviet trade. They try to agree among themselves, in which way total exports are to be divided into quotas, and this agreement is the basis of the Finnish proposal at negotiations with the Soviet Union. In a few cases (mainly in the forest industries) they even distribute quotas among the firms. Government organs are in direct contact with the industrial associations, while representatives of the latter are members of the joint commission, so they also participate in the government-level negotiations with the Soviet party.

As mentioned above, the Finnish government does not deal with the actual sales contracts: these are concluded between the Soviet and the Finnish firms. The government organs try to keep the turnover between the planned limits in a way that they subject actual deliveries to a state licence. Licensing is the task of the Export-Import Licensing Office. The firms submit their applications directly to the Office. Its decision depends on the extent the quotas are fulfilled, and on the general standing of the clearing balance. In the board of managers of the Office all the state organs having a part in planning the turnover are represented and this body makes decisions in cases of surpassing the quotas, which is rather frequent.

Another important function of the Licensing Office is to control the convertible exchange content of exports. To understand this, we have to know that, even though the Finno-Soviet payment agreements contain no stipulation as for the origin of the goods delivered, there is an internal regulation concerning Finnish exports: "the goods to be exported must be essentially of Finnish origin." [2] Although this does not imply the setting of a rigid limit, and the authority usually acts with a practical consideration of all the given circumstances, it is known from practice that the Licensing Office will

grant an export licence only if the (direct) convertible import content of the product to be delivered to the Soviet Union (or to another clearing market) does not surpass 20 percent. Above this rate, the Licensing Office will not grant the licence, and the firms, knowing this to be a generally applied rule, do not try to go beyond this limit.

The rate of exchange of the clearing rouble and the logic of the Finnish regulation of Finno-Soviet trade

In Finland the cross-rate between the clearing rouble and the dollar corresponds to the official Soviet rouble-dollar rate. The Finnish authorities explain this specific method of determining the rouble/mark exchange rate by referring to the pricing principle of mutual trade. According to this, the prices of the Soviet-Finnish trade are to be calculated on the basis of the current world market (dollar) prices, in roubles. It has to be emphasized that this is only the principle of pricing in bilateral trade, the calculation of actual foreign trade prices is the business of Finnish and Soviet firms. The pricing principle is not obligatory for the firms and that at most it is a basis of bargaining for them is specifically emphasized in the literature [6], [2].

From the aspect of rouble/mark exchange rate, that consequence of the pricing principle is to be examined that the current world market (dollar) prices are converted into (clearing) roubles at the Soviet official dollar-rouble rate. And, in order that the world market dollar price, expressed in rouble, of the same product should be the same in Finland and in the Soviet Union (that is, either the Finnish, or the Soviet firm converts, at their respective rates, the given dollar price, the rouble price should also be the same), the exchange rate of the rouble and dollar in Finland should be identical with the official Soviet rouble-dollar rate. The same condition has to be fulfilled in order that the import prices in Finland—expressed in home currency—of products imported from the West as well as from the East (such as oil) should be identical.

The Bank of Finland acts according to this logic: "The quotation of the exchange rate for the clearing rouble in Finland is based on the exchange rate between US dollar and the rouble announced by the state Bank of the USSR and the quotation of the dollar made by the Bank of Finland." [5]

That was the official explanation.

Now, looking merely at the technique of the Finnish quotation of the clearing rouble, we are bound to come to the interesting conclusion that the Finnish monetary authorities treat the clearing rouble exactly *as if it were* a convertible currency. That is, the Bank of Finland *simulates*—by regularly correcting the clearing rouble rate, following the rouble-dollar rate of Moscow—those mechanisms of the foreign exchange market, which automatically assure the consistence of the rates of exchange

(cross-rates) among different countries. However, no spontaneous mechanism exists to assure that the rate of the finmark to the rouble and to the dollar should correspond to the Soviet rouble/dollar rate. Owing to the nature of the clearing rouble, such mechanism could not even exist, since the clearing rouble is strictly inconvertible: it only serves for balancing the assets and liabilities as they arise in the bilateral trade, and cannot be exchanged into any convertible currency.

Let us now turn to the economic effects, consequences of the above presented method for determining the exchange rate of the rouble.

The Finnish firms exporting to the Soviet Union can convert their earnings in clearing rouble into home currency without any restrictions. The Bank of Finland does not apply any discount, neither open nor concealed, when converting the clearing rouble into finmark; the *de jure* (officially quoted) exchange rate is identical with the *de facto* exchange rate (actually applied in dealing with firms).

The home currency i.e. the finmark is, however, convertible: it can be freely exchanged (apart from a few restrictions) into dollar or any other convertible currency. And this amounts to saying that the clearing rouble assets earned in trade with the Soviet Union can be exchanged, by mediation of the finmark, into convertible currencies; they can be spent on Western imports, or money and capital exports. We wish to emphasise that what is worth attention is not the mere convertibility in Finland of the clearing rouble assets i.e. the possibility of its conversion into Western currencies. This possibility is quite naturally a part of the monetary system of every country which maintains clearing as well as convertible accounts in its foreign economic relations. The remarkable feature in the Finnish regulation is that the clearing rouble can be exchanged in Finland into dollar at the nominal rouble/dollar rate announced in the Soviet Union. This means that, when changing the clearing rouble into home currency at the Soviet dollar rate and guaranteeing the convertibility of the finmark into Western currencies, the Bank of Finland guarantees in fact that *the clearing rouble can be converted into dollar or any other convertible currency at the rate declared by the Soviet Union*. Thus the Finnish monetary regulation acts not only technically but also essentially (regarding the *actual* converting possibility), *as if* the clearing rouble were not a clearing currency, but a currency actually exchangeable for convertible currencies at the official rate quoted in Moscow. This way of acting of the Finnish monetary authority makes the clearing rouble practically convertible at home, that is, for the Finnish firms. And this brings the Finnish firms not to perceive and thus not to make, either, any *financial* difference between the clearing and the convertible currencies.

The foregoing makes obvious an important contradiction in the Finnish financial regulation of the clearing accounts. It is, namely this regulation that conceals the fundamental fact that the clearing rouble is indeed inconvertible; that the net

assets earned in trade with the Soviet Union cannot in fact be converted into dollar or other convertible currencies i.e. spent on Western imports. This fundamental fact is perceived *only on the macrolevel* and its consequences also come about on the macrolevel. The freezing of the assets earned in the early 1980s, i.e. the accumulation of inconvertible reserves by the Bank of Finland presented worries only for the authorities. Of this, the firms did not feel anything *financially*; they could continue to convert the financial means immobilisable on the macrolevel into domestic i.e. convertible currency, without having experienced the decreasing value of the clearing currency which followed from both the size and the immobility of the active balance, obvious to economic policy makers.

In Finland trade accounted in clearing roubles is not regulated by indirect—that is to mean *financial*—instruments of economic policy. This trade, however, has to be regulated in some way, and it is in fact being regulated. But since financial instruments are not applied, *non-financial*—that is, direct or administrative—instruments have to be used. To understand the nature of the latter instruments and the logic of the regulation of Finno-Soviet trade in Finland, an important question has to be briefly dealt with. Namely: taking into consideration the existing exchange-rate quotation technique for the clearing rouble with respect to the Finnish mark, as well as the ruling pricing principle of bilateral trade, what was the relationship between Finnish export supply to the Soviet Union, on the one hand, and import demand from the Soviet Union, on the other?

To begin with, we have to refer to the large Finnish surplus accumulated in the early 80's on the bilateral clearing balance. The novelty of this phenomenon was mainly to be found in the fact that the willingness of Finnish exporters to supply the Soviet Union with goods and services in a value exceeding the purchasing possibilities (or Finnish import demand) from the USSR—in this particular period—*expressed itself in an actual Finnish surplus* in bilateral trade. Thus, there is nothing new in the mere fact that Finnish firms were (and are) willing to export more to the Soviet Union than they can import from the latter country—according to several sources this has been a lasting and characteristic feature of bilateral trade (see [5], [6]). Since the excess export supply is an existing and lasting phenomenon indeed, the conclusion has to be drawn that beside the actual method of determining the exchange rate between the clearing rouble and the mark, the rouble is overvalued in Finland (or, to put it otherwise, the Finnish mark is undervalued with respect to the clearing rouble).

The fact that the clearing rouble is overvalued, necessitates the maintenance of such mechanisms and institutions in Finland which can compensate for (or at least deal with) the potentially adverse consequences of the exchange rate determination. While presenting and surveying these mechanisms and institutions, we shall also try to answer the question why and how this institutional system could maintain an

approximate balance in bilateral trade until the late 70's and why it didn't succeed in the early 80's.

Regulation of the volume and pattern of trade

In the Finnish regulation of Finno-Soviet trade first of all such institutions, mechanisms and rules are necessary, which assure or at least promote *in advance* the harmonization of export supply and export possibilities. Also, it has to be provided for that once this preliminary harmony is created, it should be kept more or less in practice, that is, the planned and actual export volumes should roughly correspond.

Although the 80 percent domestic value added content prescribed (expected) as a condition of Soviet exports by the Licensing Office is not exclusively and not even primarily aimed at a quantitative regulation of trade, one of its effects necessarily is that it selects among potential exporters in advance. Thus the (administrative) regulation restraining the convertible import content affects not only the input-output pattern of exports, but the possible volume of exports as well: it sorts out from the outset those potential exports whose Western import content would exceed the prescribed limit.*

The regulation of import content may become stricter depending on sectors (groups of products) and on the clearing balance and this may have—and in fact, has already had—a role in adjusting export ambitions to the agreed and planned turnover.

But let us now stick to the mechanisms promoting the *preliminary* restriction of export ambitions. We have already mentioned the extremely important role of the industrial associations in setting a limit to the firms' export ambitions: as a matter of fact, it is the function of these organs representing the firms' interest to distribute the quotas among the industries or groups of products, and in certain special cases (for example, in the forest industries) the distribution within groups of products i.e. among the firms is also their task.

This is not to say, of course, that Soviet demands have no influence on the composition of Finnish exports or on the distribution of quotas among the different groups of products. On the contrary: shipbuilding and machinery exports of a decisive importance and traditionally having the greatest weight in exports to the Soviet Union (and lately also the exports of investment and construction activities) are basically shaped by Soviet import demands, and the export quota of these products (activities) is

* "... the Export and Import Licencing Office controls the origin of Finnish export goods. As Finnish exports to the USSR have traditionally tended to exceed imports, it has been necessary to curb exports. *For this reason* (italics ours—G. O.—P. P.) attempts have been made to reduce exports with a high proportion of... inputs purchased with freely convertible currencies." [5]

usually a confirmation, on government level, of the agreements or contracts previously concluded between the Finnish firms and the Soviet customer.

As for the exports of the other groups of products the Finnish proposition for distribution of the quotas or the list of goods offered for sale is much more important. And it is exactly in composing the list where the industrial associations play an important role: the authorities themselves represent the central industrial association's proposition for the composition of exports at government-level trade negotiations with the Soviet Union.

Within this special quota distributing and pattern determining mechanism the representative organs of the industries show (are forced to show) a peculiar duality. On the one side, having an overview of the export ambitions of the firms represented they try to cut out for themselves the biggest possible share of the export possibilities, that is, to obtain the biggest possible quota for their own industry. On the other side, knowing the Soviet purchasing intentions, the sales possibilities of the industry, and the bargaining power of the other representative organs, they represent the "national economic interest" towards the firms. They try to bring the firms to moderation, and to accept the limits given for the industry.

It has to be mentioned that previously the issue of the bargaining process among industrial associations used to be better calculable and involved fewer conflicts than during the past few years, when the export pattern has undergone important changes. It is because in earlier decades the product pattern was relatively stable, previously obtained positions were firmly kept, and the exports of certain groups of products were more or less smoothly increasing in the long run. But the late 1970s and early 1980s brought a considerable restructuring, as we have seen, and this, as well as the decreasing export possibilities during the last few years, caused some really sharp conflicts in the process of quota distribution.

Further, it is clear from the preceding that it is *not the only* function of the industrial associations to promote the preliminary harmony of *volume* (global harmony) between export ambitions and possibilities; another, at least as important, function is the laying down or influencing the *pattern*.

In examining the economic nature of the bargaining mechanism of quota distribution, it is obvious that the functioning and operation of this system is aimed at a kind of restriction of competition or market division. The domestic restriction of external competition *among* the groups of products (sectors) has by all means its economic rationality. This system lessens the risk that the pattern of exports to the Soviet Union be practically determined by an external price competition among the groups or products. That this effect can assert itself, it is necessary that the Soviet Union should not have clearly defined purchasing preferences in regard of the groups of products beside the above-mentioned basic products (machines, ships, etc.) and

that, when selecting among the Western sources, it should explicitly or implicitly give preference to the Finnish market, taking into consideration the clearing accounts, the traditional relations as well as political aspects. In the past, although with some exceptional years or periods, both conditions were usually fulfilled.

Now, let's turn to the functioning of the system which aims to ensure that the export plan agreed on government level be in harmony with actual exports.

The keeping of Finno-Soviet trade turnover between planned limits is the task of the Licensing Office which we have already presented. The signing of sale contracts between a Finnish firm and its Soviet partner, i.e. the filling of interstate quotas is not subject to preliminary approval; however, the carrying out of the transaction, i.e. the actual delivery is subject to licensing.

The Office has to take care, by granting or refusing licences, that the pattern and balance of turnover should develop more or less according to plan.

Before turning our attention to the other important task of the Licensing Office, which is to impose rules on the upper limit of the convertible import content of exports settled on the clearing account and to assert these rules, it has to be pointed out that in the past (until 1980) this Office had been rather passive in attending to its tasks of a *direct quantitative* or structural regulation of trade. The main reason for this had been that there was not much to regulate (quantitatively) or to restrict. Although this explanation seems to contradict our statements concerned with excess supply of Finnish exports, there is no real contradiction—more exactly, there had not been up to the late 1970s—between export ambitions surpassing realistic possibilities, and the passivity of the Office in charge of preventing transgression of the export plan.

Although the subject of the present analysis is the regulation of Finno-Soviet trade in *Finland*, in order to understand the phenomenon presented above, the nature of the interstate regulation of this trade is to be called to attention. The economic relations of the two countries are based upon bilateral accounts, which implies that, theoretically, the Soviet party (the management organ or organs concerned) has to keep the volume and balance of trade (consequently, its *own* imports) between the limits set in the interstate agreement just the same as Finland. And, up to the late 1970s, though there had been fluctuations and excess deliveries causing imbalances, these were not too important in comparison with the volume of the turnover; in any case, they did not accumulate but were settled in a relatively short time. And, in that Finnish exports had not been regularly excessive in the past, an important role must have been played, it seems, by the *Soviet Union's* efforts to adjust its Finnish imports more or less to the quotas of the interstate agreements. Therefore, in spite of the above-mentioned differences and fluctuations, it is very probable that the reason why the Finnish export excess supply had not become apparent for the Licensing Office *previously* was that

there were no such 'excess orders' which would have presented any serious (restrictive) task for the Office.

It seems that this is exactly why, after 1981, the Licensing Office, its control organs and in general, the authorities in charge of planning and controlling exports to the Soviet Union were caught so unprepared by the unprecedented excess of exports and the extreme growth of the clearing surplus. The administration of the Licensing Office (though its function should make it apt for export restriction and selection of licence applications) was now faced with a task for which it was not really prepared. It is illustrative as well as revealing what the director-general of the Licensing Office said about this: "*Both countries' authorities have their responsibility in keeping the balance.*"* Obviously, the Soviet authorities did not do their best at that time—in 1982—to maintain equilibrium; they did not release the Licensing Office from the disagreeable, unpopular** and in any case difficult task of export restriction. From the Spring of 1982, however, the Licensing Office had no choice but to become more active: export restriction was rendered more intensive and stricter.

Duality of the regulation: integration and isolation— the devaluation of the rouble as an alternative

In the foregoing we have examined and tried to understand the functions and the logic of Finland's institutional system for regulating and planning Finno-Soviet economic relations only from the aspect of the system of economic relationships *between the two countries* i.e. of the bilateral trade (and in it mainly of Finnish exports). Yet our analysis would not be complete without examining also the relation of the latter to Finland's *Western* trade and to its domestic market economy.

If we now examine the monetary reflection of the regulation of Finno-Soviet economic relations in Finland, more exactly, the way of establishing (adjusting) the rate of the clearing rouble in finnmark from this aspect, we can reformulate our earlier negative statement saying that the clearing trade is *not regulated monetarily*, in a positive form saying: the clearing trade is *monetarily integrated* into both Finland's domestic economy, and into its Western economic relationships. To support this statement it is enough to recall that the Finnish firms can convert the clearing currency into finnmark at the domestic rate following the Soviet rouble/dollar rate, and the finnmark can be then converted into dollar or into any other convertible currency. The

* See [4]

** We shall later discuss the effect of export restriction on employment, and the ambivalence of Finnish economic policy in respect of excess exports.

most surprising fact illustrating the monetary integration for us was that in October 1982, when the finnmark was devalued, the rate of the clearing rouble was raised in proportion to the convertible currencies, whereby the profitability of exports to the Soviet Union was increased just as that of Western exports, exactly at a time when the authorities' efforts were aimed at reducing the surplus on clearing accounts.

The monetary integration of the bilateral clearing accounts and Finland's Western economic relations and domestic economic processes involve, however, the risk that any disequilibrium of the clearing trade might cause tensions spilling over to the domestic economy and to the convertible balance of payments. What is more, even a balanced clearing account may entail an imbalance in Western trade, if the bilateral exports involved a considerable volume of Western imports, or if some Western firms used Finland as a stepping-stone to the Soviet market.

In the final analysis, it is these risks rooted in the monetary integration that can explain the necessity of the rules—represented by the Licensing Office—restraining the convertible import content of the clearing exports, as well as the *principle* that the Office should try to achieve that intended exports to the Soviet Union are covered by the quotas.

In our opinion, one of the most important *real* function of the Licensing Office and of the entire internal institutional system of Finno-Soviet trade is to act as a kind of *isolating* layer between trade transacted with the Soviet Union on the one hand, and Finland's Western economic relations (and its domestic economy institutionally open towards the latter) on the other. In order, namely, that the East-West and domestic economic integration realised in the monetary sphere should not lead to cumulative domestic and external economic-financial tensions, the *real sphere* has to be regulated directly, so that the clearing turnover remain (roughly) within the planned limits, and further, it should not lead to increasing burdens in convertible currencies.

Some macroeconomic effects of relations with the Soviet Union on the Finnish economy

In the following, we shall only discuss a few aspects of the effect of Finno-Soviet economic relations on the Finnish national economy.

First, the terms of trade. The effects of the deteriorating terms of trade with the Soviet Union is one of the most debated issues in Finland; several misunderstandings have spread about it in other countries. The Economist of London* forms the opinion that the deteriorating terms of trade in bilateral trade (with the Soviet Union) is a

* See [1]

"good thing" for the Finnish national economy. This view is based on the idea that the increased oil bill necessitates and allows additional exports, that is, it creates additional effective demand, which again enables enlargement of production and employment, the multiplier effects of which lead to further increase of investment, production, and employment—and so on. All this seems to imply that Finland is the better off, the more its terms of trade with the Soviet Union are deteriorating.

The final conclusion is obviously absurd, which suggests that something is wrong with the entire reasoning. What is wrong is exactly the starting-point, that is to say, the idea that deteriorating terms of trade will automatically create *additional* (Soviet) demand for Finnish products. However, deteriorating terms of trade do *not* automatically create additional demand. They rather lead to an international redistribution of real incomes.

This does not contradict the statement that Finland was luckier, after the big oil price rises, than several other oil importing countries, since it had to pay for the suddenly grown oil bill not in convertible currency, but with products. And, though this advantage is very important, it is not the same as if it were *because of* the deteriorating terms of trade that Finland was luckier than the other oil importing countries.

Among the macroeconomic factors, the job-creating effect of Finnish exports to the Soviet Union is of a particular importance. Its size is estimated at 120–150 thousand Finnish workers [9].

In this light, the ambivalence in the Finnish authorities' behaviour when trying to restrict exports in order to reduce their surplus on the clearing account is better understood. No other explanation could be found, for example, for the fact that the quotas of 1982 were determined in such a way—in spite of the well known developments of 1981—that the *current* deliveries should be in balance, that is to say, they did not plan to reduce the existing surplus.

The knowledge of the employment effect also enables us to sum up the causes of the spectacular and sharp turn of the Finno-Soviet clearing balance in 1982.

Some of the causes are exogenous for Finland: they come from the Soviet Union's behaviour, expectations, and efforts. One of the reasons for the Soviet "overspending" (owing to the nature of the clearing system, this is of course, *no real* overspending) may be that a further rise in oil prices was expected and if that had happened, the Soviet deficit on the clearing account could have quickly disappeared. The other reason may be the Soviet Union's wish to "spare" its convertible means of payment, so that it redirected its purchases from other Western countries to Finland. As economic difficulties increased, the Finnish trade relationship not requiring convertible currency became more valuable for the Soviet partner; in the early 1980s a temporary use of the automatic clearing credit may also have been important for the

Soviet Union. All this is rather hard to separate from the fact that when the Olympic Games were held in Moscow, considerable additional import needs for Western products—mainly consumer articles—arose in the Soviet Union, which must have had a part in the fast increase of imports of this product-group from Finland.

As for the Finnish authorities' behaviour, a speculation for further oil price rises may have had a part in it, as well as the expectation of a recovery in the world economy. One more reason why the export restriction measures were delayed could be that the employment problems owing to the world market recession were not to be made worse; in order to maintain employment, the government let the imbalance of the clearing account grow in part deliberately.

Although the expected Western boom only came later, the Finnish authorities' passive behaviour could not further be maintained, and the effect of export restriction in increasing unemployment was indeed felt, particularly in the textile industry.

In 1983–84 it was *via* the decrease of the volume of Finnish exports that trade between the two countries could be balanced. Special deals and a change in the terms of Soviet payments had an important role in achieving that not only the clearing account was balanced but Soviet debts were repaid as well.

The special deals consisted mainly of the aforementioned reexport of Middle Eastern oil and oil products. The other factor was discontinuation of the practice of Soviet pre-payments. As a result of the latter the Soviet clearing position turned out to be more favourable than it otherwise would have been. The medium and longer term implication of this change, however, is the opposite of its short run effect: delayed Soviet payment obligations will accumulate in the future and then become source of problems.

Therefore only a relatively slow increase in Finnish exports to the Soviet Union can be expected and the share of the Soviet Union in Finland's total trade will decrease somewhat from the record level of the first half of the 1980s.

Microeconomic effects

In the preceding chapters it has been made clear that the nature of the macrolevel institutions regulating Finland's trade with the Soviet Union, and the way of this regulation are basically different from those in the Western trade having the bigger share in Finland's foreign trade turnover. Moreover, it is known from other sources, in how many respects the Soviet domestic market and foreign trade system differs from those of Western countries. In which way does this difference affect the Finnish firms interested in Soviet trade? Are their efforts and attitude identical or different in exporting to the two different markets? In general, are those exporting to the West and those to the East from an identical circle, or from different ones?

In the Hungarian economic literature, following Ferenc *Jánossy* [7], a phenomenon called "quasi-development" has been much discussed. This term refers to the fact that the economic macrostructure of the CMEA countries shows these countries to be much more advanced than they are in reality. The weight of the manufacturing industries, and within them particularly of the engineering industry, is similar to that of the advanced Western countries, but their actual competitiveness on the world market remains far below that of the similar sectors of advanced capitalist countries. The contradiction is the most obvious in the difference of the export structures: Eastern exports to the Western markets contain manufactures in a low proportion, while their majority is sold on the much less demanding markets of the socialist countries.

The cause of this phenomenon is not the subject of the present study; here it is enough to observe that the different levels of requirements of the two foreign markets carries a dual scale of values into these economies: the existence of the "softer" socialist markets, lack of competition, and the nature of the socialist international trade sustain, and even assure possibilities of growth for sectors and enterprises which cannot stand up to world market competition. A rather inflexible, hardly innovative sector is maintained, which is accustomed to a "seller's market" and is of a relatively low efficiency, and which is thus specialised on the socialist markets closed from and protected against world market competition. And the existence of this sector sets back the technological-economic development, and hinders the countries' integration into the world economy.

A quarter of Finland's foreign trade is carried on with the Soviet Union and this takes place within such an interstate framework which is in many ways similar to the system of CMEA cooperation. We have presented how much the Finnish export structure to the Soviet Union differs from that to the OECD countries. For various political and economic reasons, and owing to the institutional elements of the cooperation, Finland enjoys certain advantages over the capitalist competitors—some firms might even be in a protected position. It has to be added, too, that the firms involved in Soviet trade constitute a rather isolated group within Finland. Do the above factors produce a phenomenon similar to that found in the CMEA trade? Is there also a kind of specialisation on the Soviet market, and does the protected position enjoyed on this market enable the survival of sectors of lower efficiency, not competitive elsewhere?

Although such impulses (or, what is the same from this point of view: the lack of impulses and necessities existing elsewhere) do affect the Finnish firms concerned, their behaviour remains free—with very rare and not long-lasting exceptions—of the negative features described above, which characterise the socialist countries'

enterprises exporting to the CMEA market.* The reason for this will be understood if the factors of contrary effects are examined: those which distinguish the general position and operational conditions of a Finnish firm exporting also to the Soviet Union from those of a similar enterprise of a socialist country.

First of all, the Soviet customer's general level of requirements is not the same in regard of goods coming from the socialist countries and of those coming from the West. It is true that the various product parameters are given different weights than on the world market in general—thus, for example, empirical marketing examinations prove that the Soviet foreign trading enterprises attribute less importance to fashion and outer appearance and more to durability even in the case of consumer articles—however, as for the quality parameters important for them, technical ones in the first place, and in regard of terms of delivery they are very demanding, much more so than they are, or rather used to be, with imports coming from the socialist countries. And, even though Finland enjoys a more advantageous position on the Soviet market than other Western countries, and even though the orders for Finnish goods do not touch the limited Soviet convertible currency sources, the Finnish connection is still a capitalist relation for the Soviets, and is treated as such.

An investigation based on interrogation of Finnish firms exporting to both markets aimed at revealing the difference between the two marketing activities [12] found that the Finnish firms did not feel their Soviet market positions to be *essentially* more secure or requiring less effort than their Western market positions, and the importance of efforts on the Soviet market in regard of quality and prices was especially stressed. The latter is, of course, also a consequence of the fact that no marketing efforts, or very little, are needed to select distribution channels, to advertise, or, because of the way of accounting, to settle the terms of payment. There is no question, however, of the Soviet market being for them “soft” in general, requiring little effort.

Another important factor that prevents development of the “dual scale of values” is the Western import competition. Though the movement of capital with foreign countries is still controlled in Finland, commodity imports are perfectly liberalised (except for agricultural imports). Thus, even if Soviet exports—sometimes suddenly speeded up—have a certain “suction” effect, within the country no “seller's market” can develop for a long time, because foreign competitors are always present.

Finally, we have to talk of the demanding domestic market, which also represents competition. Finland is a capitalist economy, with corresponding domestic commodity, labour, and capital market, which are, naturally, rather small, following

* This observation is—by and large—confirmed by *Kivikari* and *Tolonen*, who presented some new and important empirical results on the effect of Soviet trade on the Finnish light and manufacturing industries, respectively. [10], [13]

from the small population of the country. The domestic environment in which also the firms exporting to the Soviet market are functioning is not basically different from the economic environment customary in Western and Northern Europe, and this further hinders development of the potential tendencies drawn up above.

As a consequence of all this, though a certain line can be drawn between the firms participating in Soviet exports and those which are not, the high share of the Soviet market does not cause any rigid isolation in the economy between the firms exporting to the Soviet market and those exporting to the Western markets. What is more, with the exception of the ship-building industry—in which the Soviet share is bigger in exports—in the other sectors the share of Western markets (and of the domestic market) is larger.

Of course, the higher degree of protection on the Soviet market—often higher even than on the domestic market—remains a fact for the Finnish firms, and even though this does not entail a lagging behind world market standards in the long run, neither does it mean that the firms concerned do not rely on this protection and do not try to make the best use of it.

Some closing remarks

Our study could, on the whole, only confirm the opinion generally accepted in Finland, independently of political attachments, that economic relations with the Soviet Union are beneficial and advantageous for the Finnish national economy. We have also tried to point out that the advantages inherent in bilateral relations are by far not evenly distributed within Finland and we have indicated the potential disadvantages and risks as well. On the macrolevel, an excessive export or import dependence on a big trade partner can undoubtedly cause worries in the long run, and on the microlevel, again in the long run, the existence of a guaranteed market for certain industries and groups of products entails not only advantages, but also some risks. Besides, for the non-traditional and less preferred sectors (such as light industry) the extreme fluctuations are obviously disadvantageous which come about because of the unexpected and large growth of the export possibilities (quotas) and their subsequent, just as unexpected diminishing. In consequence, the sales of such sectors to the Soviet Union are much more dependent on the global state of the bilateral trade—deliveries of the preferred sectors, size of the advance payments, development of the terms of trade, balance of the clearing account—than on the firms' own activities and competitiveness. On the other side, it is also true that trade with the Soviet Union absorbed to some extent the high fluctuations accompanying Finnish economic development, reduced the burdens of the large oil price rises and directly or indirectly promoted the establishment or development of a number of industrial branches.

Finally, we cannot undertake to draw up a definitive balance of advantages and disadvantages from the Finnish point of view. We shall rather call the reader's attention to a lesson to be drawn from the Finnish experience.

One of the important questions of the present study was: how successful Finland has been in adjusting the bilateral trade to its domestic market economy and to its Western foreign trade? Our analysis, however, has not provided the grounds to answer this question unambiguously. On the one hand, we could question both the economic efficiency and the effectiveness of the Finnish regulation of Finno-Soviet trade. The regulation is not uniform and does not operate with financial instruments, therefore, it leaves the shaping of foreign trade structure to a kind of political bargaining mechanism, though it could be better and more efficiently regulated by mechanisms more conforming to the market and relying more on financial tools [8].

On the other hand, it seems to us that perhaps it would not be consistent with the whole of the Finno-Soviet economic relationship, laden with political elements, and with Finland's political efforts to meet halfway the Soviet preferences and requirements (or at least not to cross them) to apply a stricter and more uniform mechanism, selecting more definitely on the basis of efficiency. Therefore, it may be not only the country's domestic interests, but also the importance of maintaining good economic and political relations that speak for maintaining the present domestic regulation and this has to be considered an important and real interest.

In the final analysis, if we asked the question in a more pointed form, that is, whether the beneficial and advantageous character of the Finno-Soviet trade for Finland is attributable to the domestic regulation of the bilateral trade, the answer would have to be in the negative; we are inclined to say that these advantages are independent of the way of the domestic regulation, and even exist contrary to it. In our opinion, the reason why Finland could and can turn its intensive Soviet trade to its own advantage is that it has a very sound and dynamic economy, ready to adjust; this latter is, however, inseparable from the fact that the gradual but definite opening towards the Western market presented a possibility as well as a necessity to render its manufacturing industry competitive with its Western partners on the domestic and the foreign markets.

It has, however, to be emphasized, that it is owing to the same fact that the Soviet Union enjoys considerable advantages in her intensive economic relations with Finland, since she can receive, against clearing currency, products of hard, Western quality from this country.

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ТОРГОВЛЯ С СССР — ОПЫТ ФИНЛЯДИИ

Г. ОБЛАТ—П. ПЕТЕ

Финско-советские экономические и внешнеторговые связи в двух отношениях заслуживают особого внимания как пример отношений стран с различным общественным и экономическим строем.

Первый — это масштабы торгового оборота. В отличие от других развитых капиталистических стран большая (составляющая более одной четверти) доля внешней торговли Финляндии приходится на СССР. Интересно уже одно то, какое влияние оказывают интенсивные экономические связи с огромной и имеющей централизованно планируемую экономику страной на небольшую рыночную экономику.

Однако не меньшего внимания заслуживает и то, что система этих связей с ее межгосударственными договорами, организационной структурой и регулированием очень похожа на известные из взаимной торговли стран-членов СЭВ формы; большую роль в ней играют соглашения между правительственными и межправительственными органами, которые стремятся регулировать объем и структуру двустороннего оборота как на долгосрочный, так и на среднесрочный и краткий периоды. В формировании этих рамок Финляндия, как представляется, приспособилась к запросам и процедурам советского планового хозяйства. Основной вопрос состоит в том, как интегрируется

такая, во многих отношениях чуждая рыночной системе организация во внутреннюю экономику Финляндии, для которой характерно абсолютное преобладание частного капиталистического хозяйства.

После краткого обзора реальных процессов двусторонней торговли авторы статьи сосредотачивают основное внимание именно на этом, то есть на показе тех внутренних институтов и механизмов, благодаря которым Финляндия приспособливает торговлю с Советским Союзом к своей внутренней экономике. При этом они стремятся различить формальную и представляющуюся им фактической роль отдельных институтов. Поэтому статья рассматривает эти экономические связи прежде всего с финской стороны.

В заключение статьи рассматривается влияние этой торговли на финскую экономику, говорится о некоторых макро- и микроаспектах этого.

REVIEWS

CENTRAL ECONOMIC MANAGEMENT AND THE ENTERPRISE CRISIS IN HUNGARY

M. LAKI

In order to understand the enterprise crisis in Hungary and in order to describe the selective process taking place during the crisis, we can not avoid analysing and describing the non-market (administrative) environment of the firm. In my paper I would like to show the actions and aspirations of the central economic management in this field during the period of 1978-1983. I chose 1978 as a starting point because this was the year when the opinion of the central bodies on the development and growth and on the chances of survival for firms in Hungary changed radically. The main purpose of this paper is to find out how the managers of firms warnings (messages) related to the growing toughness of governmental behaviour. In other words: how wide the gap between the reform rhetoric of the government and the actions and process which actually took place in this field was.

Resolutions contrasting with former ones

Our paper is not a macroeconomic analysis, therefore it is enough to remember that the response of the Hungarian government to the crisis following the oil price explosion in 1973 was not only delayed but also mistaken. The vivid investment activity, the forced growth in production and of living standards led to a serious indebtedness of the country, which plunged Hungary near to financial crisis.*

In the period of a relatively high rate of growth the majority of industrial firms and cooperatives planned to grow and their assets, output and sometimes even the number of their employees really grew. The reason was not primarily that market conditions were favourable. Growth was one of the main success indicators.

The philosophy of growth was transferred to the practice of regulations as follows: when a firm was inefficient and this fact became obvious as a result of

*Describing these processes I shall use statistical data and results of a content analysis of articles published in Hungarian newspapers for this period.

regulation, the central organs (assisted by the local party organs) surmounted but often didn't settle these difficulties.

The following data provide some insight about how soft the budget constraint was and how it softened even further in the mid-seventies: "In 1975 the losses were only 0.4 percent of the profits in the Hungarian productive sectors. In 1976 it was 0.3 percent, in 1977 0.25 percent". [1]

One of the intentions of the new economic policy since 1978 was to stop the overheating of the economy by means of restricting investments, imports and the domestic demand. The planners had no doubts about the foregoing consequences of the restrictions on the micro level of the economy. They forecasted temporary stagnation, and moreover a decrease in production in different subsectors of the light and machinery industries. Under these conditions it was impossible to maintain growth as a success indicator. The policymakers started to reckon with the setback, especially with the closing down (liquidation) of industrial firms and cooperatives.*

The resolution of the Central Committee of the HSWP on 6th December 1978 already drafted that, "Enterprises, plants which are not profitable, the activities of which are not in harmony with the interests of the national economy and which—among the given investment possibilities—cannot be profitable by the means of rationalisation might not be maintained, their losses might not be covered by state subsidies. In such cases the state organs, helped by party and social organisations—as a last solution—have to be determined and use their means for partial or total liquidation". [2]

Changing intentions, unchanged trends

First we will try to find out when the desired change occurred in the behaviour of industrial firms and how strong it was.

No doubt there were processes which changed immediately after 1978. "A number of big enterprises mainly from the machinery industry had prolonged monetary difficulties and the consequences spread and eased only at the end of the year. (1979 M.L.) The tax offices dunned the firms to pay 6.4 billion forints defaults in payment which is 20 percent more than it has been in the previous year. The draft collected by forced encashment grew by 20 percent and it was 4.6 billion forints... The amount of penalty for delay was 47 percent higher then in the previous year and it was about 1 billion forints." [3]

*Firms and cooperatives were liquidated or amalgamated earlier as well but these events were hardly influenced by the profitability of the firms. See: [43] and [44]

It is also a sign of the growing austerity that after 1978 the stock of credits with short term maturity grew faster than the whole stock of credits for current assets.* This is sharply contrasting the practice of the years before 1978.

Table 1
*Growth in the stock of credits,
percent, compared to the previous year*

Year	Change in the stock of credits for current assets	Change in the stock of short-term occasional credits
1975	-3.8	-6.9
1976	14.5	11.7
1977	1.5	-0.1
1978	16.2	11.6
1979	5.4	1.0
1980	13.0	25.3
1981	8.9	12.3
1982	8.8	10.1
1983	9.2	6.1

Source: Computed from data provided by
the National Bank of Hungary

On the other hand *Table 2* doesn't indicate any rapid and fundamental changes between 1978 and 1982. The number of industrial firms in the red and the total amount of losses in the industry diminished. The tide—if it was a tide altogether—turned only 3 years later in 1982.

Similar “retarded” changes are indicated by the columns in *Table 3*.

It is evident from these two tables that only a slight minority of enterprises had problems and difficulties. If we consider the balance sheets of the firms, the overwhelming majority of them had no difficulties either after 1978: “An intolerable financial situation, and lack of a development fund occurred only in a very small group of the enterprises. (in 1979 M. L.) The lack of funds was characteristic of firms which were in a similar position earlier.” [4] And two years later (in 1981 M.L.): “...the stagnation of sources for development didn't create unusual difficulties for the majority of producers. The number of firms with lack of funds diminished in 1981. At the same time at a few enterprises the amount of lack of funds grew extraordinarily because of their debt service due in 1982. [5]

*The aim of which is to avert short term liquidity problems.

Table 2
The number of enterprises with losses and the total amount of losses in the Hungarian state owned and cooperative industry

Year	Enterprises with losses	The amount of losses in million Forints
1975	3	5
1976	10	130
1977	9	208
1978	8	358
1979	3	161
1980	5	109
1981	7	824
1982	20	1254
1983	20	2667

Source: Computed from the data provided by the Ministry of Finance

Table 3
The number of industrial firms and cooperatives with lack of funds and the total amount of lack of funds in the industry

Year	Lack of development funds		Lack of sharing funds	
	Number of firms	Amount of lacks (mill. Ft)	Number of firms	Amount of lacks (mill. Ft)
1978	.	.	22	143.3
1979	.	.	11	9.6
1980	17	1.93	1	0.1
1981	11	0.25	3	0.6
1982	13	6.22	19	73.1
1983	24	8.19	18	52.0

Source: Computed from the data provided by the Ministry of Finance

The liquidity position of the industrial firms didn't deteriorate in the two or three years following the decisions of 1978. The stock of prolonged credits started to grow in 1980. The stock of loans with default (at least in the industrial cooperatives) already did the same in 1979 but there were remarkable changes only 2-3 years later as we can see in the *Table 4*.

Table 4
*Some characteristics of the relations between
banks and industrial firms*

Total	The stock of prolonged credits in the industry		Credits with penalty- rate in the cooperative sector of the industry (in million Ft-s)
	in million Forints	in percent of the total amount of credits	
1975	16.8	.	0.6
1976	11.2	.	3.1
1977	9.0	.	3.8
1978	10.8	.	2.1
1979	11.5	6.1	12.1
1980	16.1	7.3	16.2
1981	15.5	6.7	10.0
1982	18.9	6.4	46.0
1983	31.0	9.9	91.0

Source: Computed from the data provided by the Hungarian National Bank

Can we say on the basis of these time series that waves of austerity hit the industrial firms and cooperatives?

There were difficulties which arrived a few months after the 1978 decisions, other problems occurred when different stocks and reserves of the firms were exhausted. In other words can we describe this process using the concept of time-lag?

Traditional bargaining and individual treatment (1979–1982)

The phenomenon of time-lag is necessary but not enough to understand the behaviour of the state organs. The slump of the economic growth and the diminished investment activity caused for group of enterprises not only short term liquidity problems but structural ones as well. But as the behaviour of the state organs was "soft", the bad results of the structural weaknesses of these firms were covered by subsidies, and open crises were delayed by two or three years.

At the famous Csepel Works: "The state gave a helping hand to surmount the financial difficulties of the Works: the Intra-Ministry State Committee agreed to restructure the repayment of loans from the National Bank. The Works has the right to use its reserve funds to repay its debts. They can also obtain credit to finance current assets." [6]

At the Halas Knitwear Factory: "In 1979 the state budget had to take a further 100 million forint loss because—on the basis of a decision by the State Planning Committee—a "tabula rasa" was made possible by state subsidies and the financial matters of the firm were settled." [7]

At the Hajdúság Works: "... a new director and a new technical executive were appointed. The firm got a new 162 million forints loan as a special settlement and the firm was ranked into the group of unbalanced units." [8]

And at the Tungsram Company: "... it is well known that in 1978–1979 Tungsram became a firm struggling with its lack of funds and last year (in 1980, M. L.) they projected a loss. Different governmental bodies discussed the financial condition of the Tungsram. The firm was requested to make a program of actions to find a way out of this. These organs allowed them to postpone the repayment of loans too." [9]

These cases of state intervention are typical examples of the methods used in crisis management at that time. Stories like these served as a reference and a precedent in other cases as well. The managers and chairman of cooperatives are always keeping an eye on the economic position, the business strategies, and the lobbying tactics of other firms. In taking part in this learning process, in bargaining with the representatives of ministries or party organisations, they could or can refer to the methods of reorganisation in other firms, to the amount of subsidies which other firms and cooperatives got earlier. "The proposals of enterprises to solve the lack of funds do not indicate that they would like to solve their difficulties on their own. From those investigated 15 firms planned some measures which can be decided on their own, but the majority of them needed help from outside," we read in an article summarizing the main statements of an investigation made by the Ministry of Finance. [10]

It is not surprising that in spite of the "messages" from the center of the economic management on hardening of the budget constraint, the executives of firms in trouble tried to improve the position of "their" firms using traditional methods. This means: they do this taking part in traditional individual bargaining with the ministries and other administrative bodies. The real question is; why were they able to use these methods successfully after 1978?

There are two related sets of reasons:

1. The lack of relevant regulation of crisis management at the level of firms and of ministries
2. The soft behaviour of the administration.

The need for a system of criteria separating the firms in trouble already arose in the late seventies. Experts at the Ministry of Finance suggested the introduction of a test-system based on the profitability of the firms. A firm is unprofitable if its net income or profit is negative. Those firms are also unprofitable which cannot meet a minimal rate of profit, as a target.

This group of experts—in selecting firms—did not want to rely on market forces or on a neutral system of regulation. Following the traditional line of thinking, it was necessary for them to mark out centrally the group of firms with negative or poor profits because—they thought—the market itself or a normative system of regulation is unable to rank the national utility of different activities or firms. The net income rate of a firm should show its economic efficiency or inefficiency, and in that case the firm itself should initiate recovery from its inefficiencies. But to do so—the argument continues—a regulation of prices and incomes is necessary in which the proportions of efficiency are reflected by profit differences.

Distrust of market forces and spontaneous selection based on these forces meant that in the case of “firms important for the national economy” the crisis was often solved by traditional institutions (committees set up from the representatives of ministries concerned) and methods. These institutions had a temporary character, they were established from case to case. The temporary character of these committees made it possible to make individual decisions. In other words, it was impossible to create or establish any general rules of crisis management. In addition to ad hoc decisions, ad hoc committees of state organs were expected to consult the party organisations too.

During the bargaining processes carried out in these “emergency committees” the management of firms in trouble brought up old, well proved arguments. Very effective ways of neutralising the rigidity of the state were, their argument that, without the help of the state they could not take the responsibility for

- the fulfillment of state agreements with socialist partners
- supplying the domestic market
- or the utilization of capacities producing export goods for western markets.

Arguments referring to a possible unemployment often arose during this period too. In some cases the local party organs opposed the reorganisation or liquidation of firms.

Not only firms in trouble but also their protectors, the ministries of branches used these kind of arguments. For example one of the branch ministries defended “its” four big enterprises as follows: “The financial tensions were decisively caused by factors independent from the activity of these enterprises. The magnitude and character of difficulties may not be solved by using the firm’s own resources. The significance and the role of these firms in the industry, their tasks based on international agreements make necessary the recreation of their balanced economic activity. Investments in this process—which is to ensure a more modern production pattern and an export-commodity supply which is marketable on eastern and western markets alike—can only produce the planned results... The well-being of employees working for these four firms needs the earliest possible attention too. They can only concentrate with full

enthusiasm on the tasks of their plan, it there steady economic circumstances will be created for the way out.”*

Firms in trouble (calculating the impact of the publicity) often used their importance in the national economy as an argument: “Everybody knows that not only parameters, product prices and exchange rates are in question but the fate of 22 000 employees”—said the general manager of the Csepel Works for example and: “We influence the successful fulfillment of about 260 billion forints production target of the whole industry fundamentally by our 20 billion forint production.” [11]

Officials are often cautious to accept the productivity-ranks serving the valuation of the firms not only because modifications in the regulation changed basically these ranks but because they themselves often “solved” difficulties of firms by modifying prices and taxes. The deputy minister responsible for the clothing- and textile industry evaluated the situation in 1980 as follows: “Evaluating the year 1979 I found only three firms with difficulties which cannot be easily solved. 18 percent of the production of the clothing- and textile industry was not profitable last year. We can diminish this ratio to 6–7 percent in 1980 by changing the prices. . . [12]

This pattern of solving the problems might have been wide-spread because it remained an axiom that, not to shock the whole Hungarian economy, only a few firms should be in crisis. “The degree of change is of course determined by the decision that during the modification . . . of economic management, the great majority of our firms may not become incapable. As a consequence of this at firms which cannot fulfil the average level of requirements at present and in the next years, state intervention is taking place or has been taking place in the belief that the costs of interventions will be repaid from the further profits, that the management will be improved gradually and will be able to fulfill higher requirements.” [13]

We must not forget that a lot of enterprise crises occur not only as a consequence of bad decisions but also that state organs and banks play an important role in the creation of these situations. As the chairman of the National Bank pointed out, “Besides the firm, the creditor is also responsible for the creation of lack of development funds. These cases urge us to analyse more carefully the reality of profit shares promised in claims for credits.” [14]

The secretary of the Central Committee Ferenc *Havasi*, when visiting the Csepel Works also spoke about common responsibility for common decisions: “He spoke about the economic responsibility of the firms, but also stressed the responsibility of the government. He mentioned as an example that the State Planning Committee put on the agenda the situation of the Csepel Works and gave—perhaps partial—help to solve its fundamental problems. ‘We can interpret this action as self criticism’, he added.” [15]

*Part of a ministerial proposal for the State Plan Committee (1979).

Half-turn in 1982–1983?

In spite of remarkable and high level decisions between 1978 and 1982 there were no significant changes in the “non-market” environment of the industrial firms and cooperatives which had serious economic problems. The central economic management thought: the restriction of investments and imports, a sounder policy in raising credits on the international money market are enough to extend the period of structural reorganisation in the industry. But after 13 December 1981 in Poland it was impossible to go on with the credit policy of the previous years. In the middle of 1982 it was clear that “There is practically a credit embargo against the socialist countries. In such circumstances it requires great efforts even to maintain economic relations.” [16]

Furthermore at the same time “the days of grace” of several firms expired and almost nothing came out of the promised improvements in efficiency. “The governmental committees prescribed that, the creditors had to cancel a part of their debts or suspend the pecuniary obligations. The purpose of these measures issued for a definite period was the rehabilitation of those big enterprises in 1–2 years. . . . These time limits expired in 1982 and it has been found that the situation of the majority of these firms haven’t been improved.” [17]

Leading politicians struck a harsher tone in this situation:

“The state budget can allocate for the handicapped, bad units from values which were produced somewhere else by somebody else. We have no possibility to provide investments, imports or wage preferences to substitute the high quality work of collectives, to substitute or cover up the lack of the technical recovery. If we continue this trend we trespass against everybody, against the nation, the country, the masses. It may happen that there will be enterprises in which the circumstances will be too strict compared to their management’s skills and facilities and therefore—so to say—they will go into bankruptcy. We shall take note of this and we shall find a new management which is able to solve the tasks. Or we shall find another enterprise which may use those capacities effectively.” [18]

The Minister of Finance said about the same issue: “This is the contradiction of the part and the whole: what to do with firms in the red or with low profitability? Long term subsidies for them necessarily restrict the funds for the development of other more effective enterprises. Therefore, it is essential to curtail these firms or make them more profitable. But we have to do this with tolerable tensions and therefore the temptation is big to subsidise them for too long a time. This is hardly tolerable with regard to the efficient enterprises.” [19]

It is not easy to decide whether the turn urged in handling firms in trouble since 1982 actually took place in the hard months of 1982 or not. Our time series—as we have seen earlier—indicate some changes. Not only the growing number of firms in the

red, and firms with a lack of funds pointed to these changes, but also the regulation introduced at that time.

As there is no capital or stock market in Hungary, prices, or the changes in the price of assets do not indicate the efficiency of a firm. Because of this bureaucrats introducing new regulations might do nothing else than rank firms and cooperatives according to different efficiency- or profitability indices. This way they classified firms with low efficiency, defining low efficiency as if "in two consecutive years the profitability was lower than the half of the average of their branch or subsector." [20]

We may see that not only firms in the red or with a lack of funds are reckoned as low efficient ones but also in this group are those firms where the chances of a loss or lack of funds are relatively high. This provides a possibility to prevent or reverse any dangerous tendencies.* Among those firms considered as low efficient, "the minister of finance in agreement with the founder of the firm and consulting the minister of foreign trade and that of the Chamber of Commerce specifies in every year, which firms need central measures to improve their performance." [21]

There are three parts of this package of measures. More exactly these are administrative measures, because the consumers and suppliers of the firms play no role in working out the firm's new strategy. The so-called prompt measures are already strict. They diminish the autonomy of the management remarkably. For example, the state authorities have the right to evaluate the activity of the general manager, to delegate a new director or not to pay bonuses for the present one. They have the right to order the firm to sell redundant stocks or to propose the foreclosure of bank mortgages.

The second stage—starting two years later—is also very inconvenient for the firm. The authorities have the right to withdraw the so-called non-normative subsidies. They can order the firm to pay a part of the amortisation to the state budget and to propose compulsory bond issue.

And the last stage, "If there is no possibility to eliminate the sources of losses, the authorities have to propose liquidation or reorganisation of the firm." [22]

It is very likely that managers—being conscious of these inconvenient measures—will try to avoid their firm being considered as low efficient. But how did they come to take this minimal success indicator seriously?

Besides the growing number of firms in the red and the harder messages of the government, some changes were indicated by the more consequent behaviour of the National Bank: "The amount of application for credits refused (in the 2. quarter of 1982 M.L.) was very high compared to previous years. It was about 50 billion forints opposed to last year's 24 billion." [23] The National Bank refused to provide further

*On the other hand: the chances of an effective preventive intervention were diminished because the numerator of the index consists of the subsidies of the firm too. See: [45] and [46]

loans for firms with losses. For example the Ganz-Mavag Company, which could neither finance the daily production: "The National Bank of Hungary gave notice not to provide loans for reconstruction. Its reason is that it is done in the interest of the big enterprise not only because of the paying off of further loans but also of present ones became dubious." [24]

Stories of different firms show that the pressure to change became harder in the center of the economic management as well. Firms in the red like the Hat Factory or the Halas Knitwear Factory were liquidated. The managers and chairmen might have been even more deeply impressed by the fact that the government refused to help the—until then taboo—Csepel Works with further loans. The central organs tried to solve the crisis with decentralisation of the firm. The Works had a lack of funds in 1979 and could not pay back its credits. To ease the serious financial troubles the Works won some breathing space, the State Planning Committee suspended a part of repayment obligations until the end of 1982. After this, "The staff of Csepel started to improve profitability with great efforts but its activity was not successful: the financial situation of the firm improved a little but the profit could not cover the repayment obligations neither in the future." [25] The firm's management interpreted these unfavorable tendencies first of all as the result of external factors: "The party secretary (of the firm M.L.) said that this had many external reasons, the export markets became narrower and the stock of orders diminished. He spoke openly about the internal reasons for the failure too. For example, although the discipline of the management and that of the technology was improved, they had serious problems with the labour force because the number of employees of the Csepel Works diminished by 1976." [26] The ad hoc committee delegated by the State Planning Committee had a partly different opinion: "The committee found the reasons for decreasing profit for two years in the R & D, which does not take into consideration the market situation, the production structure changing too slowly and the costs too high. They added that the fundamental reason for these symptoms is the inadequate management—and incentive system of the firm." [27] The secretary of the Central Committee of HSWP Károly *Németh*, visited the firm at this time and could not encourage them either: "He stressed: it is clear we have to find a solution which is good for the country and for this politically and economically important big enterprise too. He said: nobody should be afraid of not having a job equal to his skills and knowledge." [28]

The organs responsible for this task at last found a solution which may signify the ineffectiveness of old style bargaining methods. The Csepel Works was decentralised, its earlier plants became autonomous firms and only the Central Directorate (the tasks of which are service and some coordination) remained from the old trust.

Can we summarize these tendencies as the danger of hard currency debt crisis of the country in 1982 forcing the central economic management to find a more radical

solution for the problems of firms with long term difficulties? Several articles published in 1983—1985 and also our interviews conducted in ministries provided evidence that the experts of this field remained pessimistic. According to their evaluation no significant change took place either in the attitude of the managers and chairmen or in the crisis management techniques of the state. The head of the Directorate of Incomes at the Ministry of Finance pointed out: “On the basis of our economic history perhaps it is not surprising that firms in the red still place their trust, their deep and infinite trust, in state subsidies. They hope that—as earlier—they will get money after all, their debts will be restructured, their loans will be cancelled. They realize very slowly that firms in trouble have to make remarkable changes in their management.” [29]

An other expert Erzsébet *Horváth* underlines that the optimism of firms in trouble has some basis because “in the case of firms in such trouble—if it is impossible to liquidate them—the central economic management is forced to maintain the capacities of these firms. Especially at firms with a monopoly, favourable state interventions are necessary again and again.” [30]

Further exceptions

Two years are not enough to figure out whether the expected changes in the relation of the state and firms with losses have taken place or not. Therefore, in the final part of our paper, we can only seek a partial interpretation of the expert's pessimism. It seems that the inconsistency of the regulations for firms in trouble, the large number of exceptions act against the change in traditional attitudes. For example: “at firms with long term low efficiency, where the profit motive works in a limited way, where the officially fixed price cannot guarantee a fair profitability or where a special regulation is valid, the criterion of low efficiency is not the average profitability of the branch but the average profitability of the subsector. Based on a special examination those low efficient enterprises which produce goods or a definite quantity of products fulfilling government commands, or which are compelled to fulfill an intra-governmental agreement can get exceptional treatment, and that is the reason for their long term low profitability.” [31]

The exceptions were formulated more openly in the cooperative industry “where the classification and ranking of cooperatives have to be done differentially because of special factors influenced not, or not only by the cooperative and which play a role in the formation of the profit indicator. These can be:

- the mixed profile and activity of the cooperative
- the fulfillment of special needs of the local community
- traditional production protecting popular arts or crafts activities

- determinant role in the satisfaction of domestic needs
- important change in the organisation
- long term depression on the world market
- taking part in a bilateral governmental agreement
- special price- or fiscal regulation.” [32]

Such a long list of exceptions provide broad space for manoeuvre and bargaining for the enterprises, especially if “the opinion of the organs taking part in decision making is also contrary.” [33]

But why are these firms able to use these bargaining possibilities? Where does their bargaining power come from?

One of the sources of it was the optimism of some bureaucrats. For example the head of Department Controlling Firms at the Ministry of Industry said: “The overwhelming majority of firms in trouble only have temporary difficulties and they have the possibility to prosper again.” [34]

The bargaining power of all these firms was even growing during this period because the central economic management could not use part of its sanctions. A good example is the right of mortgage of the National Bank. The application of it is legitimate but the National Bank has no experts, no special organisation to estimate the value of the property mortgaged. This is well known by all the firms and the deterrent effect of it is very small.

The real source of the bargaining power of firms in trouble is their ability to influence important macroeconomic processes. This capacity has been growing since 1982 too. It is known that the whole Hungarian economy was pressed to export, while the number 1 task of the central bodies was to adequately supply the domestic market. In the case of the Kecskemet Tub Factory “the profitability of the firm’s export was so low that . . . the firm was frightened to go bankrupt. And what has happened? The price of tubs has been increased centrally and the firm became profitable.” [35]

On the other hand the industrial managers know or at least suspect that bankruptcy can have advantages as well.* Firms and cooperatives got significant state subsidies to recover in 1982—1984 too. To turn back to our earlier example, at the successor firms of the Csepel Works, “Supervising the fiscal situation of the firms and evaluating their recovery programs, the National Bank arranged the liabilities of the majority of these firms so that factories do not get into hopeless situations.” [36] At the Tungsram, “credits were partly written off, the other part was restructured. The time span of state subsidies repayment was extended and a part of dead loans abroad were disregarded The faster growth of the big companies was also stimulated by a

*Here we have to distinguish the fate of managers and firms. The careers of several managers finished during the crisis.

remarkable allocation of working capital." [37] Last, let us consider cases where firms in the red were reorganised or liquidated during this period. The Hat Factory, with lack of funds and losses for years, was acquired by the big telecommunication company Orion because the ministry couldn't find a firm in the light industry which was able to pay the losses and debts of the Hat Factory. Orion was ready to arrange this, using the old method of consolidation of balances. This means that the state organs avoided the direct liquidation of a firm "when machines and buildings would be sold and the staff of the firm would be informed that the Hat Factory was closed and everybody had to find a new job." [38]

This was a traditional type of acquisition. The story of the settlement of the situation in the Halas Knitwear Factory seems more business-like and therefore a more modern one. This enterprise, in the red, got a new owner "after the liquidation of it the Skala-Coop (the new owner, M.L.) authorised by the government buys all the fixed assets at the present net value i.e. 447 million forints. Not only the assets but the staff will be taken on by the Skala-Coop. The further activity will take place as a subsidiary company in order to measure the real performance of the firm." [39] But the Skala-Coop—like the great majority of Hungarian enterprises—had not enough capital to be able to buy a factory. Therefore it was able to meet the requirement of the Industrial Ministry (to buy the Halas Knitwear Factory) only if, "On the basis of an agreement with the Ministry of Finance the Skala-Coop will get state loans based on the conditions of the credit policy directives. The Skala-Coop will be granted working capital from the reserve fund of the National Association of Cooperatives." [40]

Some tentative final remarks

How do these "messages" (examples, regulations, governmental actions) influence the behaviour of the managers of industrial firms and cooperatives? What kind of lessons did they draw from their experiences after 1978?

A director of a big company for example concluded, "It is a fact that several big companies are in trouble, and it is also true that the central economic management tried to find a way out for them. Why are there these "movements" to save them? The answer is very simple: there is no other rational solution. The movement to save them is just looking for an answer and this is absolutely natural. The reorganisations and the bankruptcy procedures are also a kind of solution but these are the most expensive and have hardly any constructive perspectives." [41]

We don't know how common this opinion is among managers. Investigating the behaviour of state organs it seems not to be an exception. The unexpected market situations cause difficulties more often than before. In this sense the risk of the

management of firms has grown in the last years. But the performance of the firms headed by them is not evaluated by the market (especially not by a stock market). Moreover—as the critics of the present bankruptcy procedure pointed out: the buyers and sellers of the firm cannot influence the method of reorganisation of a firm in trouble. The horizontal relations play subordinate role in evaluating the performance of the firm. The fate of the firms in trouble is decided within the framework of a more or less monetarised but vertical bargaining process.

We can not ignore the fact that the forthcoming reform of the bankruptcy process—when the business partners of a firm will get some word in the reorganisation or the new forms of management which perhaps diminish the hierarchical subordination of a firm—will extend the role of the market in the evaluation of a firm's performance. The opposite tendency has some chance too. The decision makers can conclude that "at all firms in a critical situation it is advisable to make clear separately, which factors caused losses and lack of funds and to what extent the firm is responsible for them. The founder of the firm (a state organ) has to initiate such investigations and a committee of experts—possibly disinterested and impartial have to execute it." [42]

But this is already the world of faith. We can say that during the further research on the enterprise crises we still have to take into consideration the presence of traditional selection mechanisms in the Hungarian economy. The gap between the reform rhetoric and what is actually happening is still relatively wide.

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OBITUARY

LORD THOMAS BALOGH (1905-1985)

The society of economists is greatly bereaved. Thomas *Balogh*, the Hungarian-born world famous British economist, made life peer by the Queen for his outstanding public and scientific activities in 1968, passed away at the age of 79 on January 20th, 1985. His death put an end to an extremely rich and colourful life.

Tamás Balogh was born in 1905. He completed secondary school at the Mintagimnázium of Budapest, and studied at the Faculty of Law of the Budapest University of Sciences, where he was a disciple of the famous academicians Ákos *Navratil* and István *Varga*. Upon graduation he was awarded the title of Dr.rer.pol. In 1927 he won a scholarship to study at the Collegium Hungaricum in Berlin and continued his studies at Berlin University. Out of these studies was born his first work, at 23 years of age. "History of German inflation" (in Hungarian). Beginning in 1928 he studied at Harvard University for two years with a scholarship from the Rockefeller Foundation, and in 1935 he published a new work, which aroused considerable attention: "Gazdaságpolitika és közgazdaságtan válságban" (Economic policy and economics in crisis).

After a short stay in Geneva, where he was Deputy Secretary of the Financial Commission of the League of Nations, there followed a study tour in Britain. It was no fault of his that he was compelled to leave his native country. Accepting the hand held out to him, he found a new home in Britain. He may be counted among the few who were trusted by *Keynes*. *Keynes* also paved the way for him to find a job. In the thirties he worked with financial institutions in London. For some years after 1938 he worked in the National Institute for Economic Research. At this time he became a lecturer, later fellow at Balliol College, Oxford, from 1940. From 1940 to 1955 he also worked with the Statistical Institute of Oxford University. In 1960 he became reader in economics. He was visiting professor at some of the most prestigious universities in the world.

An important part of his life was devoted to the solution of problems afflicting developing countries. He acted as an adviser in several countries (Malta, India, Jamaica, British-Guinea, Mauritius, Algeria). He was active in the FAO and in the Latin American and African Economic commissions of the UN. In this context his scientific literary activity is extremely rich. Particularly worth mentioning are his

"Unequal partners" (a two-volume collection of works, published in 1963) and "The economics of poverty" published in 1965.

Yet the main theatre of his activity was Britain. He considered himself one of a group of socialist persons who wished to lead society gradually from capitalism to socialism. They did not commit themselves to any theory and, simultaneously, emphasized the role of individual initiative in the process of transition. They opposed the power of the bureaucratic state and wished to complete democratic self-government by strengthening trade unions, cooperatives and local government. Persons of similar beliefs created the Fabian Society in London in 1883, of which Lord Balogh became Deputy President in 1969 and President in 1970. This Society had a significant role in the foundation of the Labour Party. Thus, adherence to the party was a natural attachment for Tamás Balogh.

It was in 1973, on the occasion of one of his visits to Hungary, that, at a weekend spent in a narrow family circle at Lake Balaton, I asked him how Fabians interpreted the gradual transition from capitalism to socialism. As a matter of fact, at that time the Fabian Society was more than 90 years old. Those who knew Tamás Balogh, also knew that his real element was debate, and how good and witty a debater he was! If I wanted to sum up the gist of our long talk in a single sentence it would run like "socialism is a matter for the next generation".

Fabians are not communists, but there are points of contact with the Utopian socialists in their views, particularly with some of the ideas of Proudhon and Owen. On reading his interview given to Figyelő on the occasion of his Budapest visit of 1978 about the possibilities of a "social contract" that might provide peaceful bases for the relationship between the capitalists and the working classes, I could not help but see the close association of ideas. His argumentation ran as follows: in pure capitalism, where the working class has no say in matters, the duty of the trade unions is to fight for the raising of wages—followed by rising prices. If, however, we renounce this pure capitalism and pursue a policy with which the distribution of national income and wealth is changed, it may be expected that trade unions should feel responsibility for the stability of the economic system. Thus, the substance of the "social contract" proposed by him was that the trade unions should use their power for increasing the political weight of the working class, they should renounce wage claims and demand in return tax debates and reforms of wealth and land. Through these an increasing participation should be secured for the working class in both income distribution and decisions.

All these ideas proved to be built on quicksand, yet, it does not change the progressive role Tamás Balogh played in the formation of economic thought in the Western world. Although a follower of Keynes, in his theoretical works he argued for more far-reaching reforms than what is characteristic of Keynesians. In this context his

works "Labour and inflation" (1970), "Facts and fancy in international economic relations" (1973) "Crisis of capitalism" (1978) and "The irrelevance of conventional economics" (1982) deserve attention.

He used the influence he had on Harold *Wilson*, the former Prime Minister and leader of the Labour Party, in the interest of strengthening the institutional system for the economic organization function of the state. He could not achieve the establishment of a planning ministry, but a ministry for economic affairs was brought into being. Also the ministry for overseas development was founded on his initiative.

The fall of the Wilson government in 1970 was a source of great disillusionment for him. He temporarily withdrew from politics. He spent most of his time with scientific work at Balliol College. When again a Labour government was formed, he acted as minister of state for energy for a short time. He had an important role in the foundation of the National Oil Corporation where he also held the post of deputy-chairman.

He had left Hungary in the thirties but maintained contacts with Hungarian economists till the outbreak of the war. In 1946 he visited Hungary as the Deputy Head of the UNRRA, the post-war aid organization of the UN. He summarized his experiences and opinions in the study "The Hungarian reconstruction and reparations". After his 1946 visit, there followed a break in contact of more than two decades. In the early seventies, on the invitation of the Hungarian Academy of Sciences, he again came to Hungary. He held lectures, consultations and had intensive discussions with many economists. Since then, more frequent visits brought him back to his country of birth, which honoured him by electing him honorary member of the Hungarian Academy of Sciences, doctor *honoris causa* of the Karl Marx University of Economics and honorary member of the Hungarian Economic Association.

He not only was a participant but an initiator and organizer of meetings jointly organized by the World Federation of Hungarians and the Hungarian Economic Association, which brought together well known economists of Hungarian origin from different parts of the world, and of which the Széchenyi Commemorative Days, organized in 1980, was an outstanding event. Unfortunately, he could only participate in the opening session, his impaired health forced his early return to Britain.

He not only emphasized his Hungarian origin, but showed an almost child-like attraction to everything that linked him to his country of birth. It is no mere coincidence that in the obituary of the Times it was mentioned how particularly glad he was when the old Budapest University awarded him the h.c. doctor's title in 1979. The feeling he cherished for his native country now evokes special reverence.

B. CSIKÓS-NAGY

BOOK REVIEWS

CSABA, L.: *Economic mechanism in the GDR and in Czechoslovakia. A comparative analysis.* (With an introductory study by Kálmán Pécsi). Trends in World Economy, No. 46. Hungarian Scientific Council for World Economy, Budapest 1983. 140 p.

László Csaba's study describes the national systems of management found in the GDR and in Czechoslovakia and their mutual comparison from the point of view of similarities to and differences with the Hungarian system of management in the seventies.

Kálmán Pécsi provides an introductory study called "Perfection of planning and management of foreign trade in CMEA countries". On the basis of a survey of the development of attempts by a number of CMEA member countries during the last quarter century, the author shows that an isolated approach to perfecting foreign trade mechanisms has not yielded satisfactory results. From this he draws the conclusion that measures aimed at improvements have to be supported by and adjusted to adequate measures in domestic economic mechanisms. It is these propositions that the monograph written by L. Csaba is based on; it includes an *Introduction*; *Part one*: "Trends in the evolution of the economic mechanism of the GDR"; *Part two*: "Trends in the development of the economic mechanism in Czechoslovakia"; and finally, "Some general observations".

In the "Introduction" Csaba stresses that his most immediate objective is to seek practical solutions and alternatives for the CMEA, which forms the integrational community of the Hungarian economy, as well as that of the other East European countries in a period when the integration

of the CMEA community into the world economy has become imperative. In the time which has elapsed since the publication of this study, the highly topical and difficult nature of this problem has only been accentuated; to an increasing extent it directly concerns the most critical aspects of economic policy and strivings to improve planning and management in the small European member countries of the CMEA. Nevertheless, in our brief review we shall leave aside the doubtlessly important contribution which this study makes towards a more effective practical economic orientation.

In our opinion the author's methodological and theoretical approach to this subject and his factual method of dealing with the problem go beyond the original pragmatic purpose he set for himself. This monograph provides valuable information, as well as an analysis and discussion for specialists who study the economies of the small and medium-sized CMEA countries. For some of these countries the end of the sixties and the beginning of the seventies represented a "golden age" in their development. Subsequent developments in the seventies and eighties typically brought unexpected changes in development trends, a cumulation of previously known, but unsolved problems, as well as some new problems. Such a situation represents a challenge not only to those who form economic policy, but also to economic science which is confronted with a number of economic difficulties of unprecedented depth, which have not been clarified in any satisfactory manner. Traditional macro-economic analysis provides standard comparisons of the performance of various East European economies on the basis of the usual indicators. Csaba approaches the comparison of the two economies he

has chosen with the opinion that "in addition to the analysis of real economic factors, the study of the institutional factor is also a necessity..." (p. 29) Such an approach is based on the profound theoretical background found in the long tradition of Hungarian economic thought, which—in contrast to the communities of economists in the countries compared in the study—suffered no discontinuity of interest in the institutional framework of the economy. The author's comparative analysis in fact concerns three countries—the GDR, Czechoslovakia and Hungary, which in the seventies found themselves in similar economic situations, but who chose different solutions as far as economic management was concerned. In his introduction, the author cites a fact which has often been insufficiently taken into account, that contrary to the assumptions which existed during the elaboration of the CMEA Comprehensive Programme, the domestic economic mechanisms of individual CMEA countries have not evolved in the same direction, towards gaining ground for regulated market conditions, rather the diversity of national economic controls has increased. On the basis of this highly relevant fact the author draws a serious conclusion. In his opinion the so far unsolved task of developing such an effective cooperation mechanism within the CMEA, requires taking into account the fact that national management systems functioning in various countries differ and continue to wait for a solution. The author argues that exploration of the nature of differences among the national management systems within the CMEA can be the only sound foundation for the integration endeavours. On this basis the author derives the need to study both common and different aspects in the development of national management systems.

The main part of the monograph is devoted to a descriptive analysis of the re-centralization waves which the system changes taking place in both the GDR and Czechoslovakia had in common during the seventies.

In the first part, the author describes the evolutionary trends in the economic mechanism of the GDR during the seventies. He surveys the transformation of the substantially decentralized systems of economic management designed in the sixties, into the rather rigidly centralized systems based on

large intermediate organizations. The author describes in detail the mechanism of this recentralization, which developed under the influence of the contradictory effects of a one-sided and exaggeratedly selective "structural policy", and an overambitious investment policy conducted in the period 1968–70. The partial decentralization of price setting—the right given to associations to create prices—could not function properly in the overheated "sellers' market" of the years 1968–70. Together with corrections in investment policy, a modification of the management system also occurred. The unique right of the Price Office to determine prices was renewed, as was the right of sectoral ministries to issue direct instruction to intermediate management bodies (VVB) and their member enterprises. The role of net profits as a basic indicator was again abandoned. Macro-economic balances become the most important instruments of planning and their number has increased several fold during the seventies. The author of the study describes in detail the forming of an economic system in the GDR, which relies on large intermediate management organizations to adjust to the increasingly competitive conditions of the world economy, while domestic producer prices are determined by real sectoral average costs, and hence remain autarkic. As far as consumer prices were concerned, more flexible principles for a price policy were formulated only in 1979. At this time the problem of debt servicing both in hard currencies and in relation to the USSR increased. To solve these basic problems of economic policy in the period 1981–85 an export policy was adopted, which, similar to Hungary, considered the development of economic cooperation within the CMEA as a component of the global division of labour rather than a refuge from it. The rigid system of planning and management was subjected to criticism which stressed that an improvement in economic performance could not be achieved by the instruments and methods applied at the beginning of the seventies.

In the second part of the monograph the author describes the trends in the development of the economic mechanism found in Czechoslovakia at the beginning of the seventies. The author first considers the question of how this over-centralised practice of control came about. The renewal of state

intervention by administrative methods was at first a reaction to some negative aspects of the investment boom and inflationary increases in prices in the period 1968–69. From these measures, originally considered to be “temporary”, however, an integrated system of organizational and administrative measures developed which led to a complete rejection of the program of comprehensive and thorough reform from the sixties. Since 1972, a new stage of recentralization has been in effect, which since then has become a permanent feature of the management system in Czechoslovakia. The mechanism of this recentralization—given all the specific aspects of Czechoslovak developments—is in marked agreement with the organizational forms and instruments used in the GDR. A restoration of the traditional hierarchic structure of managing the economy has taken place, as well as a renewal of a large number of central balances and the breakdown of binding indicators from the center, through medium-level management bodies to enterprises. A system of contracts was replaced by mandatory deliveries among enterprises, which ceased to be the basic management link and instead became mandatory members of associations, which are all of more or less the same nature. The rights of enterprises to carry out foreign trade operations were annulled in 1970 and since 1972 also rigorous recentralization took place in the management of foreign trade. Domestic and foreign markets have been strictly separated from each other with the help of a traditional system of subsidies from the state budget. The system of mixed prices and especially the principle of free price formation was replaced by a strictly supervised central price policy which strives above all for price stability and the “protection” of enterprises even during periods of unexpected price explosions on the world market. The author cites some individual critical opinions of economists as far as negative effects of recentralization trends are concerned, but this tends to overestimate the force of this criticism since it remained the exception. During the seventies a climate in which traditional, petrified centralist forms came to be considered normal attributes of a socialist economy, prevailed in the economic community. A certain revival of interest in more flexible forms of management only appeared at the end of

the seventies. The author explains the modifications of the system of management which were introduced in the second half of the seventies and also some experiments carried out in this area. He describes the contradictory qualities of the set of measures for perfecting the system of planning and managing the economy of Czechoslovakia which has been in effect since 1981. This set of measures has become the point of departure for partial experiments which are to be carried out in the second half of the eighties. These essentially partial improvements also include some partial organizational and economic adjustments of relations between producer associations and foreign trade organizations, as well as gradually allow the influence of world prices upon domestic prices.

In place of the usual summary, Csaba ends his treatise with “Some general observations”. The development of management systems in the compared countries is here assessed from the point of view of the general development of several reform attempts in recent decades, aimed at creating more effective models of economic management in the socialist countries. This search still lacks an adequate theoretical background. At the end of the fifties and beginning of the sixties a number of concepts for the management of the economy appeared, which were based on a combination of direct and indirect instruments of management. According to Csaba these germinal ideas contained the concept of a “gradual transformation model” in which the formation of large intermediate control bodies, together with the reduction of compulsory indices, were the first step towards a regulated market economy. This idea was also reflected in the financial chapter of the Comprehensive Programme of the CMEA, which assumed that institutionalization of numerous integration solutions which would make the transition to a monetary type integration possible.

Csaba's analysis convincingly shows that reality took a different turn and describes those mechanisms which in the seventies led to recentralization. He finds that especially the GDR and Czechoslovakia radically broke with various ideas which came to the forefront in the sixties and introduced certain control mechanisms which asserted the predominance of the physical aspects of planning against

financial aspects and where economic units again became mere components in an integrated hierarchy of control.

Csaba shows us that while Hungary remained during the seventies on the road towards creating an alternative model, this development was also strongly influenced by covert recentralization. This makes it possible to understand why, in spite of the fact that two different approaches to economic management were used, the actual economic performance of the countries we are comparing, did not differ significantly. From this it also follows that there are a number of common problems in the economic development of these countries, whose solution as institutional factors of growth will become focal points in all CMEA countries during the eighties.

The Hungarian approach to activating institutional factors in economic development has contributed to the fact that Hungary—as the author justifiably stresses—is today one of the politically most stable and with consumer goods best supplied socialist countries.

Csaba's study is based on rich factual sources. It represents a serious contribution to the creation of a comparative analysis, unencumbered by the usual drawbacks of ideologically conceived approaches which have often reduced the value of such analyses in economic literature. Csaba's empirical description represents a point of departure for warranted theoretical generalizations and a valuable contribution to understanding the difficulties of the long-term process of seeking an effective alternative model of management.

K. KOUBA

RODE, R.—JACOBSEN, H. D. (Hg.): *Wirtschaftskrieg oder Entspannung? Eine politische Bilanz der Ost-West-Wirtschaftsbeziehungen*. Verlag Neue Gesellschaft. Bonn 1984. 328 S.

Die in den letzten Jahren entfaltete amerikanische Ost- und darunter auch Ostwirtschaftspolitik, die zunehmenden Interessengegensätze zwischen den europäischen Verbündeten und den Vereinigten Staaten, aber auch die veränderten Rahmenbedingungen der Ost-West-Wirtschaftsbeziehungen ge-

ben ausreichende Motive um dieses sowohl wirtschaftlich, als auch (entspannungs) politisch wichtige Thema wieder einmal auf die Tagesordnung der wissenschaftlichen Forschung zu setzen. Eine Gruppe international bekannter Experten versucht in 22 Beiträgen auf die Zusammenhänge zwischen Politik und Wirtschaft aufmerksam zu machen und die spezifischen Länderinteressen und -gegeninteressen zu interpretieren.

Das Buch besteht aus drei großen Einheiten, die die gegenseitigen Wirtschaftsbeziehungen mit Hinblick auf interdependente Elemente, die Politik der westlichen Länder und die der RGW-Länder untersuchen. Ihnen geht eine als Einführung gedachte Schrift voraus. Die Ausführungen werden dann durch einen kurzen abschließenden Teil abgerundet, in dem einige der wichtigsten Argumente — jetzt schon als Bestandteile einer auf die Zukunft gerichteten Untersuchung — wieder aufgenommen werden.

In seiner Einführung (Osthandel und Entspannung) beschreibt R. Rode die wichtigsten ideologischen und systemspezifischen Merkmale der Geschichte der Entspannung und der parallel mit ihr initiierten Ost-West-Wirtschaftsbeziehungen. Er stellt fest, daß der Ost-West-Handel, trotz überdurchschnittlicher Wachstumsraten in den 70er Jahren, relativ unbedeutend geblieben ist und weiterhin durch einen eindeutigen Europazentrismus gekennzeichnet werden kann. Der wichtigste dynamisierende Faktor des Handels lag — mit Ausnahme der ersten Jahre, in denen den im kalten Krieg eingefrorenen, strukturell bedingten Möglichkeiten wieder größere Rolle zukam — in den hohen westlichen Kreditvergaben und weniger in den industriellen Kooperationen. Unter den veränderten außenwirtschaftlichen Bedingungen erwies sich die sowjetische Energieausfuhr als die einzige dynamische Komponente dieses Handels. Die letzten Jahre haben manche Entwicklungen gezeigt, die die Frage nach dem Zusammenhang zwischen Osthandel und Entspannung wieder einmal stellen, und gleichzeitig neue Elemente dieser komplizierten Wechselwirkung hervorheben (Sanktionspolitik, innerwestliche Divergenzen, Blockinteressen und Spielraum der kleineren Bündnispartner, usw.).

Der erste große Teil des Buchs analysiert sämtli-

che Teilbereiche der Ost-West-Wirtschaftsbeziehungen (Handel, Kredit, Technologie, Industriekooperation, Energie).

J. Bethkenhagen stellt mit Recht fest, daß die strukturellen Träger des Ost-West-Handels einerseits die amerikanischen Getreidelieferungen in die Sowjetunion, andererseits die sowjetischen Energieausfuhren in die westeuropäischen Länder wurden, so daß die außenwirtschaftsintensiveren, kleineren europäischen RGW-Länder einen immer kleineren Anteil am Ost-West-Handel hatten. Zwar ist die Stagnation im Handel zu einer Zeit eingetreten, in der auch politische Schwierigkeiten verstärkt in den Vordergrund traten, kann man die erstere vorwiegend durch wirtschaftliche Motive erklären. Es ist eine andere — in ihren Konsequenzen jedoch nicht weniger wichtige — Frage, daß die ungünstigen politischen oder politisch motivierten wirtschaftlichen Erwägungen auf eine geographische und strukturelle Entwicklung in den kleineren RGW-Ländern hinarbeiten, die die wirtschaftliche Grundlage der politisch ermöglichten oder motivierten Ost-West-Zusammenarbeit, deren Chancen gar nicht vergraben sind, schmälern können. Der Verfasser zieht den Schluß, daß die Perspektiven des Ost-West-Handels viel ungünstiger zu beurteilen seien als vor einem Jahrzehnt, und schon eine Stagnation der Handelsanteile als ein Erfolg zu werten sei.

K. Schröder untersucht die Kreditbeziehungen und erschließt dabei die wichtigsten Gründe der Westverschuldung der RGW-Länder (Euromarktentwicklungen, bankinterne Faktoren, Polens Illiquidität, Kapitalrückzüge, politische Faktoren). Der Beitrag berührt die monetären Sanktionspläne, die ziemlich bald ad acta gelegt worden sind. „Vermutlich waren es die Erkenntnis, daß hohe Sanktionskosten in Ost und West auftreten, und die Unsicherheit der Politiker über die Kontrollierbarkeit und Begrenzbarkeit von Folgeprozessen, die durch monetäre Sanktionen ausgelöst werden, die dazu führten, daß die offizielle Diskussion über die Anwendung dieses scharf wirkenden Instruments noch 1982 relativ schnell wieder verstummte.“ (S. 52) Eine gründliche Analyse zeigt, daß die Verschuldungslage der RGW-Länder mit der der Entwicklungsländer nicht vergleichbar ist; daß die RGW-

Länder — eben wegen der stark planwirtschaftlichen Elemente — durchaus in der Lage waren, entsprechende Maßnahmen zu ergreifen; daß eine längerfristige Erholung die bewußte und planbare, gegenseitiges Vertrauen weckende Zusammenarbeit zwischen den für Strukturplanung, Wettbewerbsfähigkeit und Modernisierung verantwortlichen sozialistischen Behörden und den westlichen Banken voraussetzt. Sowohl Stabilitäts- als auch kreditpolitische Überlegungen sollten die westlichen Banken an einer solchen Zusammenarbeit interessiert machen.

Ausmaß und Struktur der sowjetischen Technologieimport und ihr Einfluß auf die ganze sowjetische Wirtschaft bilden den Gegenstand des Aufsatzes von *J. Nötzold*. Es wird hier auf die Interessengegensätze zwischen den Vereinigten Staaten und Westeuropa, vor allem der Bundesrepublik Deutschland eingegangen, und die Alternative aufgezeigt, daß die Technologieexportinteressen der Bundesrepublik — ebenso wie die Agrarausfuhrinteressen der USA — durchgesetzt werden können. Der Verfasser plädiert für vermehrte Wirtschaftskontakte, auch im Technologiebereich, denn sie bilden ein wichtiges Element der Vertrauensbildung. „Wenn diese kooperative Komponente in den Beziehungen der westlichen Industrieländer zur Sowjetunion fehlt, wird diese stärker auf ihr militärisches Potential und die internationale Ausweitung des sowjetischen Gesellschafts- und Wirtschaftssystems abstellen als im umgekehrten Fall.“ (S. 74)

Trotz partieller Erfolge konnte die Zusammenarbeit von Unternehmen — vor allem in der verarbeitenden Industrie — die gehegten Hoffnungen nicht erfüllen. *K. Bolz* sieht einen der Hauptgründe darin, daß die sozialistischen Betriebe die wirklichen westlichen Interessen (Verkaufen) nicht, bzw. erst spät erkannt haben. In der neuen wirtschaftlichen Situation haben mehrere RGW-Länder neue Möglichkeiten für Joint-Ventures geschaffen, die aber bisher wenig Erfolg aufzeigen können. Es liegt einerseits wahrscheinlich darin, daß das weltwirtschaftliche und -politische Klima diese Form der Zusammenarbeit wenig fördert, andererseits darin, daß die mehrmals modifizierten Verordnungen immer noch wenig Anreiz bieten, bzw. die allge-

nen wirtschaftspolitischen Rahmenbedingungen im Gastland nicht reizvoll genug sind.

F. Müller behandelt die Energiebeziehungen, und erstellt die Prognose, nach der die sowjetischen Energieausfuhren in den Westen in den kommenden Jahren nicht ausgeweitet werden können, auch wenn neue und vertraglich abgesicherte Gaslieferungen stattfinden werden. Ausführlich beschäftigt sich der Beitrag mit dem politisch lange Zeit kontroversen Erdgas-Röhren-Geschäft. Zwar sind die Möglichkeiten der Ausweitung der Energiebeziehungen in Europa recht beschränkt, kann der offensichtliche Wille der Westeuropäer die Zusammenarbeit im Energiesektor zu vertiefen, als ein politisches Signal für die Aufrechterhaltung des KSZE-Prozesses bewertet werden.

Im abschließenden Kapitel des ersten Hauptteils zieht P. Knirsch die Bilanz der Wirtschaftsbeziehungen. Aus mehreren Beiträgen ist ersichtlich, daß das Wechselverhältnis zwischen Politik und Wirtschaft gar nicht einfach ist. Insbesondere in den letzten Jahren haben sich autonome wirtschaftliche Prozesse entwickelt, die die Kontakte schon in sich selbst ungünstig beeinflusst haben. Manche Länder, bzw. Experten scheinen dabei die politischen oder politisch motivierten Auswirkungen höher und die tatsächlichen, objektiven wirtschaftlichen Probleme niedriger einzustufen als es für eine stichhaltige Analyse, auf der die Möglichkeiten der Zukunftsplanung beruhen sollten, wünschenswert wäre. Man kann jedoch nicht umhin auf einige positive Entwicklungen aufmerksam zu machen (Entkrampfung der Schuldenlage, westliche Konjunktur), die auch den Ost-West-Wirtschaftsbeziehungen — unabhängig von politischen Kalkülen — einen gewissen Auftrieb verleihen können.

Der zweite Hauptteil, der die Politik des Westens behandelt, enthält Länderanalysen und versucht die wichtigsten Interessenelemente der führenden westlichen Wirtschaftspartner klarzustellen. Dabei wird die Bundesrepublik „aus amerikanischer Sicht“, die USA dagegen „aus der Sicht der Bundesrepublik“ behandelt, während die anderen Beiträge von je einem Experten der betreffenden Länder stammen.

A. Stent beschreibt die Ost-West-Handelspolitik der Bundesrepublik während der sozialliberalen Koalition und unter der CDU—FDP-Regierung.

Sowohl politisch, als auch ökonomisch sind die Interessen der Bundesrepublik wichtiger (vitaler) als die der anderen westeuropäischen Länder und der Vereinigten Staaten. Gleichzeitig stellt die Autorin eine fundamentale Asymmetrie zwischen den politischen und wirtschaftlichen Interessen der Bundesrepublik fest und behauptet, „die Bundesrepublik könnte auch ohne den Osthandel überleben“. (S. 127) (aber nicht ohne Ostpolitik!) Es waren jedoch kaum ausschließlich politisch motivierte Proteste, die in der Bundesrepublik in den letzten Jahren hinsichtlich der amerikanischen Sanktions- und Embargopläne (und -politiken) laut geworden sind, sondern verbarg sich hinter ihnen ein handfestes und langfristig angelegtes wirtschaftliches Interesse. In der Zukunft erwartet der Beitrag eine „Zwei-Pfeiler-Entspannungspolitik“ von der Bundesrepublik: stärkere Zusammenarbeit mit den USA im Sicherheitsbereich, und unabhängigere Haltung in den Handelskontakten zu den sozialistischen Ländern.

Die innerdeutschen Beziehungen stellen einen wichtigen und spezifischen Bereich der „Ostpolitik“ der Bundesrepublik dar. H.-D. Jacobsen plädiert für die verstärkte Einbindung der DDR in ein Geflecht bi- und multilateraler Beziehungen um europäische Spannungen weiter abzubauen oder wenigstens das Verhältnis der beiden deutschen Staaten von weltpolitischen Spannungen möglichst fernzuhalten.

R. Fritsch-Bournazel untersucht den französischen Osthandel im Spannungsfeld von Ideologie und wirtschaftlichem Zwang. Sie befaßt sich mit den Gruppen, die die Ostwirtschaftsbeziehungen befürworten (Industrie, vor allem) und macht die interessante und nach einigen Erfahrungen nicht spezifisch französische Feststellung, daß „der wirtschaftliche Sachzwang zur Ausweitung des Handelsaustausches mit der Sowjetunion in gleichem Maße wuchs, wie der Verfall der Außenwirtschaftsposition Frankreichs“. (S. 147) Im Kreis der Gegner der Ostwirtschaftskontakte befinden sich mehrere kleinere Gruppen, von einem profilierten Anti-Osthandel-Lobby könnte man jedoch nicht sprechen. Die neue französische Regierung unter Mitterrand ließ die traditionellen kooperativen Elemente der französischen Ostpolitik in den Hintegrund treten. Zum ersten Male seit de Gaulle kann dem Verhältnis zur Sowjetunion keine Schlüsselrolle für

die Absicherung des französischen Unabhängigkeitsanspruchs mehr eingeräumt werden. Damit entfällt ein wichtiger Pfeiler der französischen Globalpolitik, die nach der Aufwertung der eigenen Position und der gleichzeitigen Einbindung der Bundesrepublik (oder des deutschen Potentials) trachtete. Dieses fehlende Element wird vorwiegend im nationalen Rahmen zu ersetzen versucht, und teilweise durch verstärkte Hinwendung zu den Vereinigten Staaten (insbesondere in Ost-West-Sicherheitsfragen) kompensiert. Damit steht aber das ganze gaullistische Erbe in der neuen innenpolitischen und internationalen Situation auf dem Spiel.

Die britische Haltung kann durch einen weitgehend stabilen Konsens charakterisiert werden, daß der Handel mit den RGW-Ländern aufrechtzuerhalten, sogar gefördert werden sollte — stellt *S. Woolcock* gleich am Anfang seines Beitrags fest. Großbritannien, das eines der Verlierer des Ost-West-Handels in den 70er Jahren war, versucht seine Rolle zurückzugewinnen. Anzeichen dafür findet man sowohl in der positiven Haltung der britischen Bankkreise zur Verschuldungsproblematik Anfang der 80er Jahre, als auch in den letzten zwei Jahren unternommenen, politisch untermauerten Handels-offensiven der britischen Regierung. Aus der spezifischen britischen Lage ergibt sich, daß die amerikanischen Vorstellungen und Koordinationspläne hinsichtlich COCOM und Kreditpolitik teilweise unterstützt werden. Gleichzeitig wendet sich Großbritannien gegen die Ausdehnung der amerikanischen Export Administration Act auf amerikanischen Tochtergesellschaften in Großbritannien, und versucht die Interessen der britischen Elektronikindustrie zu verteidigen.

Italien, das ein Vorreiter des Ost-West-Industriekooperation war, ist eindeutig an Entspannung und Fortsetzung des Ost-West-Handels interessiert. *G. Schiavone's* Beitrag hebt die Rolle der staatlichen italienischen Konzerne (ENI, IRI), sowie die des Fiat-Konzerns hervor.

M. Jopp unterstreicht die Wichtigkeit der EG in den Ost-West-Wirtschaftsbeziehungen. Nach einer kurzen Schilderung der wichtigsten Etappen einer institutionalisierten Zusammenarbeit zwischen EG und RGW geht er auf einige EG-Probleme ein. Zwar ist für die Außenhandelspolitik die EG

verantwortlich, gibt es eine Reihe nationalstaatlicher Sonderinteressen, und ein entscheidendes Fehlen vom „politischen Elan“ der Gemeinschaft hinsichtlich der Gestaltung und Konzeptualisierung der Ost-West-Wirtschaftsbeziehungen. Die EG hat zu lange an einem alten Konzept der „wirtschaftlichen Auflockerung“ und der „politischen Gegenzugeständnisse“ festgehalten, und dabei wahrscheinlich ziemlich viel Zeit verloren. Wie der Autor bemerkt: „Eines der zentralen Probleme besteht zweifellos in der Übersensibilität der Westeuropäer gegenüber östlicher Importkonkurrenz. Die EG befindet sich deshalb heute bei ihrer handelspolitischen Strategie gegenüber den RGW-Ländern in einem Dilemma zwischen politischem Anspruch und ökonomischer Wirklichkeit. Es ist nicht mehr nur die Frage, ob die von der EG gewünschten bilateralen Abkommen auch ohne einen Rahmenvertrag mit dem RGW zu haben sein werden. Vielmehr geht es heute auch darum, ob das Zustandekommen von Handelsverträgen, an denen von osteuropäischer Seite ein gewachsenes Interesse zu verzeichnen ist, nicht an der Schwierigkeit der Gemeinschaft scheitert, ausreichende Liberalisierungsangebote zu machen.“ (S. 193) Besonders problematisch wird dabei der Agrarhandel betrachtet: während die EG ihre landwirtschaftlichen Ausfuhren nach Osteuropa beträchtlich ausdehnen konnte, erschwert sie weiterhin den Marktzugang für exportfähige RGW-Länder. Die EG als Wirtschaftsmacht konnte den amerikanischen Versuchen besser widerstehen als es im nationalen Rahmen möglich gewesen wäre. Längerfristig kann sich die westeuropäische Integration jedoch erst dann behaupten, wenn es ihr gelingen würde eine eigene Ausfuhrpolitik zu konzeptualisieren, die Lösungsperspektiven aufzeigen und dem gegenseitigen Handel wichtige (strukturelle) Impulse geben könnte. Die europäische Stabilität, an der sowohl die einzelnen Mitgliedsländer, wie auch die Integration interessiert sind, erfordert ein „geschlossenes ostwirtschaftliches Konzept der Gemeinschaft“, wie auch „eine vertragliche Regulierung der ökonomischen Beziehungen zwischen Ost- und Westeuropa“. (S. 204)

R. Rode überblickt die Ostpolitik der Vereinigten Staaten. Als Befürworter der Ostpolitik behandelt er die Landwirtschaft, die Industrie und das

Entspannungslobby, wobei die Landwirtschaft ihre Interessen am weitesten verteidigen, ja sogar trotz politischer Trendwende weiterhin durchsetzen konnte. (Im Gegensatz zur Industrie, die mit dem politischen Kurswechsel verstummte.) Die unterschiedlichen Verhalten lassen sich durch unterschiedliche Größenordnungen des Handels erklären. Das Dilemma der USA läßt sich folgendermaßen zusammenfassen: wie kann man Geschäftsinteressen mit Weltmachtinteressen in Einklang bringen? Zur Zeit versucht die amerikanische Ostpolitik die Kontakte als machtpolitisches Instrument einzusetzen, wobei Sicherheit vor Wohlfahrt rangiert, aber bestimmte Geschäftsinteressen, vor allem die der Getreideexporteure bewahrt werden.

Zwei weitere Beiträge behandeln spezifische Züge der amerikanischen Osthandelspolitik. H. Müller untersucht die amerikanische Haltung anhand der Energiepolitik, und weist auf die Vorherrschaft der machtpolitischen Faktoren hin. H.-D. Jacobsen schildert die Exportkontrollpolitik der USA, die einerseits dem erstrangigen amerikanischen handelspolitischen Ziel, nämlich dem Abbau des Handelsdefizits und der Erhöhung der amerikanischen Konkurrenzfähigkeit zuwiderläuft. Andererseits verletzt sie Interessen der westeuropäischen und fernöstlichen Verbündeten und kann Unabhängigkeitsbestrebungen in den Technologiepolitiken Impulse geben. Längerfristig behindern derartige Entwicklungen die Zusammenarbeit der OECD-Länder und beeinträchtigen eine für alle Seiten vorteilhafte internationale Arbeitsteilung.

P. Pissula faßt die Rolle der wichtigsten internationalen Wirtschaftsorganisationen (UNCTAD, GATT, IWF, Weltbank) hinsichtlich des Ost-West-Handels zusammen. Sie weist auf die unterschiedliche Beurteilung dieser Organisationen in den einzelnen RGW-Länder hin. Sie spricht sich für vermehrte Mitarbeit Osteuropas im Währungsfonds — trotz systembedingter Hindernisse — aus, und erblickt hier ein Element, mit dessen Hilfe die Ost-West-Wirtschaftsbeziehungen aus der gegenwärtigen Stagnationsphase herausgeführt werden könnten.

Als Zusammenfassung dieses Teils stellt R. Rode (Bilanz der Politik des Westens) fest, daß das westliche Interesse an der intersystemaren Zusammenarbeit differenziert ist, wobei der Bundesrepu-

blik eine Vorrangstellung zukommt. Gleichzeitig kann dem relativ eindeutigen, pro-osthändlerischen westeuropäischen Interessenprofil in den Vereinigten Staaten nichts entsprechendes entgegengesetzt werden. Die gemeinsame westeuropäische Haltung konnte — hinter dem französischen und englischen „Prestige-Nationalismus“ — die vom amerikanischen Standpunkt am meisten abgerückte deutsche Position verbergen und damit eine direkte, bilaterale Konfrontation zwischen der Bundesrepublik und den USA bisher vermeiden helfen. „Die Anfang der achtziger Jahre eindeutig transatlantische Konfliktlinie in der Ostwirtschaftspolitik muß... keineswegs stabil bleiben. Die einheitliche Phalanx der Westeuropäer ist ohne einen fundamentalen Gegensatz in der Sache durch den Anspruch der Vereinigten Staaten, Machtpolitik ohne Rücksicht auf europäische Interessen (...) zu betreiben, erst erzeugt worden.“ (S. 273)

Der dritte Hauptteil behandelt die Politik des Ostens in zwei Studien. H. Machowski untersucht die Sowjetunion und weist auf die Grundzüge der sowjetischen Westwirtschaftspolitik hin. Schon wegen abgeschlossener Verträge kann man keine Änderung der sowjetischen Exportstruktur in den kommenden Jahren erwarten. Hinsichtlich der geographischen Verteilung des Westhandels besteht weiterhin großes sowjetische Interesse an der Entwicklung der Wirtschaftsbeziehungen zu den USA, an der Fortsetzung des Dialogs mit Japan. Solange die Beziehungen zwischen EG und RGW nicht geregelt werden, werden die kleineren RGW-Staaten die ökonomischen Kosten der sowjetischen EG-Politik tragen müssen. (S. 283) Die sowjetische Wirtschaft hat von den Westwirtschaftsbeziehungen profitiert, ohne dabei vom Westen abhängig zu werden, aber auch ohne eine wettbewerbsfähige Industrie aufbauen zu können. Anfang der 70er Jahre waren politische und wirtschaftliche Interessen in den sowjetischen Westbeziehungen nahezu deckungsgleich. Im späteren Verlauf sind diese Interessen — infolge internationaler Spannungen — mehrmals in Konflikt zueinander geraten, wobei die Gegensätze mal zugunsten der Politik, mal zugunsten der Wirtschaft gelöst worden sind. Ein einheitliches Konfliktlösungsmuster läßt sich nicht feststellen. Der Verfasser plädiert

für vermehrte Wirtschaftsbeziehungen ohne dabei mit einer Veränderung des sowjetischen Wirtschaftssystems zu rechnen.

Die ungleich schwerere Situation der kleinen europäischen RGW-Länder wird von F.-L. Altmann behandelt. Der Aufsatz macht auf unterschiedliche Interessenlagen aufmerksam, die teils dem unterschiedlichen Entwicklungsgrad der einzelnen Volkswirtschaften, teils den unterschiedlich konzipierten Wirtschaftspolitiken entspringen. Die Interessengruppierungen hinsichtlich der Westwirtschaftsbeziehungen werden in den Kategorien Reformer-Orthodoxe, bzw. Planer-Industriemanager analysiert. Mit Recht wird darauf verwiesen, daß die Zentralplaner — trotz Dezentralisierungsversuche — in zahlreichen Fällen mehr Westbeziehungen wünschen als die Industrie, die härtere Konkurrenzsituationen nur ungern — wenn überhaupt — akzeptieren würde. Die wirtschaftlichen Hauptprobleme der kleinen RGW-Länder sieht Altmann einerseits in den schlechteren Bedingungen der Rohstoff- und Energieversorgung aus der Sowjetunion, andererseits in der Befriedigung der erhöhten (oder in den letzten Jahren zurückgestellten) Konsumentenbedürfnisse. Wie im Entwicklungsgrad und in der bisher verfolgten Wirtschaftspolitik, kann man auch hinsichtlich der oben genannten Probleme mit unterschiedlichen (differenzierten) volkswirtschaftlichen Antworten rechnen.

Im relativ kurzen abschließenden Teil überblickt G. Adler-Karlsson die Wirkungsmechanismen von Embargos und Sanktionen und hebt ihre schädliche Wirkung auf die transatlantischen Beziehungen hervor. In der Fortsetzung der gegenwärtigen amerikanischen Ostwirtschaftspolitik sieht er die Gefahr einer Abkoppelung Westeuropas von den Vereinigten Staaten.

Die Herausgeber betonen in ihrer Zusammenfassung, daß die Frage nach dem Zusammenhang zwischen Osthandel und Entspannung zu Beginn der 80er Jahre nicht eindeutig beantwortet werden kann. Es ist klar, daß die Interessen der RGW-Länder primär ökonomischer Natur waren und weiterhin sind, während die westlichen Staaten sowohl wirtschaftliche, als auch politische Interessen vertreten. Wirtschaftsbeziehungen haben sich als stabilisierendes Element in den Ost-West-Be-

ziehungen erwiesen; gleichzeitig waren sie nicht in der Lage die Entspannung trotz ungünstiger Großwetterlage voranzutreiben.

Das Buch stellt einen wichtigen Beitrag zur Erforschung der Ost-West-Wirtschaftsbeziehungen und zur Untersuchung der aktuellen Lage dar. Man kann mit den wichtigsten Feststellungen einverstanden sein. Kritik sei insofern erlaubt und gerechtfertigt, daß die mehrmals hervorgehobenen Sonderstellungen der kleinen RGW-Länder einzeln nicht genügend untersucht sind und deswegen die Struktur des Bandes etwas einseitig (auf den Westen orientiert) ausfällt. Sicher wäre es keine einfache Aufgabe, auf der anderen Seite jedoch wissenschaftlich recht reizvoll gewesen, wenn die Verfasser über den aktuellen Stand hinaus manche Zukunftsvarianten aufgezeigt hätten. Hier scheinen aber nicht alle die selbe Meinung zu vertreten: einige erwarten eine — sei es nur leichte — Besserung, andere schreiben die Tendenzen der letzten Jahre fort. Wie Erfahrungen zeigen, kann es zu interessanten Entwicklungen kommen, wenn niemand (oder ganz wenige) — schon aus wissenschaftlichen Gründen — mit ihnen rechnet. Träger der Wandlungen formierten sich — unter der Oberfläche: — eben in der recht schwierigen ersten Hälfte der 80er Jahre, und die fortdauernden Grundtendenzen werden diese Kräfte in Ost und West weiter konsolidieren helfen können. Heute geht es nämlich nicht nur um vermehrte Kontakte und Entspannung oder Zurückziehen und Wirtschaftskrieg: es geht — anders als in früheren Etappen der Geschichte der Ost-West-Beziehungen — um die politische Stabilität und eine neue (erneuerte) Rolle Europas.

A. INOTAI

LAVIGNE, M.: *Economie internationale des pays socialistes*. (International economy of the socialist countries). Armand Colin Editeur, Paris 1985. 254 p.

Except for an earlier work by the same author: "The socialist economies of the Soviet Union and Europe" (Les économies socialistes soviétiques et européennes) centred mainly on the facts of devel-

opment of each socialist economy, a summary work has so far been missing in the French-language literature on world economy which presents East European socialist countries from the aspect of world economic processes and participation in them. Marie Lavigne's latest book fulfils exactly this task and, on account of its richness in facts, delicately formulated conclusions and last but not least, its subject covering the full range of foreign economic relationships of the CMEA countries, it is certainly most apt to be used as a reference material by Francophone economists interested in the world economic situation and relationships of Eastern Europe.

The logical and clearly arranged structure of the book makes it easy for the reader to orientate himself in the material treated. The introductory chapter presents the theoretical questions of socialist countries' connections with world economy, their armoury of economic instruments, and their mechanism of adjustment to the world economic crisis (that is, their attempts to adjust). *Part I* entitled, "Polarisations and policies", presents in four consecutive chapters the economic operation between the three poles of world economy, the trade relations, to be considered as of a novel type, between CMEA countries and capitalist economies, the relation between economic policy and foreign trade in the East European socialist countries, and, taking into account the mutual reproaches in regard to protectionism, the trade policy practices of East and West.

Part II under the title "Products and strategies" discusses in sections the three fields of key importance in the world economic relations of CMEA countries. The three chapters deal with technologies, the foreign trade of primary energies, and agriculture. Their dominant theme is the interpretation of the world economic vulnerability of East European countries and in this context, the examination of why the elimination of certain macroeconomic shortage phenomena demands that better use be made of international economic cooperation, and not only in the regional sense. In these chapters, the financial aspect is still missing from the train of thought, which is because the monetary chapters in *Part III* entitled "Financing

and risks", provide practically a summary of what has been explained previously.

Part III starts with an analysis of the financial relationships within the CMEA and of the different system and regulatory specificities of such relationships with the capitalist economies. A special place is devoted to the Western practice of export credit granting and to the changes in the terms of financial credits granted to the CMEA countries, in reflexion of the world political and economic processes of the 1980s.

The world economic performance of the CMEA countries has been judged in recent years, justly or not, increasingly by their financial or more exactly, debt situation. It is an undeniable fact that in the economic growth process of the CMEA countries in the early 1980s one of the most important path-changing factors was the necessity to reduce the debt. Thus it is by all means justified that the last chapter of the book entitled "Debts and reschedulings" should attempt to present the international financial situation of the CMEA countries from several aspects. It adds to the informative value of the chapter that the authors puts together data from various sources in each instance. The chapter, having also treated a few timely questions of the Soviet precious metal trade, is closed by considering the chances of a further extension of relations between the international monetary institutions and the CMEA countries.

All this is not to say that Marie Lavigne intended her book to be a manual and that is why she made no efforts towards a theoretical generalization of the facts. Several conclusions and statements in the book provide an amount of new information for theoreticians interested in realistic economic policy alternatives, as well as for practical economists even in such fields of which, according to some fairly wide-spread views, nothing basically new can be said.

For example, how are relationships of cooperation to be interpreted? the author considerably enlarges the interpretation of this generally used term: in her concept, it covers all forms of production specialization and cooperation just like barter trade or economic development aid granted to developing countries. This very wide interpre-

tation of cooperation relationships is not solely based on the fact that in several languages *cooperation* is the only word for any joint action. It also implies the idea that most forms of economic relations which go beyond traditional trade also help to bring the partners' production and management backgrounds closer to each other. This then opens the way for recognition of the long-term advantages of joining the international division of labour, with some significance beyond the profit of individual business transactions.

East-West cooperation has some progressive forms, as for the wider interpretation of the concept, however, it must not be forgotten that some of its types are expressly retrograde in the way they put into practice the ideal of a multi-lateral and unrestrained international trade. One of them is barter, on which the author makes several novel statements. She calls attention to the remarkable difference between the systems of division of the various types of industrial cooperations published by the UN Economic Committee for Europe first in the late 1960s and then in 1980. The new system is a lot more simple than the earlier one, since it recognizes only two basic types: first, the selling of complete equipments or turnkey factories against repayment in products manufactured by these; second, all remaining types of business. It is quite clear from the division that those who elaborated this typology considered the various forms of cooperation and barter trade closely related. Marie Lavigne justly remarks that, relying on this typology, the range of East-West industrial cooperation relationships would seem very wide, however, the greatest part is taken up with barter transactions.

In disputes over barter businesses the dominant view used to be that the CMEA countries wished to extend the barter business because of their foreign exchange troubles, non-convertible currencies and the low competitiveness of most of their products. The literature of the CMEA countries reacted to these opinions with some delay. A characteristic manifestation of this is the Soviet evaluation published in 1983 and quoted in the book, which clearly draws the line between "cooperation based

on barter", thus among others buy-back agreements, and simple exchanges of goods.

Marie Lavigne quotes a number of evaluations and numerical estimations in an attempt to give an idea of the weight of the barter trade within East-West trade. The figures listed move between 10 and 28 percent. However, for lack of complementary information (for example, whether the figures cover barter transactions that have been suggested, or laid down in a contract, or effectuated) they cannot be compared. The author does not hold barter to be refused from the outset, especially if, apparently, there is no other important means for expanding East-West trade. She thinks it likely that in the future, the main motive of growth of East-West barter trade will be the exchange of industrial articles for raw materials, while that consisting exclusively of processed goods will grow at a slower rate. The spreading of the barter business is promoted by several factors in both the East and the West.

It has been found, for example, that in the business strategy of a few large Western enterprises concerning Eastern Europe, barter trade is gaining ground, often accompanied by "excuses made in advance". The barter itself often remains quite hidden because, with the aid of so-called "witness accounts", mutual deliveries may be separated even by several years, while only a fictitious money turnover takes place. Today it quite often happens that financial institutions specialized in barter trade open credits in advance for the Western exporter, or refinance their outstanding East European debts recoverable in goods. In this respect, it is another relatively new development that the financial and commercial instrumentary of West European banks and trading companies specialized in barter is growing fast, which creates even further reasons for Eastern and Western companies to initiate barter transactions.

The high probability of the further extension of barter transactions is, in itself, by no means one and the same thing as an accelerated world economic integration of the CMEA countries. What is more, without other forms of cooperation, this would rather contribute to their lagging behind the most advanced Western countries. Today several CMEA

countries acknowledge, and express it in their official standpoint, that the various forms of interenterprise integration must be allowed.

The picture the author paints of experiences so far gained is colourful, and an important place is dedicated by her to the Romanian, Polish, and Hungarian regulation on joint enterprises followed with attention since the mid-1970s. In all three countries, the difference is remarkable between the more or less ambitious objectives of these regulations, and the poor facts of their practical realization. However, the author points out that the underlying causes are not the same everywhere. In Hungary, it is mainly that in the beginning, joint enterprises were only allowed in a narrow field, and no satisfactory advantages could be offered to the first Western investors who took on quite a considerable risk. This factor was significant in Romania and Poland, too, and further, these countries could not cope with the difficulties arising from the enclave character of the joint enterprises, and were unable to coordinate the functioning of these with planning, foreign economic regulation, and the activities of home enterprises which had relations with the former. In Romania, serious trouble was caused by the fact that the wages of the Romanian workers of joint enterprises were to be calculated on the basis of the West European wage level of the industry in question, and the state wished to simply take away, not even in the form of tax, the amount that surpassed the Romanian wage level. Finally, in several cases, management organs were of the opinion that a liberalized regulation is in itself sufficient and did not make enough efforts to advertise in the West the possibilities of establishing joint enterprises. In this respect, Marie Lavigne considers the case of the Polish enterprises Polonia as an exception, since their successful publicity activities were followed by the establishment of appr. 450 such enterprises employing about 19 thousand people by 1983.

It seems to be one of the important lessons of the book that by the early 1980s the necessity of adjusting to the world economy had been recognized by each CMEA country and, as a first sign, they began to eliminate the artificial barriers between the spheres of production and foreign

trade. These efforts were, however, crowned only with a partial success, which is indicative of the importance of the constraints the institutional system raises in the way of a foreign economic opening in most East European countries. At this point, the book treats at length Hungarian initiatives in establishing the limited partnerships in foreign trade interest *Interinvest* and *Medinvest*, the foreign trading company of a general profile *Generalimpex*, the *Central European International Bank*, and agencies of the type *Interag*. It is perhaps worth quoting one of the statements designed to explain the background of such initiatives: "In Hungary, this development was motivated (also—Á. T.) by the knowledge that the potentials of the country are not properly exploited because of structural burdens." While acknowledging the theoretical importance of the initiatives, the author points out repeatedly that they have not yet led to any far-reaching changes. This goes along, unsaid, with the opinion often found in Hungarian literature that a liberalized regulation and the incentive to establish new forms of enterprise cannot create new conditions of economy, if there is no change in the entire system of market relations.

In the other CMEA countries, attempts have also been made, to bring the production sphere closer to the world market. Of these attempts, Marie Lavigne draws attention to the reform of the Bulgarian foreign trade organization put into effect in three phases: 1978, 1979, and 1980, as well as to the modernization of the foreign trade organizations of Czechoslovakia and the GDR, the main point of which was that decision-making centres established as enterprise unions took over some of the functions of foreign trade ministries. It is characteristic of the careful style of the author to avoid any statement that might invite attacks from either side. So, in the part discussing the changes in the foreign trade mechanisms of the above-mentioned two countries, she never uses the expression "mid-level management organs", or any phrase which might indicate that, although in a different way, the new organizational system is just as centralized as was the old one.

The only three-page summary at the end of the volume deserves special mention, since in it all the

essential questions are treated in a rarely seen conciseness, which today take up the attention of scholars examining the future world economic relationships of the CMEA countries. The author stresses more than once that, in view of a successful world economic integration of Eastern Europe, it is not enough to expect that these countries transform their production structure and their economic management and regulation systems. These processes must be encouraged by the West, too, by not raising protectionist obstacles to East European

exports and thus offering an economically as well as politically acceptable alternative to regional isolation. The West European attitude is widely different in its manifestations in political declarations and in economic actions, which is most badly felt in Hungary, according to Marie Lavigne. While it is often uncomfortable for Hungary that some of the special features of its economic system are overdimensioned in the West, all the word of praise do not help it to successfully place its goods on the Western markets.

Á. TÖRÖK

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* We acknowledge the receipt of the enlisted books. No obligation to review them is involved.

** To be reviewed in *Acta Oeconomica*.

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Mihály LAKI, see Vol. 32, Nos 1–2.

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BOOK REVIEWS

BOOKS RECEIVED

Journal of Consumer Policy

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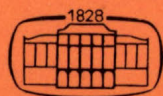
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CAUSES OF DIFFICULTIES IN CHANGING THE NORMAL STATE OF THE HUNGARIAN ECONOMY

M. PETSCHNIG

The Hungarian economy has to answer the world economic challenge in the form of structural adjustment. This implies such change in the normal state of economy in which the qualitative features of management, corresponding to the requirements of the reform, appear. Up to now no change has occurred in the normal state that would have been guided by the reform programmes. The regulatory powers of the economic system proved to be stronger than the intentions working for change. The article seeks an answer to the question what regularities must be reckoned with (and done away with) in the system of economic control and management to attain the desired change in the normal state.

The adjustment process in response to the world economic challenge started in the Hungarian economy in the late 1970s. The response practically amounts to structural adjustment to the changed international relations. Economic policy evaluations consider the first phase of the adjustment process to have ended with the year 1984. In the period from 1979 to 1984 successful changes in the macroeconomy enabled Hungary—in contrast to a lot of other countries—to meet her debt service commitments.* This adjustment was, however, achieved by driving the economy onto a forced path, by forced measures and by “manual control”. The adjustment took place *in global terms, not selectively*, by curbing growth and imports and the economic management attitude of the microsphere remained constant (if not changing for the worse).

Therefore, if we do not wish to stay behind world economic development, we have to achieve a complete change in the normal state of economy in the coming period, making the required qualitative features of management tangible.

The normal state

János Kornai writes the following words about the normal state: “We can perceive the meaning without an exact definition. There is a system whose external conditions as well as internal behaviour exhibit regularities which are more or less stable. The “regular” values of the main state variables of this system can be called “normal state”. Small external or internal disturbances in the system make the values

* In the evaluation, however, the fact must be remembered that in the period under discussion Hungary's substantial debts to the Soviet Union were rescheduled.

of state variables depart from their normal levels, yet even considering these fluctuations, this "normal state" expresses the prevalent tendency.

We must avoid associating any value judgement—expressed or implied—with the term "normal state". . . . To assert that a system is in its normal state is neither praise nor rebuke; it is not condemnation, but not an excuse either. By this, we say no more and no less than that a system functions in accordance with its own inner nature." [1]

The various economic reforms of the socialist countries were all intended to bring about a lasting qualitative change in the "regular" values of the "main state variables" of the economic system, in consequence of which the actors of the economy would work more efficiently, otherwise than before, under the conditions of a cost-sensitive market economy. The reform programmes, if aimed at bringing about thorough changes, may be considered as scenarios to the process of changing the normal state variables. The failure to implement these programmes shows, however, that the required change in the normal state has not taken place, since the regulatory powers of the old system proved to be stronger than the intentions initiating change. In the debates about the reform, the position has been officially accepted in Hungary that it is not the socialist mode of production, but only its "code system"* where changes must be brought about. As a consequence, the environment shaping the behaviour of the microsphere has remained unchanged in its essential elements. The phenomena and economic events remained within the same framework, while efforts were made to operate the "skeletal and muscular system" of social production by means of a differently programmed "nervous system".

The success of changing the normal state through reforms is largely dependent on the extent to which the institutions and conditions of the system to be changed are known. A number of valuable economic and sociological descriptive papers treat the attitudes and interactions of the actors of Hungarian economy.** The present paper wishes to join their line in attempting to describe the main supporting pillars of the normal state of economy, even against charges of superficiality on account of generalizations.

* I.e. the economic control and management system.

** Of these, János Kornai's works must be mentioned first of all.. Kornai set himself the task to describe the generally valid aspects of the socialist mode of production. K. A. Soós [2], debating with him in this periodical, in fact says the same thing in another way, striving after more differentiated formulations in certain respects, with stronger changes in emphasis, with a theoretical generalization centering on medium-level management—of the actual functioning of the socialist economy. The Hungarian authors Tamás Bauer, András Bródy, László Bogár and Ferenc Tókei describe the same economy from different approaches. The sociological descriptive theory is again different, from which the works of Jenő Andics, Mihály Bihari, András Hegedűs, Lajos Héthy, Teréz Laký, Csaba Makó, Ferenc Nemes, Tamás Rozgonyi and Éva Tárnok must be mentioned here. The economic reports and interviews supporting the descriptive theory should not be omitted, either (thinking primarily of those by Katalin Bossányi and Katalin T. Forgács).

The enterprise—in a global approach

We interpret the enterprise, beyond its economic character, as a kind of “nodal point” of social relations and we shall examine, in which way it processes information received, and what kind of information is released. The description will be deductive, progressing from the general level to the individual.

In its relations with its environment, its partners, the final consumers, the bank, the superior authorities, and the various social and political organizations, the enterprise's behaviour is *determined by the effects to which it is exposed. Its objective is, similarly to any other system, to survive—but with the least possible effort.* In a dynamic approach, the enterprise's objective of survival changes into the objective of *progress*. In the present conditions, progress is coupled with the demand to maintain and even strengthen the *status quo* of the systemic elements. This requirement is best fulfilled by extensive growth. (Expansion in space may even take place through annexation of other enterprises.) Intensive development is less desirable, since it can upset the mutual relationships of the actors, which is not at all favourable in view of the system's coherence.

The objectives of survival and progress can be achieved by means of an adequate armory. The enterprise's adjustment is two-directional and hierarchically interdependent. First the superior level* must be satisfied “externally” and, sub-ordinated to it, the enterprise's employees “internally”. The latter aspect may help in part to assert the former. Satisfaction of the external requirements cannot only be a precondition of internal satisfaction, but can also make up for its lack.

The establishment of connections with the superior organs provides different possibilities for the individual enterprises. Formal power positions occupied in the hierarchy and actual influence do not necessarily coincide. Probably only very few large enterprises are able to acquire patrons along the entire vertical line. Most of the enterprises can only defectively establish their relationships “upwards”. That is the reason why to know the actual “influence zones” is of particular importance.

The purpose of conformity to internal requirements is

- to avoid a complete upsetting of the organization,
- to ensure loyalty to a group interest declared to be the enterprise's interest,**
- to protect acquired leading positions.

This purpose can be achieved by a wide variety of means, depending on the autocratic character of management. In an extreme case, internal adjustment may not even take place at least, in the short run, if it is replaced by intimidation. With a less

* By superior level those organs, agencies are meant which have anything to do with the survival and development of the enterprise: thus beyond ministerial and local government agencies also political and social bodies, banks and, of course, the top level economic control and party apparatus.

** The so-called enterprise interest is not laid down as a result of an open agreement of the employees, but is practically formed in the course of the fights for power between decision makers, i.e. holders of key positions within the enterprise.

autocratic management, the means of such adjustment can be a flexible approach to labour discipline, indulgence towards absenteeism, distribution of incomes with the least possible tension (in most cases this means egalitarianism), satisfaction of certain cultural and social needs; in other words, the undertaking of such responsibilities which do not strictly belong to the main activity, i.e. production. Internal satisfaction means first of all meeting the employees' claim to earn the highest income with minimal work. To meet this demand mainly depends on how the enterprise can meet external requirements. Namely, the enterprise meeting external requirements can rely on the patron's support in its efforts to survive or develop. Enterprise management has to mind, therefore, the following two factors:

1. The enterprise has to be taken care of getting the easiest task or, if it has already been given, of obtaining the utmost resources. It is therefore of prime importance to establish strongholds in the struggle for tasks and resources. In the post-1968 system of Hungary only so much has changed in this respect that the "resource strongholds" are not closely connected to the "task strongholds", and that the "look-out posts" of the "resource strongholds" have to be differentiated: as regards both quality and space. As regulators have been devised to fit each individual enterprise, the clearly visible allotment of fixed and working capital has been replaced by an indirect "gathering" of resources. Differentiation in space means that the enterprise now has not only to seek the "allocating grace" of only one superior organ, but has to divide its attention among several ones. It also has to be kept in mind that the resources coming from above have different cost charges and the cheapest resource has to be obtained. With all this in view, enterprises need more differentiated strategies, developed along wider frontlines.*

In addition to a wider and variable strategy (not a market strategy) a larger network of people, capable of asserting enterprise interests, is to be established.

2. Secondly, the enterprise management has to make efforts to eliminate external disturbing factors, first of all a market in which competitors are present. There was a time when the control system automatically switched off the "signal lamps" of the market and replaced them by a plan fraught with no fatal risk. It was only following the 1968 reform that the elimination of market competition became a task for the enterprise: either by agreement with its competitors, or by their merger, or by applying for a change in the enterprise's line of production. Restriction of the regulatory role of the market also ensures the monopoly of price setting. Price setting without market control is an indirect way of "gathering" resources. Under such circumstances, price setting practically amounts to the formation of increasing prices. Bureaucratic control marked out for replacing market control is embodied in warnings never taken seriously

* Teréz Laky [3] demonstrated that one of the enterprises covered by their examination had six (!) different development conceptions. In the competition for investment resources, it always used the one having the greatest chance for acceptance. However, the basis of reference was in each case the national economic interest.

by enterprises (since these usually have no consequences), and price control can mostly do no more than only justify its existence.

Enterprise management guided by the dual objective of survival and development is practically crystallized on two poles: on that of "social" and that of economic activity. The two poles (or, the two "sections" of enterprise activity) are, however, not of the same weight and significance. Although the second (i.e. that enterprises produce something or perform some services) is more often discussed, however, the informal social activities and "services" are more important as far as production is concerned. Production must, of course, be organized, yet it is not indifferent at all—from the aspect of internal satisfaction—what kind of working conditions are ensured. The battles fought within an informal or, in some cases, entirely formal, framework (between the enterprise and its external environment) are aimed at asserting the principle of the least possible effort. The armoury includes bargaining (with its objects changing by periods), as well as the exploitation of a wide range of personal ties.

The "social" pole (let us call it comprehensively so) is more determinant for the enterprise than the economic one. It has been learnt from decades of experience that, for example, an influential connection is worth the work of an x number of man-years. There is no need for an exact quantification, since it is evident that "free" is the cheapest. Behind the shield of a routine administration of the "social" pole, the question about the quality of economic management becomes quite insignificant. It is the enterprises' experience that it is possible to survive and even to develop further if

- in current economic management not too much attention is paid on cost and profit accounting, capacity utilization, labour discipline, material and energy utilization, interests, etc. (Care must only be taken to avoid any spectacular event that would externally harm the goodwill, that is, that of the superiors.)

- only the increase of use values is taken into consideration when fixed and working capital are enlarged. The unfoundedness of the investment efficiency calculations prepared for plans is a well known fact. (And this holds not only for those who use external resources, but for those covering their finances from their own resources as well.) Inventories differ from investments in that not even intentionally vague calculations are made about them. Changes in inventories are accidental and in the socialist countries stocks have shown a rising tendency for ages.*

Of the above-listed features of enterprise behaviour, the following can be used *in the socialist theory of the firm*:

a) The basic motivation of enterprise behaviour is *being heedful of the superior levels*. As a consequence, the economic system is vertically structured, and this structure is further strengthened and economically supported by the vertical resource allocation.

* It is a well-known fact that, in comparison with capitalist economies, the socialist enterprises work with many times larger per unit inventories and also that enterprises and the National Bank of Hungary play "cat-and-mouse" about inventories.

b) Owing to the vertical structure, enterprises are "stringed" separately, which causes economic isolation from the aspect of both cooperation and market, even within an identical form of ownership relations. The 1968 economic reform of Hungary has changed neither the direction nor the content of this vertical structure. Only so much can be said that enterprises are today held by more strings.

c) *The amounts and direction of resource allocation are decided by the invisible competition between enterprises.* While everybody is everybody's enemy on the "battlefield", nobody meets the other formally: the battle has to be fought as if others did not exist. This mode of resource allocation, basically determined by subjective relations, is necessarily more accidental and incalculable than spontaneous market mechanisms are.

d) *Production only evolves in the shade of social linkages,* in which the assertion of economic rationality becomes weightless. It is unnecessary to assess the effect of decisions on profitability, if profitability or the lack of it has no consequences for enterprise economy. At the most, the enterprise has to reason in physical terms: this is how the microeconomy remains demonetized even in the presence of money.

e) *The vertical structure replaces the horizontal organization of the market.* Only the spatial appearance of anarchy has changed. The survival and development of enterprises are not dependent on the market representing a system of social opinion, but on their roles assigned or undertaken within the hierarchical structure.

On the whole, politics—having replaced production and even more the market—has absorbed economy also in the micro system of the enterprise, motivating orientation towards social rationality instead of economic rationality in enterprise behaviour. As a consequence, production relations express the continuity of the political existence of the enterprise. As a matter of fact, this follows organically from the fact that the socialist enterprise was created by political power at the time of nationalizations, and the same power was active in the organization of the cooperatives. *The enterprise is a political formation in the genetic as well as in the ontological sense; it is this feeling of identity that determines its behaviour.*

The energy engaged specifically in moving or having others moved along those vertical paths represents a heavy moment of inertia for any reform. This engaged energy cannot be released, if the conditions keep on reproducing, unchanged, the actors and the mechanisms.

A historical overview of the enterprise's socialization*

Socialization may also be interpreted as a historical process. It can be deduced, in which way the social and the economic (even more, market) rationality changed

* In this case, by socialization the learning and adjustment process is meant through which the enterprise acquires the attitude and roles that are indispensable for its survival and development within a given system.

roles as a historical product of the socialist relations. From this aspect, the development of enterprise behaviour will be examined in the phases of the five periods specified below, as far as the limits of the present paper allow, without aspiring to completeness:

1. the period preceding World War II,
2. the period from the end of World War II up to the establishment of social ownership,
3. the years of direct control up to 1956,
4. the years of direct control from 1957 to 1967,
5. after the 1968 reform.

In the course of reviewing the development, we shall examine not only the elements of the enterprise's *external* behaviour, but the quality of its *internal* actions as well.*

In the first phase i.e. in the peaceful years prior to World War II the enterprises—that may be considered as legal predecessors of the socialist enterprises of a later time—organized their activities *centering on the market*. Their external *ties* were basically determined by the market and their behaviour was dictated by the market. Central resource allocation and market control was not at all general, especially not in the scope of small enterprises. *In work organization* within the enterprise capital and labour were the dictating forces. Beyond the necessity to make a living, people were impelled to work according to their best knowledge and abilities by fear from dismissal and unemployment. *Market orientation induced the pursuit of economic rationality* in both external (cooperation with other enterprises) and internal work organization.

The *second phase* cannot be exactly delimited in time, since the establishment of the various forms of social ownership took place at different dates in each sector, varying further according to size of enterprises. This phase lasted approximately until the time of nationalizations and the organization of cooperatives. *Phases 2 and 3* are partly overlapping, too, since central control already started before social ownership was established in full scope.

The behaviour of capitalist firms before the nationalization may be considered *as of a mixed character*. Their inner conditions yet hardly changed while in their external relations the first signs of political orientation could already be perceived. They still were market-oriented, and the regulatory system also worked to this effect (for example, the credit rules of the banks), however, and increasing political responsibility was imposed on them** They were made accountable for their output with reference to the reconstruction, and those with a mixed management even directly. With their nationalization no sudden change took place: the transformation of the inner work

* This review has undoubtedly more than one limitation: first, since no enterprise exists in the general sense, the generalizations do not fully reflect reality. Second, it may be even more objectionable that a history of enterprises is presented in which no word is said about economic achievements and where explication is simplified, centering on the essential aspects of learning roles.

** An important factor was the burden of the war damage compensation imposed on Hungary after World War II, and demanding serious economic efforts.

order could be observed some time later. In order to lend a socialist character to the enterprise, not only the earlier owner was removed, but the whole set of leading executives was replaced. The criterion applied in the redistribution of management functions was the role played in the workers' movement.

The industrial cooperatives were founded when the mechanisms of cooperation with the owner, i.e. with the state, had already developed in the state-owned sector, so that these mechanisms could be extended to them, too. (Their description is, therefore, left to the next phase.) The political coercion asserted in the organization of agricultural cooperatives is generally known. The central subsidy to the cooperatives i.e. the material-financial maintenance of the political organization became a principle of economic organization. As early as the establishment of the cooperatives, the state already undertook the role of political and economic "midwifery". (It is a different question, that in the case of agriculture it had not enough resources to fulfil this role.)

Another form of "political capital" flowing into agriculture was the financial strengthening of state farms declared to be model farms and of the machine and tractor stations. Resources being scarce the measure of financial support depended mainly on social relations.

The conditions of the *third phase* were fully established through the *legal* transformation of the forms of ownership. The isolation of owners having been eliminated, the central will could be asserted directly. Enterprises could see the first signs of their *external* dependence in the settlement of debts and in the ensuing capital and working capital allocation. It is a matter of common knowledge that all three events represented the organizational framework of dependence on the issuing and credit bank, and on the state budget. The elimination of market orientation was made final by assigning an all-embracing regulatory role to the central plan. In the course of plan collations (adding up from below and breaking down from above) the enterprises became aware of economic wilfulness: the idea that their activities were only arbitrarily constrained; all this was shaped by personal relations with the upper level. With reference to the plans, even the financial sphere could be made, through the banks, into a servant of these "wills". The plan became a key phenomenon not only taking over the role of the market, but also simulating it in that it appeared as an objectivation or materialization of personal relations, representative of the social conditions behind this form. Fulfilment (or non-fulfilment) of the plan also was a political question and a question of national politics at that: a measure of identification with the system. The enterprises also realized that in this system bankruptcy could not occur, since it would be (for everything comes from above) a proof of the failure of the central economic management. The question of survival was by no means a question of enterprise economy, but at the most an individual one. The economic rationality of enterprise activity: "what does it cost", "what profit will it bring", "what should be bought from whom and at what price", "what should be sold, to whom, when, and for how much"—these questions did not even arise. Under these circumstances, no enterprise efficiency calculations were needed to serve as a basis for decision-making.

Let us examine, in which way the political conditions also affected the *inner* functioning of the enterprises (beyond the fact that the managers were political commissaries). What forces impelled the worker to labour, when his fear from dismissal had ceased? Three factors, practically inseparable, may be identified:

- Labour discipline, the compelling force of doing one's work, that had been normal in the capitalist workshop, lived on as a conditioning. This was completed by the almost generally applied task-wage system with its strict and ever stricter norms, and the low wage rates underlying the norms. Since wages remained below the reproduction costs of labour, the struggle for an everyday living was stronger than anything. (In the majority of Hungarian families, women went out to seek employment at that time.)

- The awareness that everybody was building a particle of socialism lent faith to many, especially to the young (together with the illusion that the earlier impossible material well-being was now near) and gave impetus to the work.

- Finally, there was fear. Fear from losing one's job was replaced by fear from being banned to some forlorn place, in the provinces, since it was in these years that penal law reached the working places. Everyday fear was practically rooted in the fact that some questions of labour law were "settled" under the criminal law. [4, 5]

Almost the first economic event of the *4th phase*, beginning with the consolidation of 1957, was compensation for the counter-revolutionary damages to the debit of the working capital, to be filled up later on by operational credit. A great many enterprises met thus again with central aid and, in 1959 when producers' prices were changed, they became aware that the state could make practically any costs recognized on the market. After the discarding of the reform idea, the *external* relations of enterprises were again characterized by the earlier practice. The necessary correction of the economic mechanism in 1957 seemed to be, on account of its narrow limits, a hopeless attempt at evolving market orientation. And the state clearing of the extremely large frozen stocks in 1965 was yet another experience of social help extended to enterprises.

As for the enterprises' inner conditions, this was the period when labour discipline was finally ruined. On the one hand, a vacuum was created in work incentive, on the other hand, the average wage control system asserted in that vacuum increased the demand for labour to an irrational extent, causing in-door unemployment. The vacuum came about because after 1956 the political consciousness based on empty phrases was shaken on the one hand, and political intimidation stopped, on the other. However, because of the rigid average wage control and the weak profit motive, the incentive system could provide no more than an "illusory hope" to replace the conditions ruled by "tricky fear". Under such conditions, enterprise workers became increasingly less manageable.

In the life of the agricultural cooperatives, this was the period in which they were granted, beyond the subsidies, credits for 20-30 years, which were later declared to be non-repayable.

The 5th phase beginning with 1968 could be subdivided from the economic policy aspect: but from the aspect of institutional functions, the picture is practically homogenous. Although the reform campaign had pointed to the risk of failure of enterprises, no practical precedent was created. Direct plan control ceased, but market orientation and a cost-sensitive economic management did not develop. That there was no risk accompanying the socialist economic activity was further supported by the experience that while during the economic depression of the 1970s thousands of capitalist firms went bankrupt, no such thing happened to the socialist enterprises. They were thus justified in fostering the illusion that "we should carry on as before". Market orientation was already hindered by the fact that, because of the monopolies in many fields, there was nothing to pay attention to. Despite the declared principles and the threats formulated with increasing harshness every year, the experiences under the economic control and management system dissolved in individual regulation mediated the reassurance that "their bark is worse than their bite". A vicious circle developed in the relationship between enterprises and state budget: the higher taxes the budget imposed, the smaller became the enterprise's scope of movement and the more it needed subsidy from the budget. And the greater the demand for subsidy, the more the budget had to tax away.

As for their *inner* conditions, enterprises tried to apply positive incentive. First, when they disposed of the necessary resources, the regulation usually did not allow for incentives, and by the time enterprises had learned the ways of providing for incentives, they lacked the resources. That is why new forms of economic units sprang up in the early 1980s,—and it is no exaggeration to say that they have had success in the field of work—such as operation under a contract, and economic workteams within the enterprise. (Both forms rehabilitate individual responsibility, market enterprise, the assumption of risk and the handling of property-objects with the owner's attitude.)

The above historical summary has shown that *the elements of the prevailing enterprise behaviour have developed historically*. It is not the enterprise that shaped economy one-sidedly in its own image; today's Hungarian system of enterprises was established by the political crushing of the capitalist firms and the *absolute* negation of their ways of functioning. First market orientation and the economic rationality of decisions ceased, and some time later the strict inner labour discipline was dissolved.

The process viewed as socialization of the forces of production practically led to a situation where all the functioning and idle capital of the economy came under the control of the central economic management. *Enterprises, having lost the prospects of undertakings, adjusted themselves to the new circumstances*, since they had no longer to adjust themselves to the conditions of entrepreneurship (risk, profitability calculations, innovation, market research and influencing the market). As a consequence, such routine mechanisms developed between the economic units and their superiors, of which *only the formal elements changed* with the progress of time. It was a repeated experience of enterprises that *financial constraints were eliminated*, either in the form that decisions formulated in physical terms were acknowledged even without a

financial background, or in that they did not have to bear the financial consequences of decisions forced upon them, or those of their own wrong decisions.

The conceptions prevailing in this period about the operation of the socialist economy suggest that it was not this kind of economic organization that had been originally intended. Formulating in sociological terms: the ideas of the socializing apparatus were quite different. In any case *enterprises became socialized in this way under the impact of circumstances* in spite of intentions. The causes of departure from the intentions are probably to be found in the socializing conditions, in our case, in the basic relations of a vertically structured economic operation.

Characteristics of the socializing hierarchical production relations

For the sake of simplicity of idiom, the generally used terminology of the socialist production relations will be resorted to. Namely, the production relations today called *socialist* may be so called, at the most, on the basis of the *formal* characteristics of ownership. As for their actual content, they are not equal to a positive elimination of private property in the Marxian sense.

Several sociological examinations have demonstrated that with the establishment of the framework of social property, the producer will *not yet regard the means of production as his own*. No public spirit develops which would prompt the members of society to use the equipments with a proprietary approach. In the social sector the *means of production are external, alien objects for the producer*.

The bridge, needed between the producer and the means of production alien to him, rendered indispensable by the interests of production, is built by the production relations. Earlier production relations representing relationship based on equality are transformed, through the channels of the division of labour, into dominantly vertical relationships of sub- and superordination. The one-time dependence of the non-proprietor on the proprietor is now replaced by a hierarchy of director proprietors and directed proprietors. Mutual economic dependence assumes a political character and the preservation of this dependence has no economic but political reasons. The producer's attitude to his superior in the division of labour is first of all determined by his being a political entity.

Production relations become politicized. In the basically political relationship between producers and their superiors, production acts as a catalyst. The political relationship clearly determines the way in which the means of production will be handled. Production is not adjusted to the optimum functioning or operation of the means of production but, as it follows from the functioning of the production relations, it is the equipments that "fall victim" to a production more costly than possible or necessary, as well as to the set of products unmarketable as use values.

Ownership has basically two poles: the functions of direct disposal and of

decision are separated from each other. Higher-level organizations make decisions on the equipments of which lower-level organizations dispose directly. In this paradoxical situation management has no real master. There is no need to prove the disinterest of the lower-level economic management. Everything is under the control of the upper level, and nothing under its direct management. The easiest way for it to discharge its responsibilities towards society is to make concessions in all respects, to help each enterprise to survive.

The socialist mode of economic management was developed historically in the form of issuing commands formulated in physical terms, following the principles of autarkic endeavours. Viewing it in physical terms, all kinds of economic activity are needed, and in physical terms only a quantity control can be asserted (what should be produced and in what quantities). This form of economic operation implies by its very existence the maintenance of economy in its full cross-section, i.e. to keep alive and help everybody grow. On the *formal side*, such "physical" economy intensifies the lack of selection, which is suggested from the side of *contents* by the established ownership relations.

As for the abstract attitude to the means of production there is no difference between producers and their superiors. Yet the *content* of the ownership relations cannot be interpreted as *pure abstraction*. The *practice* of socialism shows that the right of disposal and decision in respect of the means of production becomes structured through the division of labour. The theoretically identical scopes of disposal and decision determined by social ownership and the resulting horizontality are transformed, through division of labour, into a hierarchy of directors and directed. The "*public*" as a whole cannot dispose of the public property. In describing state property, this is also formulated in explicit terms: the owner of the means of production is the state and its operator the socialist state-owned enterprise, in its quality as possessor. However, the *state cannot dispose of and decide on* the operation of the means of production in general, but only specifically. The highest bodies of state power and government administration in which the state is embodied dispose of the most extensive right of controlling the means of production. The content of the statement that "everybody is owner" is expressed specifically in the representative ownership. This is, therefore, such *disintegration of the unity of property*, in which the *monolithic* character is preserved in the sense that there are no competitive forms of ownership (if there still are, their extent is determined by the existing monolithic property), moreover, the appearance is as if the unity had not disintegrated.

The behaviour of the economic control and management organization is influenced by the following factors:

— The higher-level organs of the hierarchy are not created spontaneously in the course of development of the forces of production. In the beginning, at the time of political struggles, they were established through *self-organization*, and later, too, their formation was determined by high-level politics. Their inertia is great and they are much more prone to expand than to reduce bureaucracy. It is the daily effort of

hierarchy to cover all aspects of social life in which conflicts, potentially dangerous to the functioning of the system, may arise. As a consequence, its external institutional control ceases, and it is compelled to assume responsibility for corrections and for recognizing the need for them. For this, however, it needs exactly that non-institutionalized control in the elimination of which it sees one of the guarantees of the system's stability.

The high-level organs of hierarchy constitute *an extremely complex structure*. State control also means party control. Beside the functional economic control agencies, there also are sectoral ones, and the central national institutions are complemented by local government and party organizations. Party politics govern the functional and the sectoral control agencies, as well as all local units. The functional agencies are influenced by sectoral ones, and *vice versa*. In the circulation of information all the national and local control agencies are interdependent. In this extremely complicated network it is impossible to delimit scopes of authority clearly and objectively. No one can, therefore, be held responsible for decisions formulated, discussed, and agreed by so many different agencies.

The higher-level organizations of hierarchy are expected, on the one hand, to organize an efficient operation of social capital, on the other hand, in their quality as embodiments of the collective, they have to assert community objectives. The two objectives are, in principle, coincident: the needs of the collective can only be satisfied by means of successful production. But the needs expressed always exceed possibilities and it is hard to resist the pressure of social demands. That is why the functioning of the upper-level organizations of hierarchy is of a dual nature: it is both indulgent and demanding.

By virtue of their extreme complexity and their dual attitude, the higher-level organs of the hierarchy *represent several partial special interests*. In trying to assert themselves, the special interests always refer to the national economic interest. Thus it happens that government activity is fraught with contradictions between principles and practical implementation.

The *forms of cooperation* between the higher-level organs of hierarchy and the enterprises representing the lower levels are of a peculiar character, owing to mutual dependence. The forms initiated from above are regulated from the outset, or they assume some form of regulation at a later time (such as the mechanisms of income taxation and redistribution). The initiatives of the lower levels can be formed by enterprises directly or indirectly, through agents (bargaining, complaints and "winning over", spontaneously, or through enterprise participation or representation in different national and local committees).

The *content of cooperation* between the two levels is *basically patriarchal*. The structure of ownership described necessarily leads to paternalism. Within the monolithic structure of property, this is the only possible solution to the political division, the contradiction between unity and diversity. In this normal state this structure of property can only be operated on a patriarchal basis.

There is equality within the monolithic structure of property. In the property dimension of the relationship to the higher level all enterprises are equal and have the same rights and the same obligations. Each has an equal right to survive and to develop. *The forms of ownership do not mediate any selection principle, either for development, or for reduction.* Politics has taken over the market's role of economic control, while it has been unable to replace market selection based on the law of value by any other normative regulatory principle, representative of the objective economic conditions. For government and party control all enterprises are the same, on the basis of social ownership. There is no internal economic law for a distinction.* It is thus possible that every enterprise ambition should have a chance of success in the struggle for resources, especially if it finds the temporarily most adequate form of strategy; because there is no ground for refusal, particularly if the economy is on the whole demonetized.

The spontaneous struggles carried on for decades have finally led to economic development along the whole line. Those who lag behind for some time must be helped to catch up, since the socialist economic mentality only knows development and progress, but not withdrawal of capital, regrouping, or retreat strategies. The ownership relations dictating equality imply that assistance must be given.

Those working in the higher-level organizations of hierarchy have no direct economic bases and therefore no owners' reference basis either as opposed to the ruling classes of other social systems. Their supporting pillar is politics; the daily political power relations are, however, subject to constant change, which renders the status of those directly partaking in economic control very unstable. This is one reason why the relationship between lower and higher level is two-sided: not only enterprises are in need of the support and indulgence of the superior organs, but the higher level also needs enterprises, more exactly, the large enterprises in order that it can keep and even strengthen its posts. Within the social ownership *a strong subjective intertwining comes about* through highly differentiated links among superior organs and enterprise (large enterprise) managers. (To put it sharply, the question of "who will be the deputy minister" is a much more exciting problem for the enterprise under the prevailing conditions in Hungary, than any market transaction.)

Since the superior organs of hierarchy as a whole have a political base, which may prove insufficient to keep them in power, it is in their interest as a whole to obtain economic support of their "position". This can be guaranteed by a total absorption of economy. The adequate attitude to economy absorbed by politics is patriarchal care. Thus it becomes a question of legitimation of political power to establish paternalism along the whole economic line, which amounts, at the same time, to protect the established economic conditions.

*Preferential treatment within social ownership has political motives. It is based on the political consideration that it is mainly large enterprises that are important from the aspect of political guidance.

The relationship between the enterprise and its superiors manifest in undertakings can be described in the following:

— The higher level, representing social ownership considers enterprise, abstractly, as a "dead" unit to be prompted to economic action. (As for putting into operation, every enterprise is practically an undertaking of state.) In the economic sense, however, what the state undertakes is only to have the enterprise to undertake. This can be the implementation of a direct state undertaking, or it can be indirectly organized. The undertaking is directly controlled, if the state summons its enterprises to fulfil a certain plan. The undertaking is indirect, however, if the state stimulates its enterprises to work by exerting influence on the enterprise's environment.

The undertaking and having the enterprise to undertake are closer to one another in the direct form (as indicated by denomination itself), since all the enterprise has to do is to carry out the central plan elaborated in detail, as an undertaking of national economy. The actual entrepreneur is the state.

Indirect undertaking is also the state's undertaking, since it is organizer of the entire indirect system of undertaking. On the one hand, it influences the inter-enterprise field and, on the other hand, the whole form of existence of enterprises. Indirect undertaking is almost as if it were the enterprise's undertaking: the enterprise acts, formally, as if it were his, and the state pretends that it has definitely ceded the undertaking. This appearance is maintained by a double bond: on the one hand, the enterprises' conviction that it is more advantageous for them if others undertake instead of them (namely, the enterprise has no internal incentive for undertaking based on ownership). This conception of the lower level coincides with the endeavour of the upper level bound to the monistic structure, aimed at keeping the economy in hand. Indirect undertaking infers the cession of economic power positions, its extent being delimited by the preservation of monistic unity. Therefore, the quasi-social property operated in the state's undertaking carries in itself, as an ontological condition, the constraints of its being operated in the enterprise's undertaking. As a consequence, both the necessary and the sufficient condition of the enterprise's undertaking, that is, the mechanism mediating market impacts and the ability for autonomous decision relying on material foundations will be inevitably constrained.

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The author of the present article finds the structural and institutional causes of the phenomena summed up by János Kornai in the concept of soft budget constraint, or of economic functioning qualified as of inflexible supply by Károly Attila Soós in the theorems set out above. The success of Hungary's adjustment to world economy depends on what essential changes can be made in the near future in the normal state of the established production conditions described in the preceding.

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О ПРИЧИНАХ ТРУДНОСТЕЙ ИЗМЕНЕНИЯ НОРМАЛЬНОГО ПОЛОЖЕНИЯ

М. ПЕЧНИГ

Венгерская экономика должна дать ответ на вызов мировой экономики в форме структурного приспособления. Это означает такое изменение нормального положения экономики, в котором появляются качественные признаки хозяйственной деятельности, соответствующей требованиям реформы. В Венгрии до сих пор не произошло перехода к нормальному положению, определяемому программой реформ. Силы, регулирующие экономическую систему, оказались сильнее устремлений к изменениям. Статья ищет ответа на вопрос, с какими внутренними закономерностями системы управления экономикой нужно считаться (и рассчитаться), чтобы произошел переход к желаемому нормальному состоянию. Автор описывает общие особенности нынешней хозяйственной деятельности предприятий: основным мотивом поведения предприятий является наблюдение за высшим звеном управления, в результате чего предприятия — даже в рамках одной и той же формы собственности — изолируются друг от друга; мера и направление распределения ресурсов решается в ходе невидимого соперничества между предприятиями; производство складывается в зависимости от общественных связей, потому что вертикальное членение экономики приняло на себя функцию рынка, организующую в горизонтальных разрезах. Автор подчеркивает, что особенности нынешнего поведения предприятий сложились исторически, что социалистические предприятия социализировались таким образом под влиянием обстоятельств.

Социалистические производственные отношения могут быть описаны с помощью сложившихся между предприятиями и органами управления связей, а также признаков, определяющих закономерности поведения последних. В сотрудничестве хозяйственных единиц и вышестоящих органов иерархии внутри монолитной структуры собственности неизбежен патернализм. Функционирующая как предпринимательство государства квазиобщественная собственность в качестве онтологического положения несет в себе ограничения развития предпринимательской деятельности предприятий.

THE MAXI AND THE MINI (REFLECTIONS ON THE HUNGARIAN DEBATE ON LARGE FIRMS)

R. HOCH

By analysing the lessons of the debates in Hungary about enterprise size, the author reaches the conclusion that both the debate and economic policy behaviour are biased. Today (as distinct from the past) it is fashionable to praise the small firm and to criticize the large enterprise as a form of business venture.

The key personality in the large enterprise syndrome is the manager. The article analyses the position and activity of managers of large firms, their positive and/or negative attitudes towards the reform, their role in the formulation of economic policy and their responsibility for this policy, how they are selected, their system of interests and where their interests agree or conflict with those of workers in large enterprises.

The problem of enterprise size (particularly with industrial firms) frequently came to the fore in Hungarian economic literature and in the practice of economic control, management and organization in the last thirty years or more. Even recently, a sharp debate has been conducted in newspapers and journals about the size of firms [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]. This is indeed an important question, since the efficiency of management, technical progress, and the ability to adjust to demand depend on it significantly. However, both thinking and activity are frequently biased. In some periods large enterprises are praised and smaller enterprise sizes are dismissed. At other times—like the present—small enterprises are paid homage to as a fetish and the justification of large enterprises is challenged.

As regards the wearing of skirts, at times the maxi, at times the mini is in fashion. In women's apparel variety is delightful; the fashions of ideologies and economic policies are not. The changing fashions of maxi and mini in enterprise size cause grave damage.

Economic analyses have shown, for more than a quarter of a century, that the structure by size of enterprises of Hungarian industry (and not only of industry, but of a considerable part of the service sector as well) is wrong, unhealthily centralized, that *the bulk of firms are large enterprises and the wide network of medium-size and small firms is missing*. Such a situation has developed in industry and the service sector. It has been established that Hungarian industry is more centralized than that of the USA, relatively fewer firms release industrial products in the former than in the latter. Behind these facts we frequently do not find a concentration of the technical process of production. It is a regular occurrence that the large enterprise is essentially only a unit of organization and administration, embracing a number of medium-size and small

establishments which function as plants of the large firm. But even if the production process is concentrated in a single establishment (and collected there), this change is not always warranted by technological standards. And, finally, even if the concentration of production in large firms corresponds to technical-technological requirements, medium and small establishments frequently cannot be dispensed with even in this case. The optimum size of an enterprise, and the optimum structure by enterprise size is determined above all by the standards of technology, by the development level of the forces of production. Even the most advanced technology which now exists in the world demands a rational combination of large, medium and small firms.

One of the essential reasons why large Hungarian enterprises are inefficient is that they are also compelled to fulfil such tasks which can be economically performed typically in medium and even small firms.

From this diagnosis the therapy unambiguously follows: the healthy structure of Hungarian industry by enterprise size has to be brought about by creating a sufficient number of small and medium firms. Small and medium firms have to take over those functions from the large ones which can only be done efficiently in the former.

This seems so logical that, in my opinion, no other therapy can be suggested. But I am naive in making this statement, since, instead of logical conclusions, fashionable trends predominate.

Reform process and the size of enterprises

Following the 1968 reform a healthy change also began in Hungary in the structure of industry by size of enterprises. Medium and small firms began to increase in number, and this followed from the logic of the reform. Why did this process follow from the spirit of the reform?

When an explanation is given for the fact that medium and small firms were liquidated in state industry in the fifties, and even in the sixties, usually the reason given is that the advantages and superiority of the large enterprise were interpreted in a simplified manner, onesidedly and dogmatically, attributing to it absolute validity. It was not taken into consideration that not every industrial activity can be economically performed in large establishments. And, what is at least as important, the large firm frequently cannot satisfy differentiated and changing needs, at least not in itself. As a matter of fact, the efficiency of production cannot be interpreted detached from the satisfaction of needs. (In certain branches of services the overcentralization of enterprises from the viewpoint of satisfying needs is very clearly shown.) Further, it was not taken into account either, that although the large enterprise is the carrier of advanced technology, medium and small firms also have an indispensable role in developing technology. Dogmatism is an important cause of over-centralization, but

only one of the causes. I believe that the existence of the system of plan-instructions is a no less important cause.

It is inherent in the logic of this system that the authorities who control the economy have greater chances for implementation of the plan-normatives, the fewer the number of addressees of the plans (issued as instructions). It is a paradox of our development that this logic was pushed to its own limits when the preparation of the reform which abolished the system of plan-instructions had already begun. That is, in the sixties the so-called nation-wide enterprises were created in Hungary, according to the principle of "one group of products—one enterprise". This extremity has not been attained by every country which relies on plan-instructions. Of course, in the system of control and management based on the 1966 resolution of the CC, HSWP and introduced on 1st January, 1968, this centralization implemented for the above reasons became meaningless; in fact, it contradicts the logic of this mechanism. An administrative centralization beyond the concentration of the forces of production expressedly hinders the market regulated according to the economy-wide plan and the evolution of competition on this market.

The existence of the above outlined interrelation between the system of plan-instructions and the over-centralization of enterprises is verified by the history of the seventies. The healthy process after 1968 (also) in this respect—the creation of small and medium firms on a relatively large scale—started, then came to a halt and even reversed: the recentralization of firms began. And not only in industry.* Again the maxi became the fashion. But was it really a matter of fashion? No, the primary reason was not that. The new wave of centralization, the liquidation of existing small and medium firms was an important symptom of the process in the course of which a general counter-attack was launched against the 1968 reform and the—somewhat streamlined—features of the direct control system gained strength. Instead of competition between firms, the concept of "one product—one firm" was revived or at least the so-called "profile master" organization.**

Many people call the whole process (e.g. Márton Tardos) a recentralization period. (However important recentralization may have been in this process, it still was only a partial phenomenon, and not characteristic of the whole post-1972 process.) The reform process then came to a halt and was even reversed in many respects, causing several problems. The counter-attack has lasted despite the reform's having found its legs again. Two factors played a decisive role in this. First of all, the CC and

*In Hungarian agriculture the structure according to large-scale and small- and medium-scale production has been better from the outset. First of all, the "household plots" are organic parts of farming cooperatives. Secondly, in farming cooperatives "complementary workshops" are also found which perform industrial and service activities on a small and medium scale. But it was essentially in the seventies when the centralization of farming cooperatives took place and attacks were launched against the complementary activities and the household-plot farms. [12]

**In Hungary this meant an enterprise appointed by the higher authority to produce some products (or groups of products) or to supervise their production. (Ed. note)

***This is why I then, too, felt prompted to raise my voice in the interest of a healthy enterprise structure. [13]

the 10th Congress of the HSWP (in 1970) did not revise the resolution of 1966 and firmly expressed its adherence to the reform. Secondly, the changes in economic relations attained the critical mass necessary to prove the viability of the new control system in practice, which made a complete automatic "rearrangement" impossible. The new mechanism also endured the new wave of centralization.

In the years preparing the continuation of the reform (also called the new reform wave) the size of enterprises of course became an important question. In fact, now the problem has really come to the fore, since it is one of the characteristic features of the current reform process that the problems of the organizational and institutional system have become central. There is again some hope that a healthy industrial structure can be developed also in respect of enterprise sizes.

Parallel to, or rather against, this sound effort, much louder voices onesidedly propagating the "mini" have also become fashionable. That is, such an ideal picture of the industrial structure has emerged whereby not much room remains for large enterprises. It is not difficult to find the cause of this attitude. It is worrying enough that we have troubles in and with the large firms. "Killing them is also good"—seems to be a good solution from a certain point of view. But a naive concept of the market, of competition between sellers and, on the others side, of monopoly, is perhaps even more important. According to this approach, the market and competition between sellers function well if there are many small firms; and the large firm, the necessary antithesis of all that, is necessarily in a monopolistic role. In reality, many small firms can together also attain a monopolistic position, and competition can develop between buyers instead of sellers (we can find plenty of examples of this in Hungary); and even a large firm can get under the pressure of the market under our conditions. (For the latter we can also find examples.)

It may also be objected that Hungarian large firms are not really large by international standards, rather they are of medium size. But this argument can also be reversed. Namely, one can acknowledge, in principle, the advantages of large firms, but—one may add—these are not to be found in Hungary. Thus, the enterprises called large in our country do not really possess the advantages of large firms. Then what on earth do we protect with them? In reality, however, the large Hungarian firms, if they apply a technology securing mass production, do possess the advantages of large enterprises, even if not to the same extent as the multinationals. E. g. in the clothing industry the bulk of the total output (and the greater part of exports) comes from the large firms not mainly or exclusively because such firms exist. I quote this example precisely because during the longer part of our economic history there existed and still exist medium and small clothing establishments and even private tailors—if not in sufficient number. The simple fact is that the small and medium clothing establishments in themselves could not supply the Hungarian population with an adequate quantity of clothing, corresponding to the established level of income and consumption, and export, in addition, substantial quantities. The medium and small

firms ensure excellent quality, an adequate range of choice in harmony with the highly differentiated demands and, through all that, competition with the large firms.

In recent years a strong movement has started to reconstruct the abolished small enterprises. Small firms and similar organizations have been created *en masse*. Although their existence causes certain social conflicts, the process of their development is on the whole healthy. They encourage a healthy division of labour among the various types of enterprises in industry (and in the service sphere).

What, then, is the trouble? Namely, that the condition of a healthy division of labour is not actually secured precisely on the side of large enterprises. If one talks with workers in large firms, the critique raised most frequently and by most people runs as follows (and it is exactly formulated in economic terms): "Why is it that we cannot perform and earn well during legal working hours, but we can do so after hours?" Indeed, in large enterprises the productivity of the eight hours work is low, the exploitation of assets and labour is low, costs are high, quality is unsatisfactory etc. The reverse is true for small ventures—also for the economic working panels (workteams) operating within large enterprises.* We need not go into what part of overhead these workteams carry now.** How can the partner answer the above question of the workers; and an answer which he himself believes in and which he hopes will be fulfilled? The creation of these workteams and similar ventures was only the necessary first step which, let us hope, will be followed by the second one, namely, that such conditions will also be created for large enterprises which allow workers to perform and earn well during the basic eight working hours. As a matter of fact, today the large firm is not in the same position as the medium one and certainly not as the small one,*** and it is this important problem which I feel must be resolved. If no changes are made, the reform will necessarily fail. (Even more is at stake! The large firms are under socialist ownership in Hungary, so in industry they are mostly state-owned. If the large firms are discriminated against by the regulatory system, people will also draw conclusions for the forms of ownership if they confront the situation of large enterprises with that of the smaller ones and similar ventures.)

*One of the most widespread forms of small ventures in Hungary is the "enterprise economic community" (also called working panel, or workteam—for short, with the Hungarian abbreviation: VGMK). Manual and other workers of a given enterprise create organizations similar to small ventures, which work for the firm after hours on the basis of a contract made with the "parent firm". These small organizations have a large degree of independence. E.g. they select their members themselves, and determine how the income earned should be distributed among the members.

**The workteams use the buildings, machinery, and equipment of the parent firms, and demand heating, lighting etc. Often, only a part of the true overhead is charged to the teams.

*** Large enterprises carry the burden of the so-called responsibility for supply, are under pressure to produce for export what is uneconomical, the weight of—*de iure* or *de facto*—fixed prices is highest for their commodities, and they are first of all restricted by wage control regulations (it is precisely the workteams with which we are attempting to ease these restrictions); the profitable large firms are taxed to the greatest (disproportionate) extent etc. . . .

The reform and managers of large enterprises

It is a vital question for the history of the economic mechanisms and for its future fate whether the managers of large enterprises are adherents to or opponents of the reform. We can find such opinions that the managers of large firms have been against the reform from the outset. And, if this is true, it is self-evident that they had a substantial role in the counterattack of 1972. Let us say immediately: it is not true that the managers of large firms have been against the reform from the outset.

Our story begins in 1968. A basic deficiency of the reform and of the policy managing the reform after 1968 was that it did not secure adequate conditions for the economical functioning of large enterprises. Putting it in more general terms: the 1968 reform aimed at uniformity just as the earlier control system had done. Of course, it did so in a different manner. But the economy cannot function well if we try to put it into a uniform strait-jacket. If the system of control and management adjusts to the large firms, the medium and small firms will disappear, and if it keeps in view the latter, the large enterprises will get into trouble. I believe that the large and the smaller enterprises cannot operate under the same mechanism. I consider it a reassuring sign that the resolution of the CC of April, 1984 [14] differentiates e. g. in respect of the institutional system of enterprises by the size of firms. I consider this to be a decisive element in the development of the idea of reform. It was an Achilles' heel of the 1968 reform that no opportunity opened up for large enterprises to evolve their activity and, on this basis, to raise the wages of their workers. The tension which ensued had to be dispersed by the decision of an extra-economic power; and this could be used against the reform. The managers of large enterprises tried—by natural reflex—to use their political weight to extort wage rises. (It would be useless and, from the point of view of the reform, downright dangerous to deny that the social group of managers have a particularly great political weight.)

Let us ask the question again. Is it true that managers of large enterprises have been and still are against the reform? (Insofar as this group can be considered homogeneous at all in this respect.) No, in the light of facts this is not at all true! Research into the mechanism started in the Institute of Economics of the Hungarian Academy of Sciences, headed by academician István Friss, in 1955.* Managers of the large firms gave full support to the research project. They helped explore the interrelations which forced them to irrational behaviour in conflict with the interests of economy and society, and which drove many of them to despair and/or simply made them very cynical. (The present situation is very similar!) Not only could the research not have produced results without their cooperation, but the 1968 reform could not have come about either. Later, however, anti-reform tendencies did in fact appear, yet their behaviour towards the reform has not become hostile, but ambivalent. First of

*One of the most important and best known results of this research was the book by János Kornai, published in Hungarian in 1957. [15]

all, as has been indicated, the tendencies of the reform afflicting the large firms produced defensive reflexes. Secondly—and this alone is worth our paying attention to—the managers of large firms liked the independence but, at least some of them, did not like the greater responsibility, competition and risk-taking.* Even very-well-functioning and excellently managed large firms made efforts to eliminate competition, e. g. by acquiring the exclusive right to export every product belonging to their line (even if produced by other firms) and the exclusive right to import. We should not blame the managers of large firms for the usual success of such efforts. (It is a natural effort of every commodity producer to achieve a monopolistic position.) Continuing this train of thought, thirdly, when it turned out that it was possible to achieve exceptional positions, individual favours, to get money from the budget, and to solve labour shortage problems with official help, e.g. by closing down small and medium size firms, the managers of large enterprises did not say: no, thanks. But, again, it is not they who are responsible. Facts have to be extremely carefully studied in order to draw conclusions regarding the further development of the reform. Namely, on the one hand the large firms should be given adequate treatment and their managers should not be forced into opposition; on the other hand they should not have the choice between the smooth and the rough road.

Counter-push, restrictions and the manager

But can we deny completely that large firms got into an advantageous position through tendencies contrary to, that is, opposing the reform? Nothing of the sort! Let us only consider a few commonly known facts; the constant and unpredictable changes in the regulatory system; the cyclical nature of economic policy (in one year large enterprises were encouraged to start ambitious investment projects, in the next the resources necessary for continuing them were taxed away); in some branches irrational implementation of reconstructions financed from enterprise funds but guided from above; the limiting down to the minimum of possibilities for accumulation in the years of restriction; regulation of earnings which hinders the whole activity of the enterprises; the coercions deriving from the responsibility for supply,** in the last period, the strict central control of the import of equipment and

*At a public discussion not long ago a manager of a very large service enterprise made the following claim: that the maintenance and development necessary for the functioning of his firm should be financed by the state, but it should be the firm's right to fix the prices of services performed.

** The large enterprises with a definite production line and the large commercial firm with a similar profile are responsible to the ministry, in the last resort to the government, that the supply of articles belonging to their line satisfies demand (at least on the whole). That is, on the basis of this responsibility—even if plan-instructions do not exist—the enterprise is under obligation to release definite commodities in definite quantities, independent of whether this activity is economical or not. The responsibility for supply is fully consistent with the system of plan-instructions, but in contrast with the concept of purposefully controlled market economy and with enterprise behaviour motivated by profitability. One of the great problems of further developing the reform is *how we can shift* from the responsibility for supply to such a state where output is regulated by market demand and profitability, but in such a way that no major disturbances arise on the market.

materials; and, last but not least, the forcing of exports (mainly against convertible currencies) independently of and even contrary to profitability factors (although profit motivation has remained the central category of enterprise management). Well, to put it mildly, all that is not advantageous for the large enterprises, and does not make them easy to manage. I believe that if from these tendencies those entailing advantages and disadvantages for large firms are weighed against each other, the latter will predominate. The managers I call ambivalent can and have to be won round to the reform, for such reform, namely, which gives real chances for successful operation to large firms as well.

Managers and economic policy

The social group of managers of large firms have a very big political weight and a significant impact on economic policy. But can the responsibility for mistaken economic decisions be shifted onto them? It is particularly important to ask whether the efforts and behaviour of managers of large enterprises are responsible for the cycles manifesting themselves in economic development and, in the final analysis, for the country's indebtedness.

Cyclical development is one of the important problems of the economic history of our socialist system: investment and production cycles and, related to them, cycles of foreign trade and real income (real personal consumption). A boom in the early fifties, restriction after June, 1953; overinvestment in the early sixties, restriction in the mid-sixties and, as was already mentioned, two cycles in the seventies, extending to (the end of?) the eighties. Where should we be looking for the causes of economic cycles? The economic leadership blames—at least in the last quarter of a century—enterprise managers for overinvestment. And it is a refined form of the conformity of theory if it gives ideological support to this viewpoint. (There can be no doubt, as I have already mentioned, that enterprise managers are a group in society with big political weight; they have a significant influence on the shaping of economic policy.) But it is not they who make policy, and thus they can not be held responsible for it. How do some authors explain the causes of cycles, and how do they make managers' efforts and behaviour responsible for the cycles? They say that managers, in identifying themselves with their tasks and role, strive for growth beyond every limit; lacking a hard budget constraint their efforts do not run into obstacles (Kornai [16]). A similar, though simpler and less objective argument is that managers are obsessed by "gigantomania" and this is the source of their efforts towards ever bigger enterprises (Hegedüs [17]). But it is a false reasoning that makes enterprise managers responsible for the cycles (and for the indebtedness) on the basis of the above arguments. First of all, effort at unlimited growth (or gigantomania) are *constant* factors, thus they cannot lead to a cycle [18]. Secondly, and this is, in my opinion, the more important one, that for an overheated growth of investments central decisions are needed, meaning also the

raising of central investments, and a credit policy, regulations and "expectations" towards the enterprises to also increase their own investments. (And central measures are needed also for curbing, the reduction of investment.) If the economic leadership possesses an actual strategy and, as part of it, a foreign economic strategy, if it refrains from generating cycles and even pursues an anticyclical policy, then managers can hardly make the development of the economy cyclical, and can hardly be forcing the country into debt.

Cadre policy

It may be justly raised that the blame for functional disturbances of large Hungarian firms cannot be put completely on the regulatory system. No doubt, the problems of cadre policy, of the selection of cadres also emerge. But these, too, are related to control in the wider sense. A planned economy relying on plan-instructions requires managers of the type who can well implement the commands issued from above. The selection of cadres which puts such dispatcher-type leaders at the head of enterprises is in complete harmony with the system of plan-instructions (independently of whether these directives are institutionally established or informal.) But the 1966 concepts and those approved in April 1984, assume a type of manager who is capable of working out a strategy, of making independent decisions, taking responsibilities and risks, and being enterprising. Prior to 1968, of course, both direct and spontaneous selection preferred managers of the dispatcher type; such were the tasks they were called upon to perform. But even in those times, leaders of the manager type could be found in large numbers* who, despite their good conscience, were compelled to act as dispatchers, or (and they were fewer in number) tried to act as enterprising managers, taking thus grave conflicts upon themselves. It was precisely the latter to be found among those fighting for reform.

Since then, rather essential changes have taken place within the managerial sphere. Although I cannot support it with statistical data, I still venture the statement that the ratio of enterprising managers has grown.** But it is also true that the restrengthening of central operative control, the revival of "manual control" again put the dispatcher-type leaders to the fore and this obviously affected the selection of managers. Also those of manager-type were forced to take on the role of dispatchers.

Also a special problem with selecting cadres—related to the former—should be mentioned. It is a declared principle that three criteria of equal weight are applied in Hungary in the selection of leading personnel: beside professional standards and the ability to make contacts with people, political suitability is also considered. It is self-

* I took the distinction between leaders of dispatcher and manager type from the writings of László Horváth, who, as a manager-type leader, was already head of one of our successfully operating large firms before 1968.

** An interesting phenomenon could be observed around 1968. Several experts in leading positions with higher authorities asked to be put at the head of firms. In their judgement the place where independent decisions would be taken was the enterprise.

evident that this should be a demand towards managers, or rather a precondition of their selection. They should be committed adherents of this system and both their professional work and their relations with people should be permeated by this idea. Actually, in the eighties unsuitability for political reasons can be objected to in very few people who are eligible managers. In 1948, when capitalist firms were nationalized in Hungary, and a social revolution was in progress, political reliability had quite a different meaning in the selection of new leaders. Their task was to consolidate the new relations. It was very difficult, sometimes impossible, to find cadres who answered both the political and the professional requirements. And in those times it was the political requirements that came first. In the eighties, of course, the situation is quite different. This system of ours has educated a new generation of experts and also the bulk of the old ones (unless they retired or left the country in 1956) have also reached a consensus with the system. Today the task is precisely to separate the public power functions from enterprise management and to demand rational management from managers. It seems, however, that the demand for political suitability is becoming shallow: in fact it is demanded that the selected person should harmoniously fit in with the management hierarchy. Obviously, if such practice prevails, the good dispatchers but not enterprising managers are selected even in the best case. That is, to actually carry on the reform, changing the regulatory system is not at all sufficient. Also, the personal conditions have to be secured beside many other things: a cadre policy which is in harmony with the development of the control and management system is vital.

The institutional system

An item of decisive importance in the development of the reform is improvement of the institutional system, and, within it, changes in the control of firms, in the system of institutional relations between the enterprise and the higher and medium levels of economic control. This implies, as I have already indicated, changes differentiated by types of enterprises in the institutions controlling the firms. In this development it is at least one of the important ideas to separate the exercising of public power functions from the control of enterprises owned by the state. A perfect separation is not possible, perhaps not even desirable. But this emphasis is not placed here today. Such a development of the institutional system also assumes, and presumably, will also result in adequate changes being made in the requirements set to managers and in the mechanism of their selection.

Changes in the institutional system must not be restricted to essential modifications of the external (horizontal and vertical) relations of enterprises, but their internal structure must also change. It is rightly pointed out as one of the causes of functional troubles of large firms that inputs and results appear within the gates as a uniform mass, and both interests and responsibilities get blurred. All this can be linked to smaller collectives in medium and small firms. But is this situation necessary?

Obviously not! Large firms have been encouraged for years to organize the independent economic accounting of individual units within the enterprise. Such efforts and even experiments can already be found. As a matter of fact, this idea is embodied in the enterprise workteams operating after legal working hours; it would only be necessary for them to operate also during that time.* This can be realized today only to a limited extent. Managers of large firms say that a greater step forward is seriously hindered by the prevailing system of accounting. In more general terms, (and this has been supported by much research) the systems of external and internal relations of enterprises cannot be completely different. (It would be important to examine whether enterprises are doing at least as much to expand internal economic accounting as is allowed by the rules and prescriptions.)

So, the development of a healthy division of labour between large, medium and small firms—and in such a manner as to establish the conditions for an efficient functioning of the large enterprises—demands essential changes in the regulatory system, in institutions and in management. If any of these links is missing, the reform cannot be realized according to the original concepts.

Workers in large enterprises and the managers

Clarifying the role of large firms, averting their functional disturbances, instituting the conditions for their economic operation, and realizing their true advantages are primary economic problems, but not only economic ones. The working conditions of workers employed in the large enterprises, their security, earning potential and, through these, their opinions and feelings are also political and social issues. This social group also has a considerable weight in our society, with particular mechanisms for expressing and asserting their interests (partly through the enterprise managers). It is true that the real (or assumed) grievances of workers of large enterprises can be easily used to manipulate opinion regarding various interests and political currents; they can be referred to as arguments—and as pretexts. This is what also happened around 1972. But this does not change the substance of the matter, on the contrary! It is all the more one of the key problems related to the development of the reform from political and social aspects that the workers of large firms should not be the aggrieved party of the reform, they should not be opposed to the reform, but the other way round: they, too, should benefit from the reform. Otherwise the reform will again necessarily falter. And if we act correctly in this respect, the workers of large firms can hardly be used as a battering-ram in the service of anti-reform trends.

The managers of large firms and the workers in these firms are two important groups in society. Are the interests of managers and workers identical? Anyone who

* A trust directing widespread service activities (car repair) was dissolved a few years ago and the enterprises belonging to it were made independent or subordinated to some other unit. In my opinion, it would have been better to keep the trust and grant great independence to the workteams in the enterprises.

knows anything about society, would not talk such nonsense. But is there some essential community of interest between them? Again, anyone who knows anything knows that there does indeed exist some community of interests. First of all, the basic interests of both groups are affected by the situation of the large enterprises, and the basic interests of both are violated by discrimination against large firms. Secondly, the literature on management theory, which fills whole libraries, has proven beyond doubt that the conflict of interests between managers and workers is not nearly so sharp as that between the latter and the capitalist owners. On the contrary, as a rule, the manager can well perform his tasks if he yields to the interests of workers, and even represents them. Thus, managers get into, at best, a contradictory position: they have to represent the interests of capitalists against workers but they also have to represent the interests of workers against the owners. This double representation of interests—however difficult it may be at times—is in the interest of the manager himself. This holds increasingly for socialist managers. After 1968 the work of managers in large firms met with growing difficulties, since in the given conditions they could not shape the financial results of their enterprises (in contrast with smaller firms) so as to be able to considerably raise the wages of their workers (leading thus to an exodus of workers etc.), thus the interest of managers was also attached to the wage rise. It was also in their interest if this wage rise was ordered by the centre (against the spirit of the reform). Thirdly, harmony or conflict of interests between manager and worker also depends, in our society, on the regulatory system. It depends on the latter whether the community of interests will predominate, or whether the conflict of interests will also have some role. It was a significant deficiency of the 1968 reform that *it did not create an adequate conflict of interests, more exactly, that it did not make the existing conflict of interests explicit*. Even today, it passes my comprehension that outstanding theoreticians, whose names hallmark the reform, were in principle against the institutionalization of the conflict of interests. In 1968 a system of profit sharing was introduced which took into account the different impact various groups of the collective have or may have on shaping profits. Accordingly, the largest profit share relative to earnings could be distributed to the higher enterprise executives (and, in the case of non-profitable activity, it was their gross income that fell in the greatest proportion); a smaller percentage was established for the medium-level leaders and the smallest one for subordinated workers and other employees. But even this measure had to be repealed because of its bad political appearance.

What did and does this superfluous and harmful coincidence of interests brought about by the regulatory system exist in? Essentially in the fact that both the manager and the subordinated employees, thus also workers, are equally interested *in annual profit*. Enterprise profit is the central category of the existing system of economic control and management and also of the one to be developed. But it has not been clarified to this very day what kind of profit it is that should guide enterprise behaviour. More exactly, the annual profit *has become* the objective function of the enterprise,

linked to and thus conserving the "incrementalism".* And the grave troubles are caused precisely by the latter: it squeezes the firm between narrow limits and makes it inflexible; it makes impossible to work out a true enterprise strategy and to follow it; it prevents the differentiation of enterprises. The annual profit as a central category of the large enterprise is an anachronism. The interests of a modern large firm, and of its manager, must be linked to long-term gains. But long-term gains are not identical with the average profit over several years. (Namely, such proposals were also made that the average profit of several years should serve as the basis for managers' incentives.) In fact, the long-term gains are by no means an amount expressed in currency, but the long-term gain consists in the quantitative and qualitative development of the enterprise. A manager who keeps long-term perspectives in view has to direct his firm so that perhaps (e.g. following a new investment) there will be no profit for some years, or even losses will have to be incurred and for this case reserves must be available—in the hope and in the interest of a later higher profit and better position. At present Hungarian enterprises simply cannot do this. (We find that, systematically, almost the same enterprises are profitable and, on the other side, the same ones run into losses. And if some profitable firm runs into loss, it does not voluntarily take this on itself for strategic reasons.) Even if subordinated workers and other employees had—and it is desirable that they should have—a greater "proprietor-consciousness", if their objective and recognized interests were linked to the development of the enterprise, their short-term interests would even then necessarily dominate. Wages should be higher this month, and profit shares higher this year! And the manager is under strong pressure to satisfy these claims. But also a satisfactory counterweight is necessary in the motivation of the manager, and this hardly exists today. The interests of the manager—in a wider sense—should be linked to the long-term gains, that is, in the end, to the development of the enterprise. His income, his professional and social judgement—his appointment or dismissal, his career—should depend on the development of long-term gains. Obviously, there would then exist a conflict between the interest of the manager and his subordinates. If this conflict were institutionalized, then it would actually become possible to let interests collide and to harmonize them, and both factory democracy and the protection of workers' interests could play their proper parts.

Up to now the large enterprise, the problems of its existence and its place have been approached from the aspect of efficiency, and this is the main line of the debate. But the large enterprise syndrome may also be approached from a different aspect—which is not primarily economic.

I think we can rightly expect socialism, existing socialism, not only to raise efficiency and consumption in competition with the capitalist system, and even outdo it historically, but also to free mankind from the restrictions related to the hierarchy of

* The approach which demands that an increment over the preceding year should be attained by all means. — *Ed. note.*

the social division of labour, from the attached relations of subordination and superordination, and from the alienation which ensues, so that socialism can become a society of associated producers. These requirements are, again, primarily the tasks of the large firms. This is where hierarchy is most explicit, where depersonalization is strongest, and where the actual participation of producing collectives in management is the most difficult to achieve.

The demands may be raised independently of efficiency, and even in opposition to it. Also, a possible standpoint is that the simultaneous development of the technical and social relations of the division of labour—we might also say, of the direct relations of production—enjoy priority over the development of efficiency, a “one-dimensional” technocratic and consumers’ approach in the final analysis. For example, also such an opinion can be found which—at least as I understand it—thinks it a negative step that the peasant leadership in farmers’ cooperatives was replaced in the seventies by technocratic intellectuals [19]. There is no doubt in my mind that this change was a key to the successes of Hungarian agriculture. But there can be no doubt, either, that it also introduced the same hierarchy into the cooperatives which had been traditional in large industrial firms.

These requirements may also be interpreted to mean that changes in the direct relations of production which weaken the hierarchical setup, managerial power, depersonalization etc., would not deteriorate but even automatically improve efficiency.

Either the first or the second approach may, and must, be debated. Under the given historical conditions the direct relations of production have to be modified not at the price of efficiency but in order to raise it. It should be carefully thought over whether (either in our country or in the world) the relations of the division of labour can be arbitrarily selected on the basis of the presently existing forces of production. But the opinion can justly be considered naive that the above-outlined modifications of these relations would, *quasi* automatically, result in a higher efficiency. (Here we have come back to the large vs. small enterprise syndrome viewed from the aspect of efficiency from another side.)

But it does not follow from the objections as if problems of the direct relations of production (I might also say: of macroeconomic relations which are, however, of macro- or at least of mezo-level in the social structure) were unessential. No doubt, we have little discussed these interrelations,* and have done even less in order to change the relations of the division of labour within establishments and enterprises.

We should first of all investigate where these categories are placed in the order of values of people.** Of course, one might also say that this order of values is manipulated. But can or should it not be manipulated in some other direction?

* Zsuzsa Ferge has been urging for years that this subject be treated. [20]

** A worker gave his opinion about factory democracy as follows: “I have got my own trade. Nobody should interfere with how I organize the working process. Management is also a trade demanding special qualifications. And I do not wish to interfere with their trade.” Not only do I allege that this is not a

The main thing, as I see it, would be to examine how and in what form could the direct production relations of the producer be further developed—not at the expense of efficiency, but with the aim of improving it—in the framework determined by the forces of production, and on the basis of a rational structure, by large, medium and small enterprises.

Instead of a summary, I wish to say the following. It is an alarming, precisely because it is a spreading phenomenon, that old dogmatism is not countered by anti-dogmatism but instead by trendy new counter-dogmas. The new dogmas (which, if closely examined, are not so new at all), are no better than the old ones. Dogmatism is not a system of definite views but a mode of reasoning and a method of discussion.

It is even more disquieting that, instead of a differentiated analysis, we frequently meet instead of expert diagnoses with unfounded—indeed unfoundable—generalizations, with political excommunications, or with a critique that aims at a lower-set target. It testifies to the purity of our scientific public thinking, and of public thinking in general, that we have essentially got rid of the dogmatism of the early fifties; this is one of the keys to success and promises for the future as well. Only this approach helps us avoid the judgement of enterprises and their regulation swinging from maxi to mini according to the latest fashion.

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widespread opinion, but I do not even know whether the worker quoted is perhaps alone with his opinion in the whole country. According to my experience, it is not exceptional that e.g. a skilled worker does not consider his own post and activity as a lower or inferior step in the division of labour within the workshop or the enterprise, but as a *different* one. As a matter of fact, the sharp objection to the three categories established in connection with the division of profit shares after 1968 was a manifestation of this kind of reasoning.

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МАКСИ И МИНИ (РАЗМЫШЛЕНИЯ В СВЯЗИ С ДИСКУССИЕЙ О КРУПНЫХ ПРЕДПРИЯТИЯХ В ВЕНГРИИ)

P. HOCH

Автор исходит из того, что и в Венгрии следует создать такую сеть предприятий, для которой характерно здоровое сочетание крупных, средних и мелких предприятий. В особенности для развития промышленности и сферы услуг долгое время было характерно преобладание крупных предприятий, вытеснение и ликвидация средних и мелких предприятий. Эта тенденция также является причиной недостаточной эффективности крупных предприятий и недостаточной гибкости венгерской экономики. Наряду с идеологическими причинами одностороннего предпочтения крупных предприятий (догматическое понимание превосходства крупного производства), более важной причиной является существование системы директивного планирования. Однако волны реформы хозяйственного механизма (после 1968 г. и в первой половине 1980-х годов) создали более широкие возможности для создания средних и мелких предприятий.

Анализируя проходившие в Венгрии дискуссии о размерах предприятий (отношение экономической политики к размерам предприятий), автор приходит к выводу, что и для дискуссии (и для экономической политики) характерна односторонность. Модное сейчас направление — это восхваление мелких предпринимательств (в противоположность прошлому) и критика крупного предприятия как формы. Эти течения подкрепляются и действующим хозяйственным регулированием (регулирование заработной платы, изъятие доходов у хорошо работающих крупных предприятий, обязательная для крупных предприятий т. н. ответственность за снабжение, понуждение производства на экспорт и т. д.).

Ключевой фигурой проблематики крупных предприятий является менеджер, составляющий группу, обладающую сильным политическим весом. Поэтому понятно, что в дискуссии о величине предприятий важное место занимает положение и деятельность менеджеров крупных предприятий, их положительное или отрицательное отношение к реформе, их роль в формировании экономической политики и ответственность за ее проведение, механизм из отбора, система заинтересованности, совпадение и противоположность их интересов с интересами рабочих крупных предприятий. И в этих вопросах автор выступает против односторонности, показывая противоречивость в положении этой общественной группы и мотивации ее деятельности.

SECOND ECONOMY, COMPETITION, INFLATION*

P. GALASI-G. KERTESI

In recent years the legal frameworks of the second economy have considerably been expanded. It might have been expected from this measure that the supply of consumption goods and services would grow, their quality improve, their range of choice expand and the intensity of shortage diminish. These expectations have, however, only partly been fulfilled; in addition, the slower than expected improvement in quality and expansion of supply have been accompanied by a fast rise in prices. The paper seeks an answer to the question to what extent the competition between the socialist sector and the second economy is a cause of accelerating inflation and the slow improvement in the quality of goods and services.

The Hungarian government considerably enlarged the legal framework of the second economy these last years. This fact has raised great hopes, both in the general public and among economists. It has, namely, been expected that the supply of consumer goods and services will be growing, their quality improving, their range of choice expanding and the intensity of shortage decreasing. Some of these hopes have been fulfilled, others not: supply and the range of choice have indeed been growing in Hungary, while shortage has been lessening on the market of a number of goods and services, accompanied by some quality improvement. Improved quality and increased supply have been, however, accompanied by a fast rising price level. Besides, the degree of quality improvement remained much below the rise in price level, and in some cases the prices were rising while quality did not improve at all. What is more, new developments in a more liberal treatment of the second economy and its encouragement coincided with the strengthening of inflationary tendencies. This gives the impression that a causal relationship exists between the two phenomena. As a consequence, the opinion is widely spread in Hungary that the accelerating rise in the price level is directly related to the expansion of the second economy.

In the present paper, we have attempted to find an answer to the question to what extent the phenomena detrimental to households can be ascribed to the second economy. More exactly, to what extent competition between state sector** and the second economy might be the cause of accelerating inflation and of the slow improvement in the quality of goods and services. First we shall examine the peculiarities of the market in which the producer of the state sector is in a monopolistic situation, then the effect of the appearance of the second economy and of the ensuing

* The authors express thanks to L. Csontos, I. Gábor R., Gy. Kővári and E. Sik for their useful remarks on the first version of the present paper.

** In the following, the expression "state sector" stands for state-owned enterprises and cooperatives.

competition on prices and the quality of goods will be investigated and, finally, we shall analyse the structure of the competitive situation of the two sectors.

Stating in advance our main conclusions: it can be demonstrated that a monopolistic situation has worse consequences for consumers than competition developing in the presence of the second economy. The appearance of the second economy does not lead, however, to a real competition, but only to a "perverse" one, where a spontaneous market division occurs among producers. Producers divide the various consumer groups among themselves, thus the competition for consumers will be illusory. For consumers this means that while the quality of products and services has been improving slowly or not at all, the price level is rising fast. Whereas in a real competition the various consumer groups are not sharply isolated, producers thus compete for nearly all consumers. In such a case, the price level may be rising, too, but then quality is improving at least in proportion to the rise in prices. It may also happen that on the market there are expensive goods of good quality and cheap goods of poor quality at the same time, whereby the average price does not rise, or only to a small extent.

It is to be stressed that the development and persistence of this perverse competition is not the result of the producers' intentional actions but it is an unintended side-effect of their actions constrained by the institutional conditions of economy. It is further stressed that competition between the two sectors is not the only cause of the inflationary tendencies. On the one hand, there also are forces inducing price rise in the state sector, on the other, inflation—present in any case—serves as an instrument of the economic policy for tapping purchasing power necessary because of the debt service obligations.

The analysis is based on a simple model: the phenomenon in question will be treated in isolation from other effects, so that the nature of competition between the two sectors and its negative side-effects can be shown. Our examination is diachronic: the behaviour and mutual adjustment of producers and consumers will be described as a time process. The model will make use of certain tools of standard microeconomic analysis: the actors calculate rationally, their preferences and expectations are also rational. At the same time, their decisions are constrained by the conditions of the Hungarian economy. It can thus be demonstrated, what suboptimal consequences the actors' rational behaviour may entail in the given institutional environment.

Beyond revealing the nature of competition between the two economies, our analysis will supply lessons of methodology and market theory. On the one hand, it demonstrates that the tools of microeconomic theory can be used in the institutional analysis of socialist economy. On the other hand, it raises doubts as to the validity of opinions according to which it is enough to increase the number of actors on the market for real competition to begin.

A few delimitations

We shall examine the market of only one product (service), exclusively from the aspect of its characteristic quality-price combinations. Our explications are concerned with such markets of so-called *standard consumer goods* and services on which the state sector as well as the second economy are present. Thus the following goods are excluded from the analysis: 1. vital products that cannot be substituted by anything else; 2. highly expensive consumer goods (generally durables) which are beyond the consumers' budget constraint (previous savings and/or loans are needed for their purchase); 3. so-called "positional" goods for which consumers often make big sacrifices and react very sensitively on their deterioration in quality (for example, kindergarten or school).

On the market of the given product 1. effective (solvent) demand exceeds supply (excess demand, seller's market*) and 2. consumers resort to forced substitution**, since they may not find the product corresponding to their preferences exactly.

Two types of consumers (buyers) appear on the market: price-sensitive and quality-sensitive consumers.*** It applies to both types of consumers that 1. they need the given product, and are therefore willing to accept some change in price and quality without forgoing the purchase. In other words, there is a domain of unfavourable change in price and quality, which is yet acceptable to consumers; 2. The expenses of both types of consumers are constrained by the amount of money they are prepared to spend on a given product as a maximum (expense constraint); 3. Both types of consumers have a "ceiling" on quality perception. That is to say, there is an upper limit to the quality of the product, above which the consumer does not perceive any improvement. Above this limit, the consumers' satisfaction does not increase any more.

There also are, however, essential differences between the two types of consumers, exactly as a consequence of their preferences in regard to price and quality.

For the *price-sensitive* consumer (*A*) the price of the given product is more important than its quality in making his choice among different products. In other words: the utility of a given relative price increment ($\Delta p/p$) and of a given relative quality increment ($\Delta q/q$) is less than 1, i.e. $U(\Delta p/p : \Delta q/q) < 1$. This property can be formulated in several different ways: 1. the consumer will pay for a unit of quality improvement only less than a unit of price increase; 2. he is already compensated for a unit of quality deterioration by less than a unit of price reduction; 3. in the case of a unit of price reduction he is willing to accept more than a unit of quality deterioration; 4. he will only pay a unit of price increase in the case of larger than a unit of quality improvement.

* In the sense as introduced and used by János Kornai [1], there is shortage on the market.

** On forced substitution, see Kornai [1], Chapter 18.3.

*** This distinction-enabling the formulation and explication of the basic idea of the present study—was introduced by A. O. Hirschman and analysed in detail in his work [2] now considered a classic.

For the *quality-sensitive* consumer (*B*) the quality of the product is more important than its price, i.e. $\cup (\Delta p/p : \Delta q/q) > 1$. In other words: he is willing to pay for a unit of quality improvement even more than a unit of price increase; 2. he only feels compensated for a unit of quality improvement by more than a unit of price reduction; 3. in the case of a unit of price reduction he will only bear less than a unit of quality deterioration; 4. he is already willing to pay a unit of price increase in the case of a less than a unit of quality improvement.*

The properties of the two types of consumers can be represented by their indifference curves** (see *Figure 1*), in which curve *AA'* shows the preferences of the price-sensitive consumer *A*, and curve *BB'* those of the quality-sensitive consumer *B*.

It is assumed that a T_s type exists of the given product, representing a price-quality combination that satisfies both consumers. For simplicity's sake, the per head consumption of the two consumers will be considered identical. The number of consumers coming to the market is, however, different:

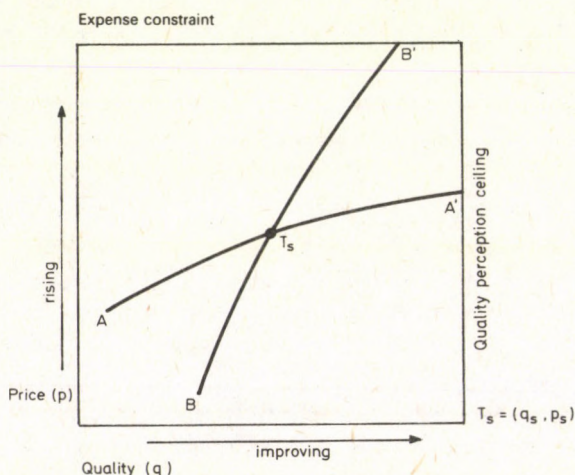


Fig. 1
Indifference curves of the price-sensitive consumer (*A*)
and the quality-sensitive consumer (*B*)

* *A* and *B* consumer types represent the *two extremes* of the average consumer, though only their considerations of price and quality are taken into account. In real life, of course, numerous transitory types exist, while it is exactly the two extremes that make the analysis based on a model possible. There may be such consumers who will buy a more expensive product even if its quality is not much better than that of a cheaper one, while others are prepared to buy a more expensive product only if its quality is considerably better, etc. Adapting this to the average buyers' behaviour: the properties of consumer *A* may be most closely approached by *buyers short of money*, and the properties of consumer *B* by the *more well-to-do buyers*.

** The indifference curve shows the mutually substitutive price-quality combinations, or, the kinds of products representing *identical utility* for the consumer. Of course, the consumer's preferences are not shown by just one curve, but by a multitude (bundle) of curves. It is further noted that the consumers' utility level rises towards the lower right corner of the Figure (products of better quality and lower price), and declines towards the upper left corner (products of poorer quality and higher price). The indifference curves represent several consumers with properties near the curves *AA'* and *BB'*.

there are much more price-sensitive (*A*) consumers, than quality-sensitive (*B*) ones.* Finally, it is assumed that consumers only have one means at their disposal to express their dissatisfaction regarding quality and/or price of the product: they *exit from* the market, i.e. refrain from purchase.** There are two kinds of consumer exits: 1. the exit in the presence of a substituting product; 2. the exit for lack of a substituting product. The latter case may occur if the consumer feels the quality of the product unbearably poor and/or its price intolerably high. Both reactions cause a direct loss of income to manufacturers of the given product.

Behaviour of the state sector's producer in a monopolistic situation

As a first step, let us assume that the product is manufactured by one single⁺ producer (or servicing) enterprise of the state sector. The producer⁺⁺ bears the marks of the state enterprise (see [1]). Here and now it is important for us that it is profit-oriented, i.e. it endeavours to earn receipts higher than its costs. The source of receipts, however, can also be government price (or other) subsidies or tax allowances. With a view to the model-like analysis (free from other effects) of the producer's behaviour concerning price and quality, it is assumed that no changes occur in its economic conditions (the regulatory system, central "expectations", etc. are the same all along). It is also characteristic of the state-owned firm that it produces a certain item only as long as it is profitable; while it is able to produce various types of the same kind of product (price-quality combinations⁺⁺⁺).

Let us assume, therefore, that at a given time the producer manufactures the product T_s which satisfied consumers of *A* and *B* types alike, and it wishes to make a change in the product in order to reduce costs and/or increase receipts. Obviously, one way to do this is to deteriorate quality and/or raise price, more exactly, to reduce the $\frac{p}{q}$ ratio of the product in a way that neither quality improvement, nor price reduction take place. Can the enterprise do this without its receipts starting to fall? In other

* This roughly corresponds to the assumption that there are more consumers short of money than well-to-do consumers.

** Hirschmann mentions a second type of consumer reaction: *voice*. The main statements of his book are exactly built on the comparative analysis of *exit* and *voice*. However, in our case (standard consumer goods), *voice* does not lead to the consequences he outlined; therefore, we have not analysed this mechanism. (For more detail, see footnote on page 276.)

⁺ This assumption holds empirically for a number of products and services.

⁺⁺ In the following, the producing, servicing and trading unit of a certain good will be called "producer", and the service or product itself will be called "product".

⁺⁺⁺ This is not an unrealistic assumption, either. A state-owned enterprise changes, namely, its production pattern more frequently because a given good has started to cause losses, than because of profit to be gained with a new product. See *Laki* [3].

words: what price rise and/or quality deterioration will consumers bear? The question can be answered with the aid of Figure 2.

The point T_s of the figure represents the product the enterprise produced in the preceding period. The curves AA' and BB' are the indifference curves of the price-sensitive consumer (A) and of the quality-sensitive consumer (B), respectively. The two straight lines setting out from the point T_s indicate the direction of price increase and of quality deterioration. In accordance with our earlier assumptions, there is a critical measure of price increase and of quality deterioration for both consumers at which they will refrain from purchase. This means, on the other hand, that they are willing to make forced substitution to a certain extent. That is, up to the above-mentioned critical measure, they will take a less advantageous price-quality combination than the product T_s .

The points marked on the straight lines of price increase and of quality deterioration are the so-called *exit points*. They indicate the measure of price increase or of quality deterioration beyond which consumer A or B refrain from purchase. The point A_{eq} indicates the price-sensitive consumer's (A) exit because of quality

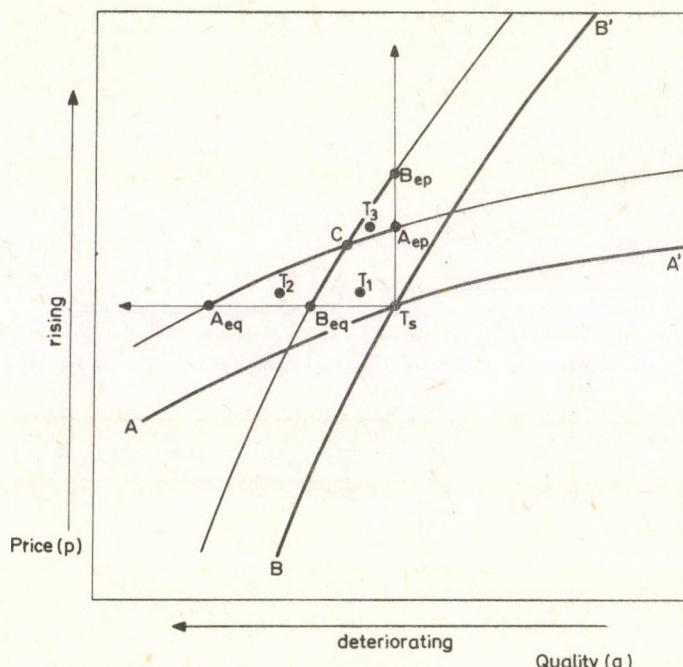


Fig. 2

Limits to the state-owned monopolistic enterprise's efforts at quality deterioration and/or price increase

Consumers: A: price-sensitive consumer, $N(A)$: number of the price-sensitive consumers,

B: quality-sensitive consumer, $N(B)$: number of the quality-sensitive consumers

Products: $T_1 = (q_1, p_1)$; $T_2 = (q_2, p_2)$; $T_3 = (q_3, p_3)$;

$T_s = (q_s, p_s)$; $N(A) \gg N(B)$; $q_s > q_1 > q_2$; $p_3 > p_1 > p_s$

deterioration, and the point A_{ep} his exit because of price increase. In the first case the price of the product, in the second its quality is unchanged. The curve connecting the two points, parallel to AA' is the *exit curve* of the price-sensitive consumer (A). If a joint change in price and quality of the product T_s reaches any point of this curve, consumers of type A will refrain from purchase. The points B_{ep} and B_{eq} and the exit curve connecting them represents the same thing, but related to quality-sensitive consumers (B).

Following from the properties of the two consumers, point B_{eq} is nearer to T_s than point A_{eq} (namely, with an unchanged price, the quality-sensitive consumer will refrain from purchasing the product already in the case of a lesser degree of quality deterioration than the price-sensitive consumer); and point A_{ep} is nearer to T_s than point B_{ep} (namely, with quality unchanged, the price-sensitive consumer will take a lower price increase than the quality-sensitive one). In consideration of the consumers' reaction, among which possibilities can the enterprise make its choice?

Option 1: If consumers have no other choice than exit, the producer is free to chose any price-quality combination within the area $T_s B_{eq} C A_{ep}$ where the $\frac{q}{p}$ ratio is in every case worse than in the case of the product T_s , without losing its consumers either of the type A , or of the type B . Within the said area, both price-sensitive and quality-sensitive consumers are willing to bear a rise in the price of the product and/or a deterioration in its quality. Option 2: If the product is placed within the area $A_{eq} B_{eq} C$, the enterprise will keep its price-sensitive consumers (A), while it will lose its quality-sensitive ones (B). The latter will, namely, form the opinion that the quality of the product has unbearably deteriorated. Option 3: If the enterprise chooses its new product within the area $C A_{ep} B_{ep}$, it will keep its quality-sensitive consumers (B), but will lose its price-sensitive ones (A). The latter will feel the price intolerably high.

What will, therefore, be the enterprise's decision? This is not independent of the *conditions of the market*.

If the enterprise finds that excess demand for the product is not too large (*shortage intensity is low*), it will be useful to opt for a *cautious* strategy. In the case of a mildly excessive demand, it is, namely less likely that the place of the withdrawn consumers will be occupied by new ones that far shut out from the market, than if shortage is more intensive. In such a case, the enterprise will turn out a product (for example, T_1) the $\frac{q}{p}$ ratio of which may be worse than that of the product T_s , yet this is not felt intolerable by any consumer. In this way the enterprise can force both the price-sensitive consumer (A) and the quality-sensitive one (B) to substitution so as to ensure a moderate growth of the enterprise profit. Assuming that costs increase with quality improvement and decrease with quality deterioration, the enterprise can maintain the given volume of turnover, have moderate additional receipts through a price rise corresponding to $T_s T_1$ and book a moderate saving in costs owing to the quality deterioration corresponding to $T_s T_1$.

If *shortage intensity is high*, the enterprise may try to gain higher extra profit: it may choose a strategy involving *higher risk*. It can decide for option 2 (any product T_2 within the area $A_{eq}B_{eq}C$), or option 3 (any product T_3 within the area $CA_{ep}B_{ep}$). Which one will it choose?

If it decides for option 2, it will only lose its quality-sensitive consumers (B) representing a minority. In this case, it will probably turn out a product T_2 the quality of which is considerably worse than that of the product T_s , while its price is not, or only a little, higher. In this way, though its turnover has decreased, the enterprise can still maintain the greater part of it.

It might happen that the saving in costs resulting from a considerable quality deterioration and a moderate price rise exceeds the loss of receipts deriving from having lost the quality-sensitive consumers (B) (namely, the number of price-sensitive consumers (A) is much higher); it may also happen that it does not. In this latter case, the enterprise can apply for government subsidy and gets it certainly, being a monopoly producing consumer goods.*

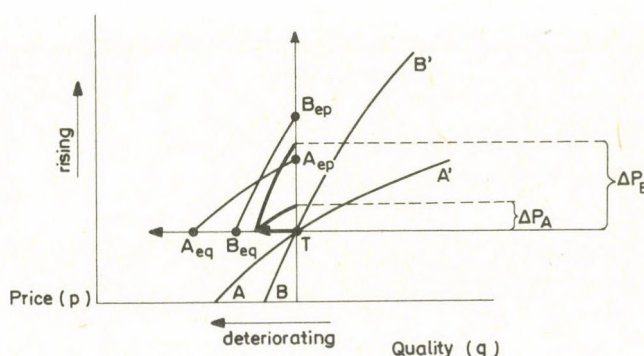
What happens if option 3 is chosen? The enterprise will then select a price-quality combination T_3 in which the extent of the price rise will exceed that of quality deterioration. As we have mentioned, in this case the enterprise will lose its price-sensitive consumers (A) representing a majority and thus its turnover will considerably decrease. This may, however, be counterbalanced by the high price rise and a saving of costs owing to a moderate quality deterioration. Looking at it from the aspect of receipts, the option T_2 may be more favourable for the enterprise than T_3 even if the loss in receipts resulting from the loss of consumers A exceeds the growth of receipts owing to the price increase. In the latter case the enterprise's chances to get government subsidy are, namely, much worse than in the case of a higher degree of quality deterioration. A considerable price increase is a fact so obvious as to raise doubts in itself about the justification of subsidy. This is to say that the version high price increase—little quality deterioration (option T_3) is the strategy of *highest risk* for the enterprise. Therefore, if shortage is high, the enterprise will more probably choose option (product T_2).

It is easy to see, therefore, that the state-owned enterprise in a monopolistic situation can spoil the quality of its product** and/or increase its price without any

* It is because the enterprise can count with a rather high probability on government subsidies in the case of decreasing receipts or rising costs, especially if incomes sink below the cost level. Even more so if the enterprise is, formally or informally, *responsible for supply*.

** It is the central proposition of Hirschman's book [2] that in a monopolistic situation the consumers' voice gains a particular significance and the voice of quality-sensitive consumers (B) is on the whole larger and more successful in it than that of price-sensitive ones (A). It is because, by definition, quality-sensitive consumers have a greater consumer's surplus than the price-sensitive ones, thus a unit of quality deterioration represents for them more than a unit of price increase (in other words: consumer's loss). With price-sensitive consumers, the situation is the reverse. If quality deterioration *approaches* the critical measure of B_{eq} , *without* reaching it, the given quality deterioration will absorb quite a large amount (ΔP_B) of the quality-sensitive buyer's consumer's surplus (section $B_{eq}T$), while much less (ΔP_A) of that of the price-sensitive consumer's ($A_{ep}T$). Both types of consumers will continue buying the product of a

disadvantageous consequences, or, it is free to deteriorate the $\frac{q}{p}$ ratio of its products in the worst possible ways. Its benefit from this is likely to show first of all in reduced costs owing to deteriorated quality and, to a lesser extent, in additional receipts owing to increased price. The monopolistic situation is particularly unfavourable if shortage intensity is high. It is because in such a situation the market conditions do not urge the enterprise to mitigate shortage and increase supply, but rather to make use of the consequences of shortage even more aggressively, i.e. to deteriorate quality even further.



deteriorating quality, but B 's dissatisfaction will be growing more definitely. His voice potential is greater—says Hirschman. This is a correct argument, the conclusion, however, that in a monopolistic situation the quality-sensitive consumers' voice will *halt* the process of quality deterioration only holds if a number of other conditions are also fulfilled. Why would the voice of quality-sensitive consumers be *sufficient* to achieve a change in enterprise management? Consumers constitute such a large and dispersed group on the market of most consumer goods that not the faintest chance exists for their collective action. Excluding the possibility of applying compulsion or selective incentives, the necessary amount of voice can only accumulate if a small number of influential group members—facing considerable individual losses—are prepared to undertake the trouble and expense necessitated by a successful voice and thus to produce alone the result favourable to the whole large group: in our case, the restoration of quality [4]. The chance for this is, however, limited, exactly because of the *particular features of the products examined*. These kind of consumer goods are, namely, within the consumer's budget constraint, they are not highly expensive consumer durables or goods that basically affect the quality of life. It is, therefore, unlikely that even one single consumer should venture so much trouble, energy, costs and nuisance (for example, a series of court hearings), which would amount to sufficient voice to put the monopoly in its place. The situation is different with the highly expensive consumer durables or with a few fundamental, "positional" goods (deteriorating residential environment and recreation zone, declining standards of school education, kindergarten, health services, etc.). In this case—seeing the melting away of their consumer surplus, some of the quality-sensitive consumers launch definite action with a view to have the quality of the given good or service restored. Upon sociological considerations, it seems likely that the consumers *most willing to protest* will be those *having the greatest influence*. In this case there is a chance of success.

For us this means that, even though the motivation of quality-sensitive consumers for voice is stronger also in the case of simple consumer goods (purchased with a daily, weekly, or monthly regularity), their practical propensity to protest will remain low *with a view to success*, (because of the disproportionately high individual costs of the action in comparison with the expectable benefit). As for price-sensitive consumers, both their motivation and their practical propensity are smaller, while their number is much higher. Therefore, the size of the aggregate dissatisfaction will not much differ in the cases of options 2 and 3. And, the decisive factor is that voice will not be successful in either case, even though in the case of option 2 dissatisfaction is clearly felt by the enterprise.

Competition between the producer of the state sector and that of the second economy

The previous arguments have confirmed our everyday experience that a monopolistic situation of the state sector's producer has grave consequences for consumers. Let us now examine, what consequences the second economy's entry to the market and the ensuing situation entail. With this in view, our model elaborated for the monopolistic situation has to be altered to a certain extent.

The second economy's producer enters the market

At the time t_1 one single producer of the second economy enters the market of the product. There are now two producers on the market. Just as in the case of the monopolistic situation, there are two types of consumers: price-sensitive (A), and quality-sensitive ones (B). The producer of the second economy strives after profitability. He has a hard budget constraint: he cannot rely upon the government to help out in case of loss or bankruptcy; he is cost-sensitive and profit-oriented. If he wishes to subsist on the market, he has to win over consumers from the producer of the state sector.* What types of consumers can be attracted and how does this affect the price and quality of the product? The question can be examined from two aspects: 1. what products are the consumers willing to take? 2. which kind of product is advantageous for the second economy's producer? Consumers use the product T_s of time t_0 of the state sector, as a basis for comparison in their decisions and the second-economy-producer's decision is determined, beside considerations of consumer preferences, by the institutional conditions under which he has to produce. In choosing a strategy, he will take into consideration both the consumers' attitude and the kinds of products favourable for him.

The point T_s shown in *Figure 3* represents the product supplied by the state sector's producer at time t_0 ; the curves AA' and BB' are the indifference curves belonging to T_s of price-sensitive and of quality-sensitive consumers, respectively; (a), (b), (c), (d) are the basic options the second-economy's producer may choose. Let us see, with which kind of the product T_m the second economy producer might try, in the hope of success, to win over some of the consumers. First decision making must be examined, from the aspects of the consumers and the producer as well.

The consumer's aspect is obviously the utility represented by the new product. In *Figure 3* only two indifference curves are drawn, though both types of consumers have other indifference curves below and above those drawn (a multitude (bundle) of curves). The points of each curve represent products embodying identical utility for the

* In the course of the present analysis, it is assumed of the second economy's producer that he carries on legal activity. It is to be noted that the appearance of illegal elements does not alter the validity of our conclusions. The unintended negative by-effects will then be even worse.

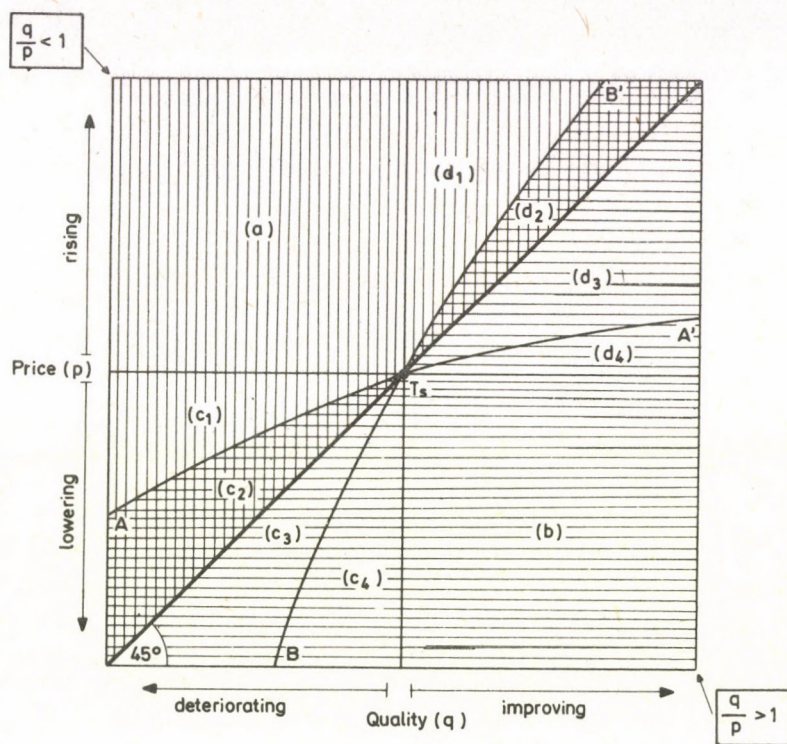


Fig. 3

Possible options of the second economy's producer
 A accepts (c_2) , (c_3) ; B accepts (d_2) , (d_3) ; A and B accept (c_4) , (b) , (d_4)

given customer, while the different curves of one and the same customer represent lower or higher utility (satisfaction). Setting out from the upper left corner of the Figure towards the lower right corner, the curves represent increasing utility. In view of these properties of the indifference curves, the consumer would only buy T_m if it were placed below the indifference curves AA' or BB' passing through the point T_s .

The strategy (a) is unacceptable to consumers, because the kinds of products to be found there are all placed above the indifference curves of both types of consumers. If, however, the producer chooses (b), he will offer to both types of consumers a product representing higher utility (the product is placed below the indifference curve belonging to T_s of both the types A and B of consumers). In such a case, therefore, both price-sensitive and quality-sensitive consumers would turn away from the state sector.

In the case of strategy (c) the decision is somewhat more complicated. Four sub-cases may be distinguished in it, marked as (c_1) , (c_2) , (c_3) and (c_4) . Consumers must refuse (c_1) similarly to (a); (c_2) represents higher utility for consumer A, while for consumer B its utility is lower. The strategy (c_3) is again attractive to A, but not to B. The kinds of products found there are still placed above the indifference curve of

consumer B . The strategy (c_4) , similarly to (b) , is more favourable than T_s for both types of consumers.

As for the sub-cases of strategy (d) , it is easy to see, by the same procedure, that (d_1) is not attractive to either consumer, (d_2) is favourable for consumer B , (d_3) would again force consumer B to substitution and (d_4) represents a more favourable kind of product than T_s for both types of consumers.

If the possibilities (a) , (c_1) , or (d_1) are chosen, *no* consumer will buy the product T_m ; if the producer chooses (b) , (c_4) or (d_4) , he will win over *both* types of consumers from the state sector; if he chooses (c_2) or (c_3) , he will win over *type A*; choosing (d_2) or (d_3) , he will win over *type B*. In *Figure 3* the horizontally striped area represents the set of products acceptable to some or all consumers, i.e. of products embodying greater utility than the product T_s and so *feasible* for the producer.

The producer's point of view is the quality-price ratio $\frac{q}{p}$ of his product (T_m). If costs grow proportionally to quality improvement, he will obviously try to reach the lowest possible $\frac{q}{p}$ of the product. The second economy's producer, however, does not simply compare the quality-price ratio of his product to his own costs. He will also take into consideration the product (T_s) supplied by the state sector's producer. If $T_s = \{q/p = 1\}$ holds for the state-owned enterprise's product, $T_m = \{q/p < 1\}$ is the favourable product for the second economy's producer. In this case he will offer a product of slightly better quality at a considerably higher price, or a product of much poorer quality at a slightly lower price. These conditions are fulfilled in the vertically striped area above the straight line of 45° . This area represents the set of the producer's *rational* product choices.

The second economy's producer is in a position to realize his ambition: in the areas (c_2) and (d_2) his preferences coincide with those of consumers. Therefore, the horizontally as well as vertically striped areas (c_2) and (d_2) represent the set of *efficient* alternatives, i.e. those that are *rational as well as feasible* for the producer.

The producer's decision is determined by his considerations regarding the *volume of turnover* which is, in turn, influenced by the *institutional conditions* of the second economy within the socialist system. As we shall see, it is because of these conditions that the second economy's producer will choose, independently of his cost conditions, more expensive and better-quality products than those of the state-owned enterprise.

As for considerations regarding the *expected volume of turnover*, two clearly different cases may be distinguished: the producer will strive either for a *big turnover* (*expansion*), or is *satisfied with a small one*. Obviously, the winning over of consumers A , or of consumers A and B leads to a big turnover [since $N(A) \gg N(B)$], while the winning over of consumers B corresponds to a small-volume strategy. The second economy's producer is more likely to decide for a small than for a big turnover.

The big-volume strategy is, namely, not at all rational for the second economy's

producer, it is risky and runs into numerous obstacles. Such producer's behaviour infers long-term expansion. And, for an increasing turnover an increasing capital (business premises, machinery, equipment, material, wage workers etc.) and security of the long-term return of investments, i.e. a longterm calculation, are necessary. The institutional environment surrounding the second economy makes, however, a long-term calculation rather uncertain and, therefore, irrational. In the following, just a list of a few factors.*

1. The size of enterprise is limited by law: authorities determine the maximum number of the unit's employees; the producer may only have a limited quantity of certain kinds of equipment.

2. Parallel to the increase of turnover, receipts and capital, the system of taxation will be increasingly restrictive; "visible" goods are "punished" most.

3. The producer has access to the necessary inputs at less favourable terms than the state sector's producer.

4. The provision of inputs may be difficult anyway, and difficulties may even grow with increasing output. The required equipment and materials are available to the producer ever more often only against bribe especially because he has to compete in retail trade with households.

5. Credits wanted for the expansion are legally available only to a limited extent, while illegal credits bear high rates of interest because of the risk and are certainly increasing with the growth of the amount.

6. Expansion through modernization is difficult: producers usually can only get the scrapped equipments of the state sector.

All these conditions make both the increase of capital and a long-term calculation irrational. Therefore, the second economy's producer chooses the *small-turnover* strategy, which may be carried into effect at a negligible risk by winning over the quality-sensitive consumers (*B*). If it is taken into consideration that long-term calculation is uncertain for the second economy's producer, wherefore he endeavours to adopt the strategy of the *highest possible profit in the short run*, he will be situated, with a *small turnover*, rather in the area (d_2). This is a strategy attractive to the quality-sensitive consumer because he can get a product of a better quality, even though at a higher price. Thus the quality of the product T_m is better, its price higher, while its quality-price ratio worse than that of the product T_s . The quality-sensitive consumer's satisfaction grows because, exactly on account of his quality-sensitiveness, he will be willing to pay for a relatively small improvement in quality even with a relatively fast rise in price.

This property of the quality-sensitive consumer, namely, that he is *comparatively insensitive to the deterioration of the $\frac{q}{p}$ ratio in the case of quality improvement* may be

* For more detail, see Gábor [5], and Gábor and Galasi [6].

called *quality illusion*. It is to be noted that the second economy's producer counts exactly on that consumer *B* will ignore the deterioration of $\frac{q}{p}$ if *q* improves.

The quality illusion is strengthened by the consumers' habits, conditioning and experiences formed in the monopolistic situation. We have seen in the previous section that in a monopolistic situation quality can deteriorate without consequences even with a low shortage intensity. (Figure 2, point T_1). It has been seen, too, that alternatives even more unfavourable to consumers can follow as shortage increases (Figure 2, points T_2, T_3). Let us assume that a monopolistic situation subsisted with a low shortage intensity at the earlier time t_0 (no more favourable case of shortage is conceivable). In this case, consumers' typical experience with monopoly will be a quality deterioration ($q_s - q_1$) corresponding to the section $T_s T_1$ (see Figure 2). The second economy's producer can justly count on that. A consumer accustomed to a monopolistic situation has not had, namely, much opportunity to know good quality before. He thinks, in any case: "Better quality costs more". The expectations of the consumer accustomed to a monopolistic situation and, consequently, to poor-quality products are, at the same time, often accompanied by the fallacy: "if a product is more expensive, it is also better". Consumer *B*'s *quality illusion*, made more intensive by the monopolistic situation, allows the second economy's producer to adopt the earlier refused strategy (d_1). There are two mechanisms of "capturing" the quality-sensitive consumers (See Figure 4).

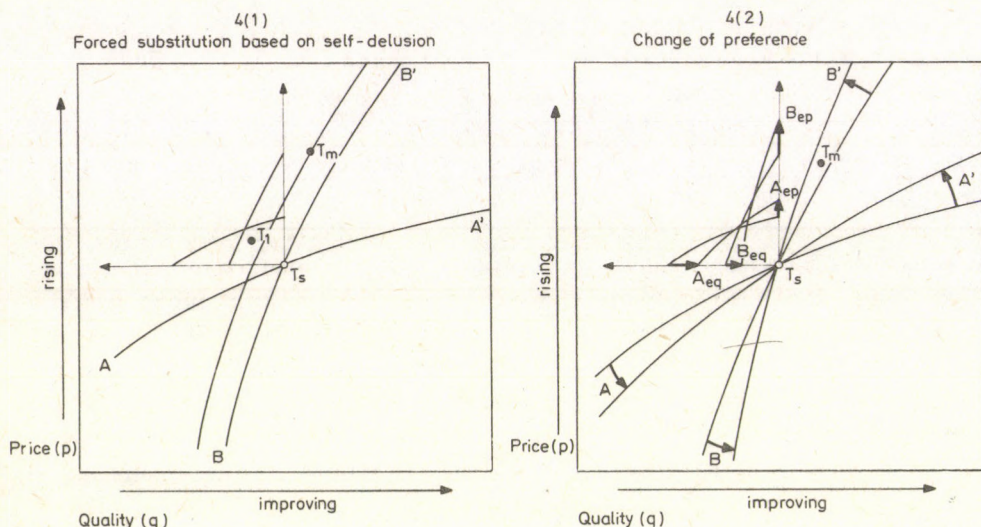


Fig. 4
The mechanisms of "capturing" the quality-sensitive consumer

1. *Forced substitution based on self-delusion.* In this case, *former bad experiences* are effective in the first place. Consumer *B* has got used to a quality deterioration corresponding to at least T_1 on the part of the state sector's producer and has accepted it as a normal quality deterioration level (the point T_1 is placed, namely, well within the area marked off by his exit curve and the lines of price rise and quality deterioration). He is therefore prone to consider the product T_s worse in the presence of T_m than it is in reality (as T_1). The quality-sensitive consumer compares the new product T_m offered by the second economy's producer to this (T_1). In *Figure 4/1*, this is shown by that T_m is situated on a better indifference curve than T_1 . In fact, of course, a forced substitution has taken place, the consumer having shifted from a better preference curve to a level representing lower utility.

2. *Change of preference* on the consumer's part. Here it is rather the effect of an *illusory quality improvement* that asserts itself. Consumer *B* becomes even more quality-sensitive under the impact of a really better quality. A learning process takes place: he has had that far no opportunity to know "good" quality, and has now discovered it. As in the previous case he underestimated the quality of the old product, now he overestimates that of the new one. He is willing to make a greater sacrifice for it, i.e. to accept a further deterioration of the $\frac{q}{p}$ ratio.

We do not know anything about the relative intensities of the two reactions. In the situation under examination they are probably simultaneously active and, what is of a decisive importance, they do not leave intact the price-sensitive consumer (*A*) preferences, either. All this amounts to saying that despite a deterioration of the $\frac{q}{p}$ ratio, the quality expectations of *all* consumers will be growing with the appearance of the second-economy's producer. And this will to some extent *constrain* the quality deterioration possibilities of the state sector's producer.

If forced substitution based on self-delusion takes place and/or a change in preference follows, T_m not only represents a deteriorating $\frac{q}{p}$ ratio, but also smaller utility. It is not certain, however, that this happens: the producer may rest content with receipts lower than (d_1) and decide for the strategy (d_2).^{*} However, the fact remains in both cases that the price of the new product grows at a higher rate than its quality improves (see *Figure 5*).

* The argument is based on the appearance of one single second-economy's producer. In real life of course, usually several producers are present on the market. Our analysis is, however, valid also in the case of several producers. If some producers adopt the strategy (d_2), and others the strategy (d_1), the negative by-effects will be mitigated at the most, but not eliminated. It is not impossible, either, that some of the producers will adopt the strategy (d_3), which, however, cannot be dominating, for it is to be considered irrational under the given institutional conditions.

be seen in Figure 4.2 has come about.* What consequences does all this involve for the socialist sector's producer? At first sight it seems that the state-owned enterprise has clearly suffered disadvantages. It has lost some of its customers (the quality-sensitive consumers), its receipts have decreased; what is more, the quality-sensitiveness of even the price-sensitive consumers has grown, which reduces the quality-spoiling prospects of the enterprise. This latter consequence must force it to pay more attention to the quality demands of consumers. Well, it must have been exactly such considerations that induced the enterprises earlier enjoying a quasi-monopolistic situation to try to put obstacles in the way of expanding the second economy's framework and of legalizing some of its forms. After some time, however, they may have gained contrary experience, too. Namely, as soon as the *division of the market* has taken place, and price-sensitive and quality-sensitive consumers have separated, the state sector's producer recognizes that the appearance of the second economy's producer does not have an unfavourable effect on sales condition. Not even its freedom of action regarding choice of the product (price-quality combination) has decreased in comparison with the time t_0 . This can be explained by the following factors.

Since there was excess demand on the market at the time t_0 , the withdrawing quality-sensitive consumers (B) can be replaced by new price-sensitive consumers (A), for whom the product T_s — of a poorer quality but also much cheaper than T_m — represents a satisfactory price-quality combination.

For the socialist sector's producer this situation may be even better than the monopolistic situation of the time t_0 , since the entering competitor frees it from the quality-sensitive consumers more likely to be dissatisfied with the poor quality of the product T_s and thus it can more freely assert its own interests against the price-sensitive consumers that have remained. [2]

What happens, however, if the state sector's producer has suffered substantial loss of receipts by having lost its quality-sensitive consumers? How will it react? Can it increase its receipts without increasing its costs? Is it constrained in doing so by the presence of its competitor and, if so, how much? To answer this question, somewhat more complex considerations are needed.

As it has been mentioned previously, the appearance of the second-economy's competitor (product T_m) also has a beneficial effect on the market from the costumers' point of view. It is because the preference-changing effect of quality illusion exerts itself not only in the case of quality-sensitive, but also in that of price-sensitive consumers. The quality expectations of consumers have grown higher in general. Going back to Figure 4/2, we can see that in comparison with the time t_0 , the possibilities of quality deterioration have decreased in the market situation at the time t_1 (the points A_{eq} and B_{eq} have come nearer to the product T_s of the state sector). At the same time, both consumers' tolerance towards price increase has grown (the points B_{ep} and A_{ep} have

* Because of limited space, the other possible cases will not be discussed here: forced substitution based on self-delusion with the strategy (d_1), or the strategy (d_2). It is verifiable, however, that the omitted cases have similar consequences.

moved away from the product T_s of the state-owned enterprise). In the course of our analysis concerned with the time t_2 , we shall first of all stress the consequences of this new development.

Let us have a look at *Figure 6*. Since in the new situation the state enterprise can in fact only count on the presence of the price-sensitive consumers (*A*), it is their behaviour curves that are shown in the Figure. As for the exit curve: since also the

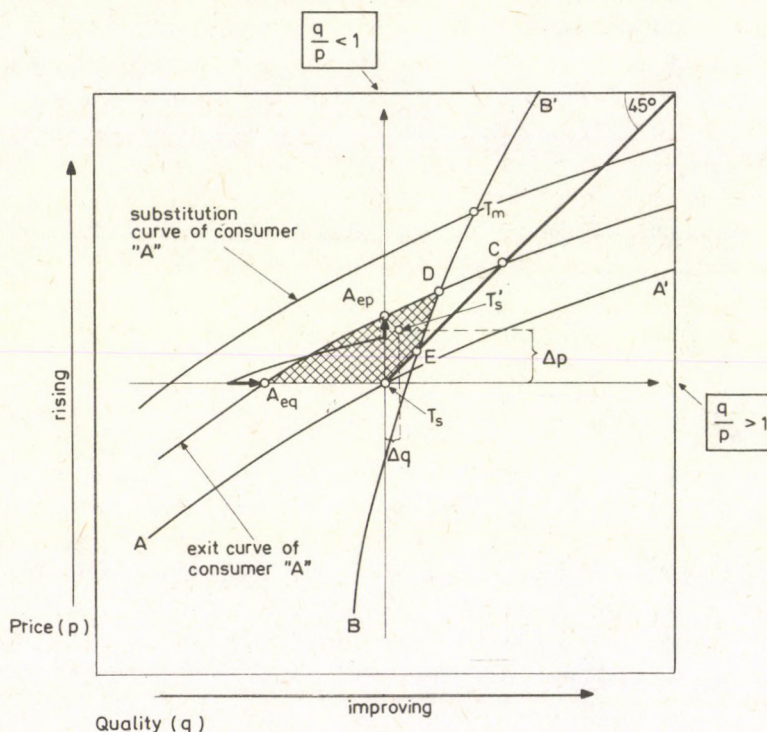


Fig. 6
The adaptation of the state sector to the presence
of the second economy competitor (time t_2)

price-sensitive consumers' preference curve has grown steeper, the point of exit because of potential quality deterioration (A_{eq}) has come nearer to the product T_s , while the point of exit because of potential price increase (A_{ep}) has moved away from it. Therefore, what the state-owned enterprise has lost on the swings through the increase of quality-sensitiveness, it has made up for on the roundabouts: *the price-sensitive consumers are willing to take a greater price increase than at the time t_0* . Let us also notice that the state sector's possibilities of quality deterioration have not ceased altogether, but only decreased, and further, that the limit of quality deterioration and/or price increase is still determined in the case of consumers *A* by their *exit curve* and not by the possibility of substitution by the product T_m (*substitution curve* passing

through the point T_m parallel to the preference curve AA'). That is to say, the possibilities of quality deterioration with or without price increase are not constrained by the qualities of the competitor's product. The state sector's producer hits before that constraint and the price-sensitive consumers renounce the product without looking for a substitute.

That this is not just the consequence of an arbitrary placement of the points representing the products is made clear by the argument of the previous section. Namely, at the time t_1 the second-economy's producer chose a product T_m which lay higher than the price-sensitive consumer's exit curve (we endeavoured to supply sufficient argument to make it clear that he had good reason to do so). It is because the small entrepreneur wishes to avoid the unfavourable consequences of a sudden inflow of price-sensitive consumers: the rise in tax burdens, the stricter control by authorities, the high interest rates of loans wanted for expansion, uncertainty, etc.

Thus, the state-owned enterprise's scope of manoeuvring is delimited by the consumers' exit curve even in the presence of competitors (only that it is now exclusively the price-sensitive consumers). These consumers' tolerance of quality deterioration has decreased, while their tolerance has grown towards price increase. What are, under these conditions, the prospects of the state sector's producer to promote its own interests by deteriorating the $\frac{q}{p}$ ratio of its own product, without unfavourable consequences?

The set of products advantageous for the state sector's producer is represented by the points of the area $A_{eq}A_{ep}CT_s$ (see Figure 6). Whichever product the producer chooses within the given area, he will earn additional receipts without effort by deteriorating the $\frac{q}{p}$ ratio. In the case of the subset $A_{eq}A_{ep}T_s$ this is trivially fulfilled (price is raised and/or quality is deteriorated). And, in the case of products corresponding to the area $A_{ep}CT_s$, the producer will improve quality less than he will raise the price and will thus increase his gain. The two domains of the area $A_{ep}CT_s$ differ, however, from each other in an important respect. The products within the area $A_{ep}DET_s$ can by no means be attractive to quality-sensitive consumers (B) having withdrawn at an earlier time t_1 : they represent a lower utility level than the product T_m . On the other hand, products in the area DCE present an attractive substitution alternative for quality-sensitive consumers. They could then shift to an indifference curve representing a higher utility level than T_m . And, what is more, in a way that it would represent a more advantageous $\frac{q}{p}$ ratio (in comparison with T_m) for the state sector's producer, too. And yet the state sector's producer *will not* choose its product from the area DCE , for more than one reason.

1. In this case, namely, much higher prices would be needed than those of the products within the area $A_{ep}DET_s$ (for example higher than p'_s belonging to $T_s = \{q'_s, p'_s\}$). It may be more difficult to have the government price authority to accept

it; while the producer would certainly not be content with a price increase identical with or less than p'_s within the area DCE , since it can reach the same thing with smaller costs i.e. with smaller quality improvement (q'_s).

2. Besides, the products within the area DCE are risky for the state sector's producer. A higher quality than q'_s would sharpen competition with the second-economy's producer for the quality-sensitive consumers. And a price much higher than p'_s would present the risk that price-sensitive consumers withdraw. The withdrawal of price-sensitive consumers may be disastrous; and efforts made at winning back the quality-sensitive consumers would imperil the enterprise's future manoeuvring prospects. In this case, namely, the state sector's producer would drive its competitor into a sharp competition for quality-sensitive consumers and, if both keep insisting on these consumers, they would sooner or later have to switch over to the price-quality

combinations $\frac{q}{p} > 1$ favourable to consumers and unfavourable to themselves. Since competition would be carried on in this case for the quality-sensitive consumers, the sector's producer would come increasingly near to the exit curve of the price-sensitive consumers and the risk of losing the latter would be growing. Therefore, products within the DCE area can be excluded. Let us note: we have excluded thereby real competition as well. *Just as at the time t_1 the second-economy-producer endeavoured to avoid competition for price-sensitive consumers because of the institutional conditions determining its situation, so at the time t_2 the state-owned enterprise endeavours to carefully avoid winning back the quality-sensitive consumers.*

Thus a *division of the market* has taken place also on the part of the state sector's producer. The set of products favourable for the state sector's producer is represented by the area $A_{ep}A_{eq}DET_s$. In comparison with the time t_0 , it will resort less to quality deterioration and more frequently to price increase. It will endeavour to adjust its price to those of the second economy's producer. Let us assume that it chooses the way most favourable to consumers: it improves quality to some extent and increases its price considerably (though less than the second economy's producer), that is, it chooses the product T'_s within the area $A_{ep}DET_s$. As a consequence, the price level of the product rises, its quality-price ratio deteriorates, the state sector's producer keeps his price-sensitive and the second-economy's producer his quality-sensitive consumers. In the following, we shall start from this latter possibility in trying to trace the second-economy-producer's adjustment to the changed behaviour of the state-owned enterprise.

Unintended collusion: new price rise in the second economy

The second economy's producer also has some freedom of action in choosing the product. Since the quality-sensitive consumers have come over to him at the time t_1 now he only has to take care that they should not withdraw, or should not go back to the state sector's producer. Knowing the preferences of consumers B , the well

calculating second-economy's producer must not perceptibly deteriorate the quality of the product and/or a price increase should be accompanied by at least a perceptible quality improvement.

We shall try to determine the set of product changes open to the second-economy's producer, in which set he can either increase his income without increasing inputs, or can have additional receipts over a modestly increased input. (See *Figure 7*.) In comparison with the situation at the time t_2 , an interesting *asymmetry* may be observed.

While at the time t_2 the state sector's producer only had to take care of the exit curve in the case of price-sensitive consumers, and could leave out of consideration the competition created by its competitor (the substitution curve in *Figure 6*), at the time t_3 the second-economy's producer solely has to pay attention to the substitution curve of quality-sensitive consumers, i.e. that his product T'_m chosen at the time t_3 should not fall to an indifference curve containing T'_s . In such a case, namely, quality-sensitive consumers would resign to the fact that the qualities of the product supplied by the second-economy-producer are no better than those of the product T'_s of the state sector's enterprise (its quality and price).

The choice of the product is therefore constrained from above by the substitution curve of consumers of type *B*. And from below, it is constrained by the line

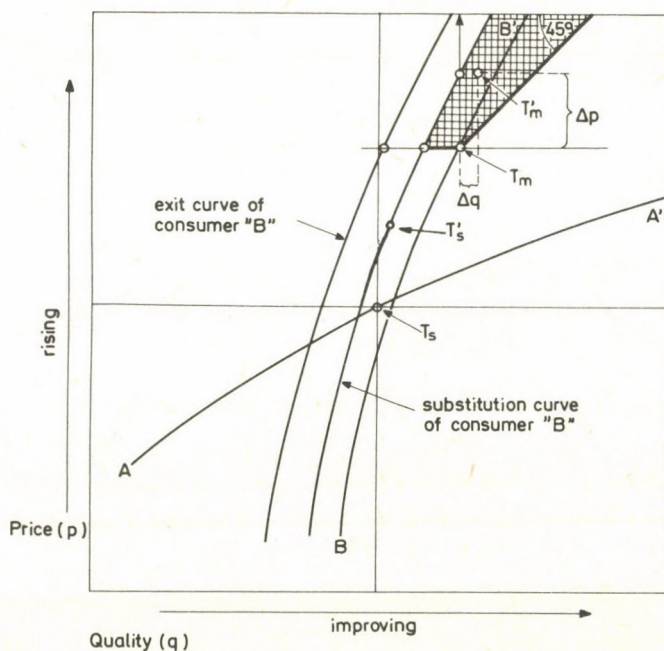


Fig. 7
New price rise in the second economy (time t_3)

of 45° drawn from the point T_m . In the domain below this line of 45° the extent of quality improvement exceeds that of price increase: the producer has to pay increasingly higher costs in order to raise his returns from sales. In the domain above the line of 45° , however, he can shape the $\frac{q}{p}$ ratio of the new product advantageously for himself. This may be unfavourable to consumers, but they cannot do anything against it. They are in a strait: T'_m will still be better than T'_s .

The circle has been closed. *Both producers can turn the advantages of the division of the market to their own benefit without doing any harm to the "competitor". The result: by deteriorating the $\frac{q}{p}$ ratio, the state sector's producer exploits the price-sensitive consumers, and the second-economy-producer the quality-sensitive ones.* The accompanying phenomena of the process of mutual adjustment lasting from the time t_0 to t_3 are: *a fast rise in the price of the product in question* and deterioration of the $\frac{q}{p}$ ratio.* The changes that took place in the period under examination are summed up in Figure 8.

It should be stressed that the process is *unintended*. The unfavourable consequences outlined above do not come about by any agreement on the producers' part. The division of the market and exploitation of advantages arising from it are to be traced back in the case of both actors to their choosing the most rational alternative action within the given institutional conditions. Any other choice would demand of them an economically irrational, and altruistic behaviour.

Conclusions

Of the harmful consequences of a monopolistic situation, and of a perverse competition on consumers, the former are deemed to be the worse ones. A monopolistic situation may even further increase shortage with deteriorating quality and slightly rising prices. On the other hand, the perverse competition reduces shortage intensity, and expands the range of choice, but prices are fast increasing and the quality of products is relatively slowly improving.

This form of competition developing between the state sector and the second economy also has some further unfavourable by-effects. One of these is—to be stressed

* The events described above also take place if the single second-economy's producer is joined at a later time by another one. With higher price and better quality the newly entering producer can win over some of the quality-sensitive consumers. It is true that, progressing towards more expensive and better products, the number of potential consumers is decreasing, yet it is possible for further producers to enter as long as even the activity of the second-economy's producer supplying the most expensive and best-quality product is profitable. Therefore, the unfavourable consequences of the perverse competition are also felt in the case of several producers, and it is even conceivable that the price level of the product will be rising at an accelerated rate.

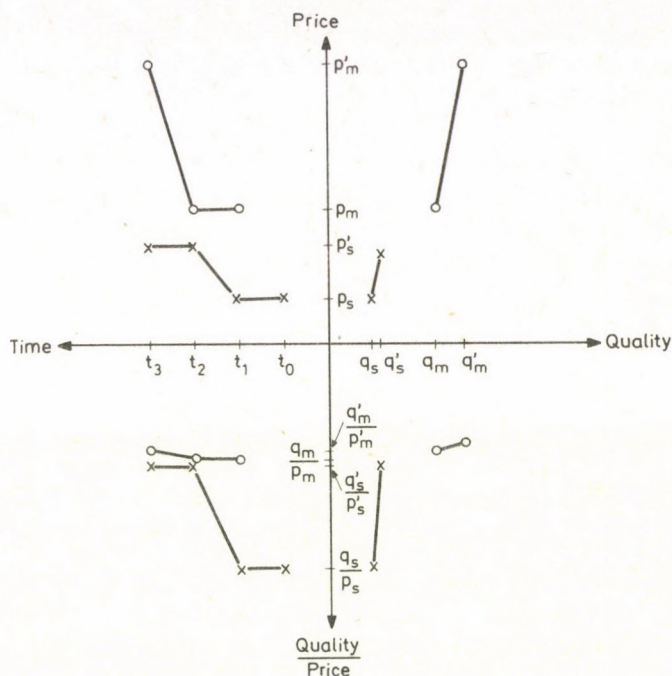


Fig. 8

Harmful by-effects of the perverse competition between state sector and the second economy

× The state sector's producer; ○ The second economy's producer

in the first place—that, though it does not exclude, it slows down innovation. The producers incentive for cost reduction and technological innovations is low, and their prospects are limited in these fields. The harmful social effects of the perverse competition show most clearly exactly in the “laziness” of producers: they can “live on” the consumers without any particular risk or effort.

An analysis of this perverse competition is also important because it is easy to mistake it for real market competition. It is not without reason that those who oppose the ideas of economists wishing to strengthen the role of market competition try to discredit those ideas exactly by laying emphasis on the consequences of the perverse competition. However, the two kinds of competition are basically different. In a real competition, such products also appear on the market which are inconceivable in a perverse competition: highly expensive, high-quality products embodying innovation on the one hand, and cheap mass products on the other. Real competition broadens the field in respect of both quality and price. Let us go back to Figure 3. Why can the second-economy's-producer not choose the high-quality and highly expensive products represented by the set (d_3) or why can he not choose the mass products of the set (c_2)? The answer is to be found in the particularities of the institutional environment surrounding the second economy. Therefore, beside laying stress on the

differences between the two situations, it has to be pointed out as well that the primary condition of creating a real competition is to transform the institutional conditions; it is not enough to increase the number of actors on the market. That is to say, the logical question is the following one: if, within the given institutional framework, even the most rational actions of producers entail such harmful by-effects, *should not the framework itself be enlarged in a way that the rational and feasible alternatives of action should include such as will allow to avoid the harmful by-effects?*

On the side of the state sector, it is probably the consequences of the producers' hierarchical dependence on the state, hindering long-term calculation and profit orientation that should be eliminated*; *on the side of the second economy*, solution might be expected from the lifting of restrictions (releasing prohibitions regarding size, transformation of the often punitive taxation, etc.) and extending the credit system.

We repeat our statement that the perverse competition is just one, and not even the most important, factor of the inflationary tendencies that have evolved in Hungary these last years. At the same time, as a consequence of its highly considerable *demonstration effect*, the rising price level following from the competition between the state sector and the second economy undoubtedly makes it easier to have the inflationary economic policy accepted: it acts in itself towards making consumers accustomed to rising prices, and increases their tolerance of inflation.

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* For details see Soós [7]. The latest and most concise explication of the questions under discussion is to be found in Soós [8].

ВТОРАЯ ЭКОНОМИКА, КОНКУРЕНЦИЯ, ИНФЛЯЦИЯ

П. ГАЛАШИ—К. КЕРТЕШИ

В последние годы в Венгрии правительство значительно расширило легальные рамки второй экономики. Можно было ожидать, что благодаря этому возрастет предложение предметов потребления и потребительских услуг, улучшится их качество и расширится ассортимент, а также ослабнет интенсивность дефицита. Однако эти ожидания оправдались лишь частично, к тому же медленнее, чем ожидалось, а улучшение качества и расширение ассортимента сопровождалось быстрым ростом цен.

В статье делается попытка ответить на вопрос, как повлияла конкуренция, сложившаяся между второй экономикой и социалистическим сектором, на инфляцию и медленное улучшение качества товаров и услуг. Для этого авторы сначала анализируют рыночную ситуацию, когда производитель социалистического сектора находится в монопольном положении. Затем они рассматривают воздействие появления второй экономики и складывающейся таким образом конкуренции на цены и качества товаров, а затем анализируют структуру конкурентной ситуации между двумя секторами.

Одним из основных выводов из анализа на основе модели является то, что монопольное положение сопровождается более тяжелыми отрицательными последствиями для потребителей, чем конкуренция, сложившаяся вследствие существования вторичной экономики. Однако и с появлением второй экономики не возникает подлинная конкуренция, а лишь «странная» конкуренция, суть которой состоит в том, что между производителями происходит стихийный раздел рынка.

Помимо показа природы конкуренции между двумя экономиками, анализ приводит также и к методологическому выводу, что инструменты микроэкономики могут быть использованы для институционального экономического анализа. Не менее важны и выводы для теории рынка, а именно, что для возникновения подлинной рыночной конкуренции недостаточно, по-видимому, только увеличение выступающих на рынке агентов.

DEPENDENCE OF THE HUNGARIAN ECONOMIC PERFORMANCE ON THE WORLD ECONOMY. FACTS AND ECONOMIC POLICY INFERENCES

GY. SZAKOLCZAI—G. BAGDY—J. VINDICS

The paper*—using in the first part simple graphs and in the second part econometric methods—shows that the development of Hungarian economy depends on world economic events, and that all important domestic economic variables are directly influenced by the import index of Hungary's main Western trading partners. Hungary's economic behaviour is therefore practically the same as that of other small open economies. It could also be demonstrated that only imports can be influenced by macroeconomic demand policy while exports can only be promoted by policies concentrating on the microeconomic aspects of the firms' behaviour.

It seems important to define the dependence of the Hungarian economy on the world economy also in numerical terms. It is evident that our current economic difficulties result from the present state of the world economy, from the oil price rises and the following events. It is, nevertheless, very important to know *also in numerical terms* what the effects of those changes on the Hungarian economy are, how these effects can be neutralized, how constraints on domestic absorption and export promotion can contribute to restoring equilibrium and what the result for Hungary of an upturn in the world economy can be.

In the first part of the paper very simple graphic methods are used. The very simple econometric model on which our conclusions, shown in the second part, are based is built partly on the results of this graphic analysis. The following section summarizes the most important economic policy conclusions. The Appendix of the original paper, containing the equations and variables of the econometric model, is not reproduced here. This model, along with the data and their sources, as well as the *ex post* forecasts obtained from the econometric model are only shown in the working material [8] on which this paper is built. An earlier version of this paper was also presented to the 1983 Sewanee Conference [7].

*This analysis is based on the results of an econometric modelling experiment made in the Econometric Laboratory of the Institute of Economics, Hungarian Academy of Sciences, on behalf of the National Planning Office, the Hungarian National Board for Materials and Prices, the Ministry of Industry, and the Ministry of Foreign Trade, and aimed at laying the foundations of short-term planning and economic management. The authors thank nearly all members of the staff of the Laboratory for their participation in the economic, modelling, statistical and programming work connected with this research. Preliminary versions of this paper were published by the Laboratory [8], and were also presented to a conference [7].

Graphic analysis

The figures shown here present the most important relationships in the simplest possible way. They are at the same time—as it has already been mentioned previously—important starting points of the subsequent econometric analysis.

Figure 1 shows the 1961—1981 values of the OECD *index of world trade* and the *import index of Hungary's main Western trading partners*. The latter was constructed from the import volume indices of Austria, France, the Federal Republic of Germany, Italy, Switzerland and the United Kingdom using their relative importance in the Hungarian exports as weights.* The construction of this index clearly shows the predominance of Western Europe in Hungary's Western trade. The two graphs run closely parallel but the investigations have shown that the *specific trade index correlates more closely with the Hungarian data*. This series will therefore be used in the following and it will be referred to as the "import index".

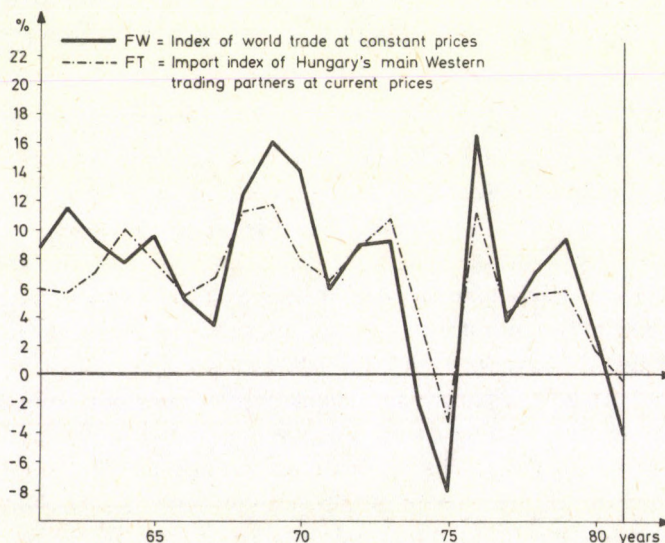


Fig. 1

Index of world trade and import index of Hungary's main Western trading partners 1961—1981^a, total imports

Source: OECD Main economic indicators

a) Previous year = 100

The dependence of Hungary's non-rouble trade—i.e. of its trade transacted outside of the clearing agreements with the other socialist countries—on *the above index* is shown in Figure 2. The *close correspondence* of the three figures is striking, and the most evident conclusions are the following. On the one hand, Hungarian exports follow the main Western trading partners with a lag of about one year or less, while Hungarian

*We thank J. Köbli and E. Török for their help in solving the statistical problems regarding the variable import index.

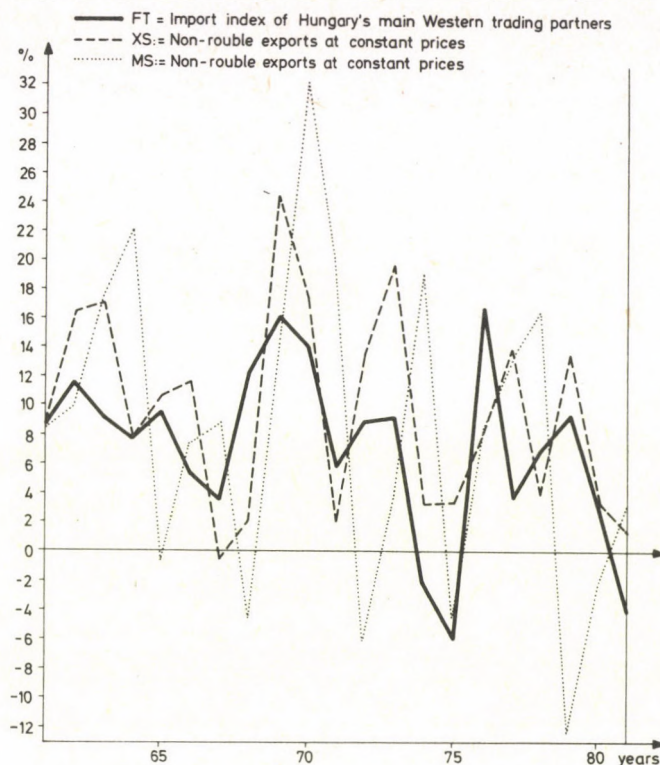


Fig. 2
Non-rouble exports and imports, Hungary, 1961–1981^a

Source: Non-Hungarian data: see Fig. 1

Hungarian data: calculated from the *Yearbook of foreign trade statistics*. Central Statistical Office, Budapest.

a) Previous year = 100

imports follow Hungarian exports almost exactly with a one-year lag, and thus the imports of the main Western trading partners with a two-year lag. The only major departure from this general rule appears in 1979 when—owing to the increasing indebtedness of the country—consumption and investments were curbed and exports promoted. On the other hand, it can clearly be seen that the swings in the Hungarian export and import activity are mostly greater than those in the imports of the main Western trading partners. It seems, therefore, that *Hungarian exports and imports are not only geared to the economic activity of the main Western trading partners but that their fluctuations tend to be greater than the original changes*. It is also clear that the upward swings tend to decrease and the downward swings tend to increase by the end of the period studied, and, this points to a certain deterioration of the situation.

The behaviour of the Hungarian economy shown here is *far from being exceptional*. Western Europe reacts in most cases with a lag of half to one year to the changes in the American economy, and the speed of reaction of the various Western

European countries is different. The raw material producing and exporting *developing countries* depend to an even greater degree on the changes in the world economic situation. It would, therefore, be very interesting to compare the degrees of dependence and the lag-structure but this can only be done later.

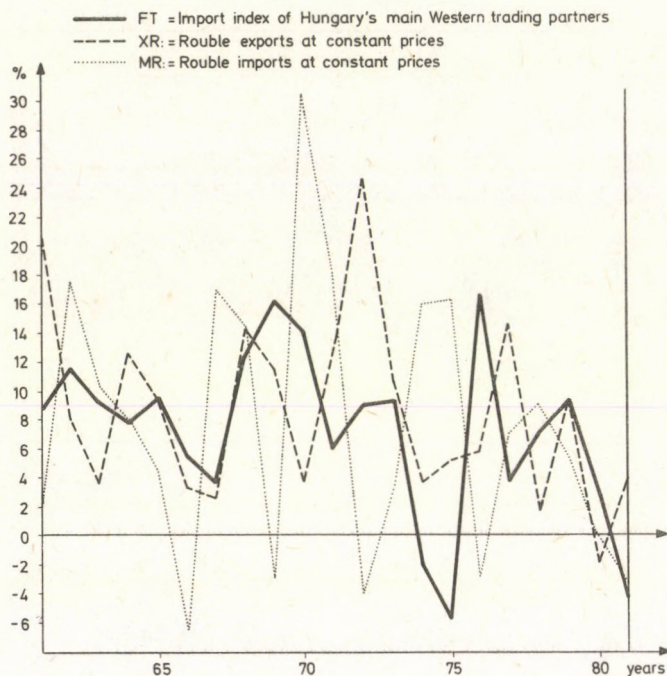


Fig. 3

Rouble exports and imports, Hungary, 1961—1981^a

Source: see Fig. 2

a) Previous year = 100

While the close correspondence between Western economic activity and Hungary's Western trade cannot be surprising, it may be somewhat more novel that a *similar correspondence*—even if with a different lag-structure—exists between the central variable import index and Hungary's rouble trade, i.e. trade performed within the framework of the rouble clearing agreements. This interrelation is shown in Figure 3. In this case the export peaks tend to precede the development of the key variable import index with a lead of about one year while the import peaks tend to follow the peaks of exports with a lag of two years. This regularity decreases by the end of the period studied but the similarity of periodicity in all the above variables is nevertheless striking.

A certain *summary* of the previous results is presented in Figure 4 that shows the development of *total exports and imports*. The close correspondence of the import

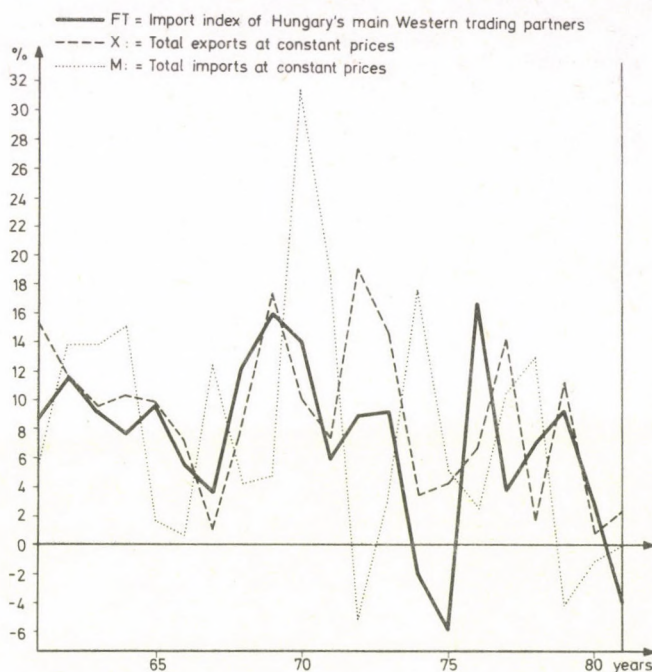


Fig. 4

Total exports and imports, Hungary, 1961—1981^a

Source: see Fig. 2

a) Previous year = 100

index with total exports is striking, and it seems that the one-year lag of Western and the one-year lead of Eastern trade add up to an almost exact parallelism of the two graphs with the single minor difference in 1976—77. (The periodicity is much less pronounced in the first few years of the period analyzed here, all our conclusions refer, therefore, first of all to the period after 1964—65.) As to the *imports*, it is again quite clear that *their peaks follow those of the exports with a lag of about one year*.

The reasons for all these results can be seen in *Figure 5* that shows our key variable import index, as well as total imports and gross output. The swings of gross output follow those of the key variable import index with a lag of one or two years, while the time-structure of the swings in imports closely corresponds to that of the swings in output, but their amplitudes are much greater. It can, therefore, be seen quite clearly that *the expansion of gross output leads to a much greater expansion of imports*.

These results, particularly if they are compared with those shown in the previous figures point to the existence of a *definite cyclical mechanism*. *The upswing in the economic activity and imports of the main Western trading partners leads to an upswing first in Hungarian exports and later in gross output. This latter development leads to a disproportionate increase in imports that cannot be matched by a concomitant increase in exports*. Domestic capacities—on the one hand—do not allow such an increase, and—on

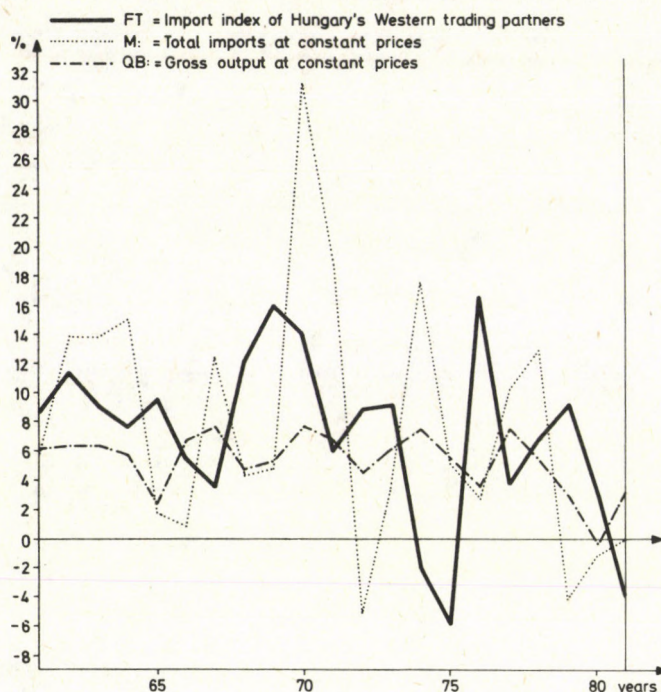


Fig. 5
 Gross output and total imports, Hungary 1961–1981^a

Source: Import index and total imports: see Fig. 2 Gross output: *National income balances*. Central Statistical Office, Budapest.

a) Previous year = 100

the other hand—the slowdown in the activity of the main Western trading partners makes a further rapid expansion of exports impossible.

If we compare the development of the rouble and non-rouble imports shown in *Figures 2 and 3* and take into due consideration both the general tendency to attain bilateral balance in the trade of the individual socialist countries and the mechanism of attaining this balance we can easily explain why the *rouble trade* follows the import of the most important Western trading partners. It can be seen from *Figures 2 and 3* that the peaks of rouble and non-rouble imports either coincide or the peaks of rouble imports follow the years when non-rouble imports increase most rapidly with a one-year lag. This shows that *rouble and non-rouble imports increase roughly at the same time, more or less parallel to or somewhat later than the increase in domestic production.*

The mechanism of eliminating this imbalance in rouble trade is that the necessary decisions are taken in the year following the rapid increase of imports, i.e. with a lag of one year, while exports increase in the following year, i.e. with a lag of two years. This means that export peaks follow the import peaks with a lag of two years. The result of all the above will be—taking into due consideration the time-structure of the swings in the economic activity of Hungary's main Western trading partners—that the increase

of the Hungarian rouble exports will come two years later than the increase in Hungarian imports, and will, therefore, somewhat precede the next upturn of Hungarian general economic activity as it has already been mentioned in connection with *Figure 3*. This turn of events is also promoted by the fact that some exportable surpluses develop in this phase of the domestic cycle as production can already be increased at a more rapid pace but the upturn in domestic incomes only takes place later.

Departing from what has been told now, we may attempt to explain why the connection between the key variable import index and the Hungarian rouble exports changed *by the end of the period studied*. *The periods of the cycles then became somewhat shorter* and the peaks of import index follow each other with a lag of three years only. Hungarian rouble exports could follow this acceleration of events only with some delay, and thus the two-year lag between the increase of imports and exports was also maintained between 1975 and 1977. It can therefore be seen that Hungary's rouble trade is connected with the import index only through the adaptation mechanism of the Hungarian economy to the economic activity of his main Western trading partners and in a way determined by the functioning of the Hungarian foreign trade control, but this dependence is certainly of a secondary character. This is, of course, very natural. The specific features and interrelations of the rouble and non-rouble trade ought to be analysed in a more detailed way but this will only be possible later, after the building of a more disaggregated econometric model.

Figure 6 shows the same interrelation from the side of *consumption and investment*, i.e. from the side of utilizing, national income. The swings in the sum of consumption and gross fixed capital formation, i.e. domestic absorption are even more pronounced than those in output, and these swings are even more closely correlated with the changes in total imports. A comparison of the two last charts shows that a very *definite cyclical mechanism* is at work also here. *The upswing in consumption plus investment, i.e. in domestic absorption tends to last longer than the upswing in output, and leads to an upswing in imports. These heavy imports again lead to a process of readjustment leading to a decrease in consumption plus investment or at least to a decrease in their growth rates.*

Further analysis of *Figure 6* points to some other interesting phenomena. *There are three very deep drops in consumption plus investment and in imports within the period studied: that of 1965, 1972 and 1979.* They are separated from each other by a distance of seven years and a smaller cycle. The average length of a cycle is therefore three and a half years, and this shows that the cycles studied here could perhaps be better analysed by using quarterly data. What is more important, *these three deep drops in Hungarian economic activity seem to be preceded by three very pronounced upswings in the central variable import index, i.e. in the imports of the main Western trading partners.* The tentative conclusion can therefore be drawn—the conclusion must, of course, be confirmed by further research—that *very pronounced upswings in the economic activity and imports of the main Western trading partners might have led to very pronounced*

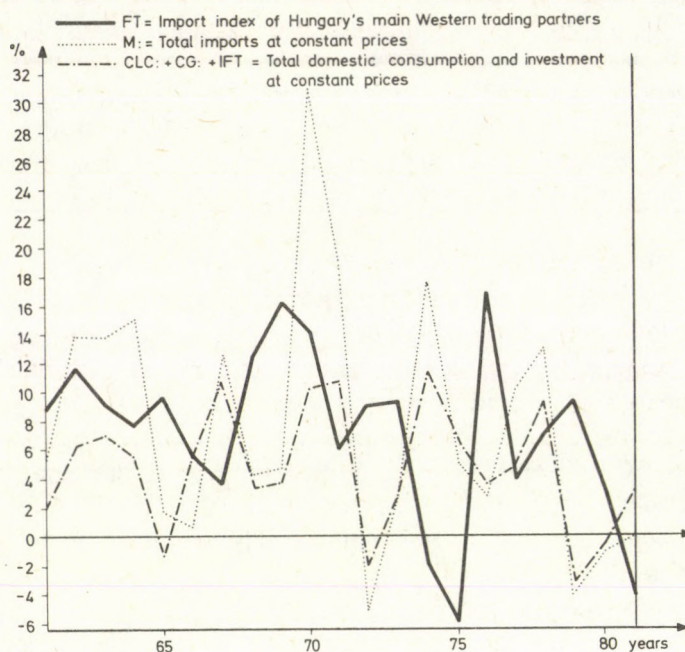


Fig. 6

Total domestic consumption and investment and total imports, Hungary, 1961—1981^a

Source: Import index and total imports: see Fig. 2

Consumption: National income balances. Central Statistical Office, Budapest.

Investment: Investment yearbook and collection of investment data. Central Statistical Office, Budapest

a) Previous year = 100

overheatings followed by exceptionally deep declines in the Hungarian economy. Although Figure 6 clearly points to such a conclusion, this conjecture, of course, cannot be proved by these excessively simple methods. This conjecture, nevertheless, justifies further study, the more so as these deep declines and the preceding heavy imports played an important part in inducing heavy changes in economic policy: the new economic mechanism in 1968, a certain recentralization in 1972, and a more pronounced return to the principles of the new economic mechanism in 1979—changes that were described by some experts as cycles of de- and recentralization.

The details of the phenomena described here can be studied using Figure 7. It is clear that *changes in personal consumption tend to be rather small, changes in government consumption much greater, and changes in investment excessively high—but all of them are strictly parallel, and their swings coincide almost exactly. This shows both the strength and weakness of Hungarian short-term economic policy quite clearly.* Its strength is that the fluctuations in personal consumption could be damped—its weakness that the fluctuations in investment could not, and that the different swings are synchronized, instead of neutralizing each other, at least to a certain degree. The first aspect is extremely important with respect to social policy and the stability of the

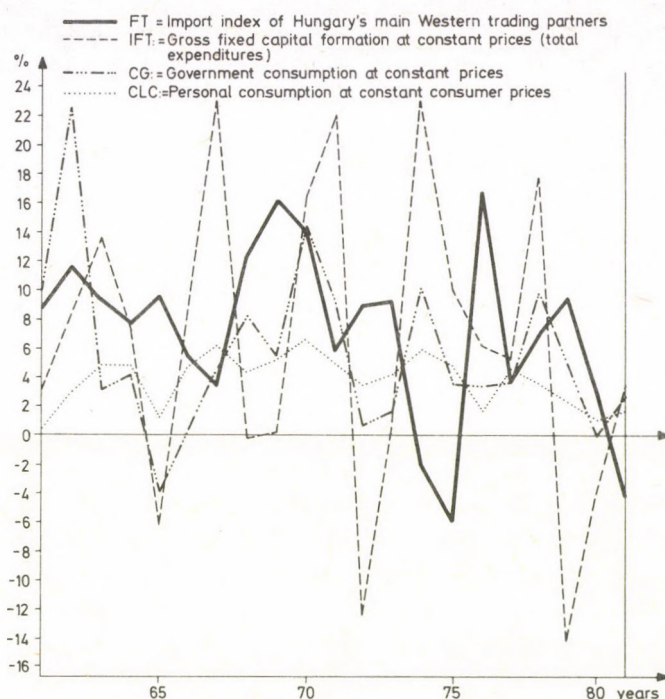


Fig. 7

Consumption and investment, Hungary, 1961—1981^a

Source: see Fig. 6

a) Previous year = 100

societal and political processes; we shall come back to this aspect in the concluding part of this paper. The second problem, the dampening of investment cycles still remains to be solved.

Two further important observations seem appropriate here. First, *there is a general tendency among Hungarian experts to impute the fluctuations in investment activity to causes inherent in the investment process and in the planning mechanism.* The investment cycles are, according to this general belief, self-generating, and are at the same time sources of cycles appearing in other spheres of domestic economic activity. *The findings of this paper seem to support, however, the assumption that these cycles are generated in the sphere of international economic relationships, and produced by the swings of foreign economic activity.* The events of the last years give, of course, further support to this opinion.

This paper cannot aim at reviewing the relating Hungarian literature and we can therefore only deal—and only very shortly—with the related study of Tamás Bauer [1]. He writes on pp. 308–309—citing Julia Zala [9] and József Bognár [2]—that “the curbing of investments... are brought about by the deepening strains in the utilization of national income at the expense of the balance of international trade and

the resulting over-indebtedness or its increase". The reasoning that the curtailment of investments results from the imbalance of foreign trade has therefore appeared very long ago in the Hungarian literature using traditional, non-econometric methods. The view, however, that the origin of the upturn of investment activity is—through the resulting expansion of Hungarian exports—the upturn in the trade cycle of Hungary's most important Western trading partners has not appeared until now—as far as we know—in the literature using traditional methods of analysis.

At least some elements of this reasoning have, however, been published in a paper written by András Simon [6]. He connects the cycles of Hungarian investment activity to the changes in the balance of trade in such a sense that the amelioration of the trade balance precedes the upturn of investments and its deterioration their downturn, leading to a cobweb-type mechanism. From this view only a single step is needed to introduce foreign economic activity as the determinant of the balance of international trade into the system.

Returning to the main line of our arguments, Figure 7 also shows that *the depth of the three major downturns already shown is definitely increasing*. This has already been mentioned in connection with Figure 6. This shows that present Hungarian problems do not only result from the recent changes in world economy but were preceded by similar events in the past. This problem is therefore not new but it goes back by decades. This points even more to the necessity of introducing further changes in the system of economic management, the more so as the first two setbacks occurred before the oil shocks. This problem will be dealt with later.

It can easily be seen, even if in a less striking and unequivocal form, that *changes in foreign economic activity are closely connected with some further aspects of Hungarian economic activity*. Figure 8 depicts the development of *stock accumulation*, with and without goods in transit. Data are only available from 1968, but it can clearly be seen, even in this short time series, that the accumulation of stocks, with or without the very volatile element of goods in transit, is *closely correlated with imports and thus with foreign economic activity*. It must be emphasized that changes in stocks cannot be deflated properly, and for this reason we had to use here total imports at current prices.

What has been written above is fully consistent with Ervin Fábri's results [4]. He has pointed to the very close connection between the balance of trade and the changes in stocks in the sense that a higher import-surplus goes hand in hand with a greater stock accumulation. Our results show the same in a slightly different form.

Perhaps there is an even closer similarity between our results and those of Péter Budavári and László Náray [3]. They point to the existence of a *definite cyclical mechanism* where investments increase and the non-rouble foreign trade balance deteriorates in the first phase, stock accumulation reaches its peak and the balance deteriorates further in the second phase, while in the third phase, owing to the economic policy decisions, made necessary by the deterioration of the situation, investments and stock-accumulation decline and the trade balance improves. These authors also show that at the peak of the upswing the enterprises—anticipating

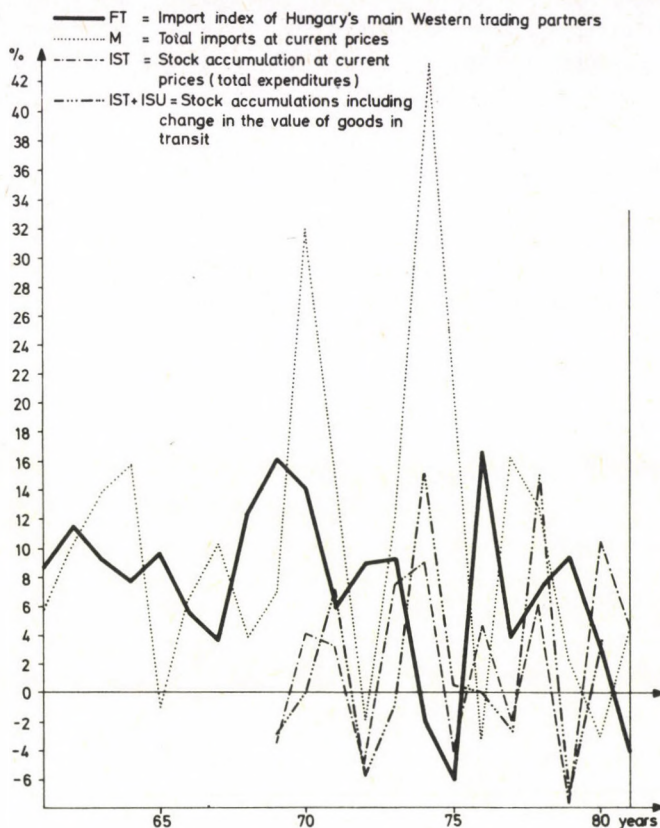


Fig. 8

Stock accumulation and total imports, Hungary, 1961—1981^a

Source: Import index and total imports: see Fig. 2

Stock accumulations: National Bank of Hungary, Budapest.

a) Previous year = 100

restrictions—deliberately increase their stocks. The mechanism described here—apart from explaining the first phase by domestic and not by international events—is in its most important lines the same as ours, and it gives a more detailed explanation of the actual behaviour of enterprises in many respects.

Econometric analysis

Although the figures shown in the previous section have proved very helpful in illustrating Hungary's dependence on world trade and world economic activity, the building and use of an econometric model is certainly a much more appropriate way of looking into this problem. We made an attempt at using also this method but it must be emphasized already at the outset that the model used here is still of an *experimental*

character and its numerical results must not be considered as final. The model presented is a *simplified version of a much greater model* built for other purposes. Its description has been published elsewhere [7] [8], and we must confine ourselves to a very concise description here.

No production function appears in the model. It defines production from the demand side, from the main components of demand. Such a specification had to be chosen because the very slow growth of the last years could not be explained from the supply side. We must also take into consideration here that—for lack of data—*changes in capacity-utilisation* do not appear in the model. *Wages* depend on the wages of the previous years and on the profits of the last year, while *profits* depend on the rouble and non-rouble exports. The latter obviously depend on the changes of world economic situation which also influence rouble exports. Therefore *incomes* are dependent—through exports—on the world economic situation which means that outside events are directly influencing consumption.

The above results about *wages and consumption* are completely consistent with Katalin Hulyák's findings [5]. She used the methods of disequilibrium econometrics to analyse the sale of cars and consumer durables, private residential construction and total consumption. In the case of cars, consumer durables and total consumption—although on the supply side, as defined by her—she obtained highly significant correlation between the two-year-lagged trade balance, the two above-mentioned elements of consumption, and total consumption. According to her own interpretation an improvement in the foreign trade balance increases domestic supply with a two-year lag.

This does not completely correspond to our results showing that import peaks tend to have a lag of one and not of two years after export peaks and thus after the years when the trade balance position is the best. This difference, however, is not essential: perhaps we have here a lag that is longer than one year and shorter than two years and, therefore, the difference is not substantial. Her results are at the same time fully consistent with ours in such a sense that there is a simultaneous interrelation between profits and exports, that wages follow profits with a one-year lag, and that consumption follows wages with another one-year lag. This leads to a two-year lag between the peaks in the growth rate of exports and consumption, which completely corresponds to the findings of Katalin Hulyák.

To return to the description of our econometric model, *investments*—or, to be more precise in a statistical sense—*investment outlays* depend on the previous year's increase in the stock of investments in progress, on the previous year's import index of the most important Western trading partners, and on the exports of the current year.* Investments depend, therefore, on the endogenous cycle of investment activity represented by the stocks of investments in progress, and on the general cycle of total economic activity represented by the imports of the trading partners and of the

*We thank P. Subicz for his cooperation regarding the specification of the foreign trade equations where we could rely on his unpublished results.

Hungarian exports. At the same time, *finished investments* or—to use the exact translation of the statistical term—investments put to actual use—depend on the stock of investments in progress taken over from the previous year and on the investment outlays of the current year. Foreign economic activity influences therefore—with the lag-structure defined in the model—the development of investments. Total expenditure spent on *stock accumulation* depends at the same time on current gross output and on current productive consumption, and also on the the export surplus of the current and last year.

Exports are negatively correlated with investments and consumption and positively with gross output, which completely corresponds to expectations. According to these equations the increase of domestic consumption decreases, while the increase of domestic production increases exports. *Our central variable, the import index of the most important Western trading partners appears, and is very significant, in the non-rouble export equation.* The one-year-lagged value and the one-year-lagged cumulated value of the balance of the non-rouble foreign trade are also present in the two export equations as explanatory variables. This shows unambiguously that *a deterioration in the international payments position leads to an expansion of exports.* The lagged values appearing in the equations point to an essential element of the Hungarian system of economic management: the economic policy of the current year depends first and foremost on the results of the previous year, and, for this reason and in this concrete case on the state and development of the trade balance in the previous year.

The results obtained from the model somewhat differ from those obtained from export equations: *imports are positively correlated with investments and consumption, and negatively with gross output—at least in the case of non-rouble imports.* The increase of domestic absorption increases therefore imports; on the other hand, the growth of domestic production—owing to the substitution effect—decreases imports, which is very natural.

The results obtained from the model differ somewhat from those obtained from the simple analysis presented in the previous section but the difference can be easily interpreted. The more intricate analysis used in the second case necessarily describes events in a better but more complicated way; a more refined lag-structure could perhaps be used to ensure a greater conformity between the results obtained with the two methods; such an extension of the analysis will soon be attempted.

Bearing this in mind, we are going to examine now the *dependence of the Hungarian economy on world economic events* or—to be more precise—on the import index of Hungary's most important Western trade partners. The results obtained from the reduced form of the model are presented in *Table 1.*

The results show quite clearly that *Hungarian economic performance depends to a great extent on the activity of its main Western trading partners and thus on the state of the world economy.* The simultaneous changes shown in the *Table* are between 0.24 and 0.41, and—what is very remarkable—we have obtained the smallest impact in the case

Table 1

*Calculated increases in the values of some endogenous variables
per one unit increase in the value of variable import index of Hungary's
main Western trading partners 1979*

	Percentages	
	Simultaneous	One-year lagged changes
Fixed capital formation, total expenditures		
at current prices	0.41	0.31
Stock accumulation, total expenditures		
at current prices	0.30	0.91
Gross output at current prices	0.28	0.31
Non-rouble imports at constant prices	0.30	0.44
Non-rouble exports at constant prices	0.24	0.59
Gross profits	0.37	0.50

of the *non-rouble exports*, and the largest impact in the case of *fixed capital formation*. The above picture changes, however, if we turn to the analysis of the one-year-lagged changes in the variable import index of Hungary's main Western trading partners; in this case the reaction of *non-rouble exports* and particularly of *stock accumulation* becomes the greatest. This is in conformity with the results of the figures shown above that pointed to a lag of one year between an upturn in the partner states and an upturn in the Hungarian export activity; it is clear, nevertheless, that the lag-structure of the model must still be examined.

The most important finding is beyond doubt the impact of the key variable import index on gross output. The calculated values of 0.28 and 0.31 show that the delayed effect is somewhat greater than the immediate impact; what is even more important, it can be seen that two subsequent prosperous years or two subsequent years of stagnation in the most important Western trading partners must lead to prosperity or stagnation in Hungary—of course with the very natural proviso of other things being equal which means disregarding major international capital movements etc. It seems, therefore, that Hungary's behaviour is just the same as that of the other small open economies: its prosperity or stagnation depends on the development of the world economy. This analysis confirms, therefore, that the current Hungarian economic situation is a direct result of the changes of world economy.

It would be worth while to continue the above analysis and to take into consideration e.g. also two-year lags; this will perhaps be done later. It would also be important to analyse how these interrelations change under the influence of structural changes such as decreasing import requirements or changes in the system of economic control and management and in the organizational structure of industry introduced in order to increase the role of market forces in the Hungarian economy. Such analyses will be attempted later.

Table 2
Regression of imports on gross output and domestic absorption^{a)b)}

Independent variables	Dependent variables	Coeff.	t-value	R ²
Gross output	Rouble imports	2.5030	3.91	0.45
	Non-rouble imports	3.5338	3.25	0.36
	Total imports	3.0272	4.54	0.52
	Rouble exports	0.7377	1.16	0.07
	Non-rouble exports	0.1974	0.28	0.004
	Total exports	0.4701	0.86	0.04
Domestic absorption	Rouble imports	1.3784	5.51	0.61
	Non-rouble imports	2.0108	4.60	0.53
	Total imports	1.7042	7.56	0.75
	Rouble exports	-0.4260	-1.46	0.10
	Non-rouble exports	-0.3931	-1.25	0.08
	Total exports	-0.4136	-1.70	0.13

Source: See Figures 1-8.

a) Consumption plus investment

b) Variables defined at constant prices

The results shown here lead to some very interesting conclusions with respect to the *limitations and possibilities of macro- and microeconomic policy*. These implications can be derived from the results presented in *Table 2*.

The results clearly point to the existence of a moderately close but very definite correlation between output and imports on the one hand, and domestic absorption and imports on the other, the latter being definitely stronger. On the other hand, the correlation between output, domestic absorption, and exports is practically non-existent. More elaborate analysis using some lag-structure and more variables could certainly lead to somewhat different results—the signs of the regression coefficients of exports in *Table 2* point in this direction—, but the main implication is beyond doubt: *is it only imports that depend significantly on domestic activity, and the dependence of exports is almost negligible.*

These results lead to some very important implications as to the *efficiency of macro- and microeconomic policy in maintaining or restoring equilibrium in the balance of trade under adverse international conditions*. It seems that *a macroeconomic policy restricting demand can only influence imports and restore equilibrium on a much lower level of production, consumption and imports, but it is powerless on the export side and cannot promote exports*. This finding is contrary to the assumptions of some Hungarian policy-makers who have assumed that the restriction of domestic demand combined with an inherent tendency of enterprises to expand or at least to maintain production would result in increased exports. Last years' results clearly show that this did not happen, and that *exports—at least in the short run—are not responsive to macroeconomic demand policy*.

Exports can therefore only be promoted by a policy concentrating on the microeconomic aspects of the firms' behaviour. The role of the profit incentive must be increased, a closer connection of enterprises with the world markets must be ensured, the organizational structure of the industry must be changed in order to accelerate adaptation to world market conditions, and innovations must be encouraged: to sum up, a new impetus must be given to the further development of the new economic mechanism. Restraining demand without developing the system of economic control and management cannot solve the present Hungarian economic problems.

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ЗАВИСИМОСТЬ РЕЗУЛЬТАТОВ ФУНКЦИОНИРОВАНИЯ ВЕНГЕРСКОЙ ЭКОНОМИКИ ОТ МИРОВОЙ ЭКОНОМИКИ. ФАКТЫ И ВЫВОДЫ ДЛЯ ЭКОНОМИЧЕСКОЙ ПОЛИТИКИ

Д. САКОЛЦАИ—Г. БАГДИ—Й. ВИНДИЧ

В первой части статьи применяется простой графический анализ. С его помощью показывается, что венгерский экспорт-импорт — с лагом на один или два года — тесно связаны с экономической деятельностью важнейших западных внешнеторговых партнеров и индексом их импорта, а также, что колебания венгерского экспорта больше, чем колебания импорта

внешнеторговых партнеров. Эта взаимная связь распространяется и на венгерскую торговлю с расчетами в рублях и, таким образом, на внешнюю торговлю в целом, а также на внутреннее потребление, то есть на суммы потребления и капиталовложений, а также создание запасов. Венгерская экономика ведет себя так, как любая другая небольшая открытая экономика: ее процветание или упадок зависят от мирохозяйственного положения.

Во второй части статьи с помощью простой эконометрической модели показывается, что индекс импорта важнейших западных внешнеторговых партнеров проявляется не только в уравнениях венгерского экспорта и импорта, но и — прямо или косвенно — играет роль в определении продукции, заработной платы, прибыли предприятий, а также — через них — потребления, капиталовложений и образования запасов. На основании редуцированной формы модели можно было численно определить воздействие индекса импорта важнейших западных внешнеторговых партнеров на венгерские капиталовложения, накопления запасов, производство, импорт, экспорт и прибыль. Эти расчеты привели к выводу, что процветание или депрессия стран-партнеров в течение двух следующих один за другим лет неизбежно вызывает процветание или депрессию в Венгрии, если не учитывать возможных эффектов международного оборота капитала. На основании этой же модели можно было также показать, что венгерский импорт можно ограничить рестрикцией внутреннего спроса, однако венгерский экспорт нельзя расширить такими средствами, а лишь с помощью микроэкономической политики, воздействующей на поведение предприятий. Решения проблем венгерской экономической политики, таким образом, нельзя ожидать от длительного ограничения спроса, а лишь от дальнейшего развития хозяйственного механизма, а также от создания прямых связей между предприятиями и мировым рынком.

INTERNATIONAL COMPARISON OF CONSUMPTION PATTERNS BY CLUSTER ANALYSIS

I. KOVÁCS

The study compares the structures of private personal consumption in 17 OECD countries on different levels of economic development and in Hungary with the aid of cluster analysis in the years between 1965—1981. The order (ranking) of countries by similarities in their consumption levels shows a close interrelation with their ranking by economic development level but, besides the determinant role of economic development, the impact of relative prices in the various countries is also important.

Finally, the author draws some conclusions for Hungary's consumption pattern on the basis of her place among the countries compared.

Introduction

Demand analysis may be considered as one of the oldest branches of quantitative economic analysis. The most important goals of empirical demand analysis are to investigate and to discover the causal relationship between consumption and the essential factors influencing consumption; to analyse demand patterns by way of demand functions; to set up and elaborate new demand systems and so on.

Traditionally, demand analysis refers to a single country, either in the form of time-series or cross-section analysis. It has, however, been realized for a long time that comparisons of consumption patterns among different countries using consumption functions can be very fruitful. Pioneering works in this field are those of *Clark* [2], *Houthakker* [5], *Kuznets* [7] and, subsequently, more sophisticated methods like the complete demand system were developed. See *Pollack* [10], *Lluch-Powell* [9], *Lluch* [8].

Mathematical-statistical methods other than demand analysis and demand functions are not frequently used in international comparison of consumption patterns. In this field the cluster analysis seems to be a useful method. (See *Blandford* [1], *Szilágyi* [12].) The method is a grouping procedure, which examines the degree of similarity of consumption patterns and, on the basis of the overall similarities, aggregates of countries are derived. This means that countries with similar consumption patterns are in the same group or cluster, while others with different consumption patterns form an other cluster. (About cluster analysis see *Everitt* [4]).

In the paper this clustering method is used for the analysis of personal consumption patterns in 17 OECD countries and Hungary over the period 1965—1981. Three aspects are being taken into consideration:

1. national similarities and dissimilarities;
 2. relationship among the similarities and the level of economic development;
- and
3. trends and changes in consumption patterns during the period covered.

Making an international comparison of consumption patterns, the researcher has an easier job when merely two or at most three countries on similar levels of development are compared. The results can more easily be interpreted and surveyed than in the case when 15—20 or even more countries are compared. The shares of the different commodity groups vary both in time and across countries. Personal incomes are spent in different ways in richer countries and in relatively poorer ones. It is necessary to make a simultaneous comparison for all commodity groups and for all countries. As long as we decide to investigate the similarity of countries according to, let us say, the share of food in consumption, it is enough just to rank the countries either in decreasing or increasing order. But when we take into account all the additional commodity groups—we can call them variables—we cannot form an unambiguous rank of countries, because from one aspect one of the countries, and from another aspect another country is ranked higher. That is why we tried to look for a method, by which this problem can be solved: cluster analysis accomplishes the ranking and grouping of the investigated countries excluding the subjectivity and mistakes of the researcher. We should note, however, that many variations of cluster analysis exist and, depending on the method applied, results differ.*

About classification and data

The pattern of per capita consumption is described by the following main aggregates: 1. Food; 2. Beverages and tobacco; 3. Clothing; 4. Housing (Household operation, rent and water, fuel and light); 5. Household equipment (Furniture, furnishings and household equipment); 6. Personal care (Personal care and health expenses); 7. Transport (Transport and communication); 8. Recreation (Recreation and entertainment); 9. Miscellaneous goods and services.

The source of data for OECD countries are the National Accounts Statistics at constant prices. For Hungary, data from domestic sources (also at constant prices) had to be adjusted according to those of OECD countries. This means: social fringe benefits, mostly referring to health care and education, are subtracted from consumption; coffee and tea is included in the food category; meals outside of home (restaurants and institutions) are included in miscellaneous goods and services. After this modification Hungary's data are approximately of the same content as those of OECD member countries.

The OECD member countries investigated are: Austria, Belgium, Denmark,

*The computations have been made in the Institute of Economics (Budapest) on an IBM 3031 computer with the PKM-algorithm of the BMDP library program package.

Finland, France, the Federal Republic of Germany, Greece, Italy, Japan*, the Netherlands**, Norway, Portugal***, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Similarities and dissimilarities in the pattern of personal consumption

From the 1965—1981 period three years—1965, 1970 and 1981—are selected and a cross-country comparison of consumption patterns is being made using cluster analysis for the country grouping. The basic data at constant prices in the selected three years are presented in *Table 1*.

By application of clustering techniques, 5 groups of countries are formed automatically on the basis of overall similarities in consumption shares across the entire set of countries. The clusters are presented in two versions: *Table 2* is based on 8 and *Table 3* on 9 commodity groups. The clusters are ordered in both *Tables* on the basis of their distances from each other. Only distances of clusters belonging to *Table 2* are presented in *Table 4*. These are the Euclidean distances, calculated in this case from the original variables instead of their standardised form, because our variables are ratios independent of scale.

A seventeen-year period seems to be sufficiently long for significant modifications in the grouping of countries on the basis of different changes in the consumption patterns across countries but, at the same time, remarkable constant features can also be observed in the three selected years.

Considering *Table 2* as the basis of our analysis and starting with the permanent traits of the groupings derived, one of them is striking: Hungary contrasts with all the other country groups except in the 8 commodity group comparison of 1965, when Hungary and Greece together formed a cluster while in the other two years Hungary has been alone. According to its position in the order of rank by level of economic development it might be expected to take a place in the group of the South-European countries (Greece, Spain and Portugal). The contrary has taken place: even Greece, which constituted a single group with Hungary in 1965, forms a group with more developed Spain and Italy in the years 1970 and 1981. Even less developed Portugal joins this group in 1981.

We can state that another feature of forming clusters is the bunching of the South-European countries into one group—that is, into the group nearest to Hungary. In these countries relatively quick changes in consumption structure were rather

*Data from 1970. For Japan, the aggregation of commodities differs slightly from that of the other countries. There are only 8 groups instead of 9, because beverages and tobacco are together with food. The computations are being formed in two versions: a) including Japan; 8 commodity groups, b) excluding Japan, 9 commodity groups.

**Data from 1970.

***Data from 1977.

Table 1

Shares of personal consumption in the various categories of goods and services by countries, in selected years, at constant prices (percentages)

		Food	Beverages & tobacco	Clothing	Housing	Household equipment	Personal care	Transport	Recreation	Miscellaneous goods and serv.	The year of constant price
U.S.A.	1965	17.2	4.4	8.0	17.9	7.8	8.2	14.4	7.0	14.3	1975
	1970	16.1	4.3	7.2	18.2	7.2	9.4	14.9	8.0	13.6	
	1981	13.3	3.9	8.2	19.7	6.4	11.4	15.0	9.0	12.6	
Sweden	1965	22.4	7.9	8.0	21.8	7.9	1.7	13.4	6.7	8.8	1975
	1970	20.4	8.3	7.4	22.1	8.1	1.9	13.3	8.1	8.1	
	1981	18.7	6.6	9.3	24.2	7.2	2.1	13.3	10.8	5.7	
Switzerland	1965	22.9	9.9	7.2	18.4	8.3	5.6	10.4	9.3	7.9	1970
	1970	22.6	9.9	6.9	17.8	8.0	6.4	11.3	9.3	7.9	
	1981	21.1	8.1	5.4	19.5	6.8	6.8	12.5	10.6	8.9	
Denmark	1965	21.9	8.3	7.5	18.1	11.2	2.1	14.4	7.3	9.7	1975
	1970	20.3	8.1	7.2	20.1	9.9	2.1	15.8	7.8	9.7	
	1981	18.1	8.2	6.6	23.6	7.7	2.1	14.5	10.5	8.7	
FRG	1965	28.8	2.5	10.5	16.7	10.5	3.6	12.2	6.8	8.4	1976
	1970	25.9	2.4	10.6	16.6	11.2	2.7	14.4	7.0	8.8	
	1981	23.6	2.0	8.8	17.3	11.3	2.7	15.2	8.3	9.4	
France	1965	24.0	5.6	9.0	13.0	10.2	8.7	10.5	5.9	12.8	1970
	1970	22.0	5.1	8.6	14.5	10.0	9.8	11.6	6.1	12.2	
	1981	17.3	3.9	6.8	15.8	9.9	14.0	12.2	7.8	12.1	
Norway	1965	26.4	7.3	10.3	13.7	8.0	4.2	11.7	6.5	10.5	1975
	1970	24.6	7.9	10.4	13.9	8.7	4.3	11.6	7.2	10.3	
	1981	20.9	6.3	8.5	15.2	9.0	3.9	14.3	9.9	9.2	
Belgium	1965	24.7	7.0	7.2	16.3	13.7	6.3	9.9	4.3	10.3	1975
	1970	23.7	6.9	6.9	15.8	13.8	6.4	10.9	4.3	11.0	
	1981	19.3	5.9	6.7	15.4	15.9	9.1	11.5	4.9	10.4	
the Netherlands	1970	19.7	4.8	11.0	14.0	11.8	10.8	9.2	7.2	10.4	1975
	1981	17.5	5.4	8.0	14.3	9.4	11.5	11.0	10.2	11.2	
United Kingdom	1965	21.7	5.6	8.1	19.2	8.0	0.9	11.8	8.6	15.4	1975
	1970	20.4	5.5	8.2	19.8	7.4	0.9	13.1	9.4	15.6	
	1981	16.7	5.9	9.0	19.2	7.8	0.8	13.8	11.0	15.4	
Finland	1965	26.2	5.7	6.8	17.9	6.1	2.4	15.1	5.2	10.1	1975
	1970	24.5	6.7	7.6	17.3	6.4	2.6	14.6	5.8	11.6	
	1981	20.6	5.9	5.2	20.3	7.4	2.5	14.6	8.7	12.0	

continuation of Table 1

		Food	Beverages & tobacco	Clothing	Housing	Household equipment	Personal care	Transport	Recreation	Miscellaneous goods and serv.	The year of constant price
Austria	1965	24.7	7.2	10.6	11.6	7.7	4.1	10.9	5.2	17.9	1975
	1970	22.2	7.2	10.9	12.3	8.2	4.1	12.5	5.5	17.0	
	1981	20.0	6.2	12.0	13.9	8.1	3.7	15.2	6.1	14.8	
Italy	1965	33.8	6.7	9.1	13.9	6.0	3.2	7.9	7.9	11.3	1970
	1970	31.8	6.4	9.5	12.8	6.2	3.7	10.1	7.6	11.7	
	1981	27.8	6.5	8.6	12.7	6.8	5.2	11.6	8.8	11.9	
Hungary	1965	39.7	13.3	13.5	7.3	7.3	1.5	4.4	4.6	8.3	1976
	1970	36.3	14.6	13.2	7.2	8.5	1.6	5.3	5.1	8.3	
	1981	29.7	15.8	10.2	8.8	9.1	2.2	8.1	6.5	9.5	
Japan	1970	30.4	—	8.2	14.2	7.6	7.1	7.8	9.1	14.2	1975
	1981	25.5	—	6.9	17.4	6.4	9.8	8.7	9.3	14.6	
Spain	1965	34.7	3.6	10.7	14.0	8.6	3.3	5.5	5.7	7.6	1970
	1970	31.2	3.5	9.8	13.6	8.3	4.4	9.0	6.0	8.4	
	1981	31.1	3.7	8.3	13.6	7.2	5.7	11.9	6.0	9.4	
Greece	1965	40.7	6.2	10.8	13.8	6.5	2.1	7.0	3.5	7.0	1970
	1970	34.8	6.5	12.4	14.0	7.4	4.1	8.3	4.8	7.5	
	1981	28.4	8.4	9.9	16.7	8.5	3.3	12.6	3.9	8.3	
Portugal	1977	36.7	4.6	9.2	7.1	10.4	4.0	12.4	4.8	11.7	1976
	1981	33.1	5.1	11.6	6.0	10.3	4.5	15.1	4.9	12.7	

similar—regarding their direction and intensity—and this kept them within one cluster.

In *cluster 3* Norway and Austria, and in *cluster 4* Denmark, Finland, Sweden and Switzerland all kept their places. But they are always joined by one or some other countries as well—the so-called wandering countries—characterized by wandering from one cluster to an other, caused by the fact that their consumption patterns were changing at different speeds, in some cases even in different directions.

Another constant feature is the place of the United States for all years in *cluster 5*, as well as that of the Netherlands in 1970 and 1981.

The constancy of features of cluster forming are, of course, relative, i.e. the consumption structures of these countries in comparison with each other changed in such a way that the grouping of countries relative to each other remained constant.

Among the 18 countries studied there are five which change their places. All of them are very noticeable: France, in *cluster 3* in 1965, joined the U.S. in the years 1970 and 1981. Similarly Japan, in *cluster 3* in 1970, moved to *cluster 5* in 1981, and Belgium

Table 2
Clusters on the basis of similarities in consumption patterns
(according to 8 commodity groups)

Year	Countries belonging to clusters				
	1	2	3	4	5
1965	Greece Hungary	Italy Spain	France Norway Belgium Austria	Denmark Finland Sweden Switzerland FRG	United Kingdom United States
1970	Hungary	Italy Spain Greece	Japan Norway Belgium Austria	Denmark Finland Sweden Switzerland FRG United Kingdom	France the Netherlands United States
1981	Hungary	Italy Spain Greece Portugal	Norway Austria FRG	Denmark Finland Sweden Switzerland United Kingdom	Japan Belgium France the Netherlands United States

Table 3
Clusters on the basis of similarities in consumption patterns
(according to 9 commodity groups)

Year	Countries belonging to clusters				
	1	2	3	4	5
1965	Hungary	Italy Spain Greece	France Austria Norway Belgium FRG	Denmark Finland Sweden Switzerland	United Kingdom United States
1970	Hungary	Italy Spain Greece	Norway Austria FRG	Belgium France the Netherlands Switzerland United States	Denmark Finland Sweden United Kingdom
1981	Hungary	Italy Spain Greece Portugal	Norway Austria FRG	Denmark Finland Sweden Switzerland United Kingdom	Belgium France the Netherlands United States

Table 4
Cluster distances

1965				
	1	2	3	4
2	13.4			
3	22.2	10.5		
4	23.4	11.6	7.5	
5	30.7	17.8	9.9	9.1
1970				
	1	2	3	4
2	15.4			
3	23.3	9.0		
4	26.9	12.0	7.4	
5	30.7	16.2	8.4	10.0
1981				
	1	2	3	4
2	12.4			
3	22.1	10.8		
4	24.7	14.7	7.3	
5	26.7	16.2	9.7	11.1

moved step by step from cluster 3 to cluster 5, the U.K. fell back somewhat: in 1965 its consumption structure was near to that of the U.S. while in 1970 and 1981 it became more and more similar to that of the Scandinavian states.

Changes in consumption structure are brought about by the joint effects of several factors. Of these we regard as the most important: a) the level of economic development transmitting the effects of consumption and income levels; b) the role of relative prices; c) different geographical and climatic conditions and, last but not least, consumption habits, being themselves in many respects consequences of the factors mentioned.

Unfortunately, in this article we have to disregard some important factors, such as the effects of relative prices, and we rather concentrate on the dominating role of the level of economic development.

Relationship between consumption patterns and the level of economic development

Taking into consideration the ranking of clusters in *Table 2*, we will try to find a correlation between this ranking and the level of economic development. (See *Table 5*.) Source of data for the level of economic development is *Summers and Heston* [11].

Table 5
Relationship between the ranking by clusters and the level of economic development

		1965																	
Clusters according to distances	Countries in order of the level of economic development	Greece	Spain	Hungary	Italy	Austria	Finland	U.K.	Belgium	Norway	France	FRG	Denmark	Switzerland	Sweden	U.S.A.			
1		+		+															
2			+		+														
3						+			+	+	+								
4							+					+	+	+	+				
5								+								+			
		1970																	
		Greece	Hungary	Spain	Italy	Austria	Japan	U.K.	Norway	Finland	the Netherlands	Belgium	France	FRG	Denmark	Switzerland	Sweden	U.S.A.	
1			+																
2		+		+	+														
3						+	+		+			+							
4								+		+				+	+	+	+		
5											+		+					+	
		1981																	
		Portugal	Hungary	Greece	Spain	Italy	U.K.	the Netherlands	Finland	Japan	Austria	Belgium	Switzerland	France	Denmark	Norway	FRG	Sweden	U.S.A.
1			+																
2		+		+	+	+													
3											+					+	+		
4							+		+				+		+			+	
5								+	+	+		+	+					+	

The question arises whether the ranking based on distances of clusters might be regarded as well as an indicator of ranking by development level. In other words, is the consumption pattern of countries at a higher stage of economic development also "more developed"?

Whether there is a correlation between the ranking based on cluster distances and that based on the level of economic development can be checked in the following way: if we find that countries joining the individual clusters next to each other are of a higher level of economic development, then we can claim that a regularity has been revealed.

This regularity is visible in all selected years, although in 1965 and 1970 the correlation is much stronger than in 1981.

In 1965 we find a small deviation in clusters 3, 4 and 5 for Austria, Finland and the U. K. All three countries are found in clusters where the other members are more developed than they are. In other words, these countries have consumption patterns similar to those of countries more developed than themselves. For the U. K. this is true for all three years. The explanation can partially be found in the fact that as far as the U. K. in the fifties is concerned, its level of economic development was near to that of the U. S., but in the sixties and seventies, and also since then, it has been constantly falling back in its relative level of economic development. But its consumption pattern, which in the fifties corresponded to its general level of economic development, did not "deteriorate".

In 1981 the two orders, that is the one based on cluster distances and the other based on the general level of economic development, do not completely correspond. In comparison with the other two years we can find the greatest variance within the clusters in the level of economic development. It can be noticed that clusters are not formed in a way that neighbouring countries, according to their level of economic development, join into one cluster, but rather countries standing farther from each other in this respect. Concerning the FRG and Norway, for instance, their level of economic development would justify their placing in a cluster of higher rank.

Analysing the relationship between consumption patterns and the level of economic development during the period 1965—1981 we can conclude that the correlation which was rather strong at the beginning of the period is subsequently weakening, although it cannot be characterized as weak. Towards the end of the period the effects of determining factors other than the level of economic development are gaining strength. In the long run different growth rates were not always accompanied by corresponding changes in consumption patterns. This is not astonishing, since changes in consumption patterns are not directly related to the rates of increase in GDP but to those of personal income or personal consumption expenditure, although the correlation between GDP and the two other indicators seems to be rather strong, in the long run. There are, however, certain periods and certain countries showing a weaker correlation in this respect. The seventies were such a period for most countries. The increase of per capita consumption was not strictly related to that of GDP. This explains to some extent why changes in consumption patterns did not follow the development levels brought about by different growth rates of GDP.

Changes in consumption patterns during the period under study were slower than the reranking of countries brought about by differences in growth rates. That is

why the U. K., falling back in the ranking order based on the level of economic development, was even at the end of the period only one rank lower according to its consumption pattern. Even this place in rank order can be considered higher than the one justified by its level of economic development.

In *Table 6* we present the average per capita real-GDP and personal consumption of countries belonging to each cluster. This way we also want to demonstrate the correlation between the ranking by clusters and that by the level of economic development, and of consumption level as well. Thus a higher ranking cluster also indicates a higher per capita GDP and consumption or, rather, a higher per capita GDP and consumption level is accompanied by a higher ranking cluster. There is one exception, concerning GDP in 1981 in the case of *clusters 3 and 4*.

Table 6
Average per capita real-GDP and consumption expenditure in clusters

Clusters	1965		1970		1981	
	a	b	a	b	a	b
1	2326	1483	3077	1796	3861	2296
2	2686	1757	3186	2089	3990	2595
3	3774	2294	4413	2556	6615	3652
4	4614	2672	5272	3002	6285	3685
5	4957	3001	5479	3352	6582	4126

Note: a = per capita real-GDP in 1975 ICP\$

b = per capita personal consumption in 1975 ICP\$

Source: Summers, R.—Heston, A. [11] for individual countries and on the basis of that cluster averages were calculated.

During the period under study the variance of per capita GDP across countries was decreasing. The ratio of per capita GDP for countries belonging to the highest and lowest ranking clusters being 2.1, 1.8 and 1.7, respectively, in 1965, 1970 and 1981. Most striking is the levelling among developed countries: while in 1965 the two most developed country groups—i.e. those in clusters 4 and 5—showed a 340\$ difference in their real-GDP and comprised seven countries, in 1981 the GDP ratios of the cluster were such that the average GDP of the three most developed clusters differed only slightly and comprised thirteen countries. (The increased number of countries belonging to these clusters also indicates that a levelling has taken place not only in the level of economic development but in consumption patterns as well.)

Our analysis shows that the order based on cluster distances—i.e. respective similarities and dissimilarities of consumption patterns—correlates with the level of development of consumption more strongly than with the level of economic development.

Trends and changes in consumption patterns

Tendencies in the changes of consumption patterns within clusters are shown in *Tables 7 and 8* for the years 1965 and 1981.

Differences in consumption patterns by country groups become quite clear at the beginning and at the end of the period as well.

Concerning the cross-section of consumption patterns across countries studied in the two selected years we have to point at the main characteristics of the consumption patterns:

1) The most striking general relationship can be found between food expenditure and the level of consumption. This tendency is nothing else than an application of Engel's law on an international scale. Engel's law, which usually is applied for cross-section and time series data in a given country, might be extended. The extended law can be formulated as follows: the share of food expenditure of countries is a decreasing function of the level of consumption or of the level of economic development.

2) Moving toward more developed countries, the cross-section analysis of countries shows a decreasing tendency of the share of clothing expenditure.

Based on changes in time we find that in countries at a lower level of economic development, for instance Greece, Hungary and Spain, this share is increasing for some time parallel to economic development, and its decrease only starts at a higher level of economic development. In most highly developed countries, however, the share of clothing expenditures shows a slightly decreasing tendency even while incomes are on the increase.

3) Changes in expenditures on housing and transport show a strict correlation with the level of economic development, respectively with consumption level. As we are approaching the clusters of higher ranking, the share of the expenditures on the groups mentioned is generally getting higher.

4) Astonishingly, we cannot find an unambiguous relationship between the share of the group of household equipment expenditure and the level of consumption. The changes over time of the share of this group also show a mixed picture for individual countries. In some countries we find a clearcut decrease in its share, while in other ones an increase can be seen. There are, however, some countries where the changes in shares show a somewhat cyclical pattern.

Cross-country tendencies for the expenditure groups prevail also in time regarding individual countries during this one and a half decade. All these changes in time resulted in considerable structural changes in many countries. The most remarkable is that food, having even nowadays the highest budget share in most countries, is more and more losing its leading role and is being replaced by housing and transport. This switch was finished in the U.S.A. already in 1965, since the food group was pushed back in that year to the second and in 1981 to the third place. The same phenomenon can be observed in 1981 for Sweden, Denmark and the U. K. where

Table 7
Average shares in personal consumption in clusters in 1965
(8 commodity groups)

	Clusters				
	1	2	3	4	5
Number of countries in cluster	2	2	4	5	2
Average per cap. pers. consump. (1975 ICP\$)*	1483	1757	2294	2672	3001
	Shares				
Food	50.0	39.4	31.7	31.3	24.5
Clothing	12.1	9.9	9.3	8.0	8.0
Housing	10.5	14.0	13.7	18.6	18.6
Household equipment	6.9	7.3	9.9	8.8	7.9
Personal care	1.8	3.3	5.8	3.1	4.6
Transport	6.7	6.7	10.8	13.1	13.1
Reaction	4.1	6.8	5.5	7.1	7.8
Miscell. goods and services	7.6	9.5	12.9	9.0	14.8

* ICP = International Comparison Project, See Summers—Heston [11]

Table 8
Average shares of personal consumption in clusters in 1981
(8 commodity groups)

	Clusters				
	1	2	3	4	5
Number of countries in cluster	1	4	3	5	5
Average per cap. pers. consump. (1975 ICP\$)*	2296	2595	3652	3658	4126
	Shares				
Food	45.5	36.0	26.3	26.0	22.4
Clothing	10.2	9.6	9.8	7.1	7.3
Housing	8.8	12.3	15.5	21.4	16.5
Household equipment	9.1	8.2	9.5	7.4	9.6
Personal care	2.2	4.7	3.4	2.9	11.2
Transport	8.1	12.8	14.9	13.7	13.4
Reaction	6.5	5.9	8.1	10.3	8.2
Miscellaneous goods and services	9.5	10.6	11.1	10.1	12.2

* See Table 7.

the group of housing acquired the greatest share. Looking again at *Table 1*, we can easily be convinced that if this tendency continues, then this phenomenon will be extended to more and more countries and in the next 5–10 years it will be overwhelming as an accompaniment of economic development. Even in 1981 the share of food in Switzerland, France and Finland is only 1–2 percentage points greater than

that of housing. Although the process of changing shares can be followed in all countries, it takes place in the less developed countries much later, in spite of the fact that the growth rate in GDP and personal consumption is higher in these countries than in the developed ones.

The clusterwise place of Hungary

The consumption pattern of Hungary—as we have seen in the clustering process—is strikingly different from that of other countries. With the exception of the year 1965—when it formed one cluster together with Greece—it forms a cluster on its own. The consumption pattern of Hungary is characterized by a relatively high share of food and by an exceptionally high share of alcoholic beverages and, simultaneously, by a relatively low share of housing and health expenditures.

This separated position of Hungary is not explained by its level of economic development. Most probably several other factors, not investigated in this article, play a decisive role in this phenomenon. It can certainly be assumed that relative prices in Hungary differ much more from those of Western countries than relative prices of Western countries differ from each other.

The most characteristic changes and tendencies in the consumption pattern of Western countries are observable in Hungary as well, but in a much more damped form.

If we extrapolate the data given in *Table 1*, it would appear likely that this switch in consumption pattern will take place in Hungary much later than in Western countries on about the same level of economic development.

In Hungary the process of changes in consumption pattern has slowed down even more from 1979, and this is continuing as a result of an insignificant (almost stagnating) growth in per capita real income. As far as real income is stagnating, the tendencies of changes in consumption pattern—having prevailed during earlier periods—cannot go on. On the contrary, there is a possibility, or now it is already a reality, that some unhealthy distortions of consumption patterns will take place.

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МЕЖДУНАРОДНОЕ СОПОСТАВЛЕНИЕ ПОТРЕБИТЕЛЬСКИХ СТРУКТУР

И. КОВАЧ

В статье анализируются структурные изменения личного потребления на основе данных в неизменных ценах по 17 странам ОЭСР и Венгрии в период 1965—1981 гг. В функциональном разделении потребление подразделяется на следующие группы: продовольствие, вкусовые продукты, одежда, бытовые услуги — отопление — бытовая энергия, оборудование домашнего хозяйства и жилища, здравоохранение — гигиена, транспорт и связь, образование — культура — спорт — отдых, смешанные блага и услуги.

Для сопоставления со странами ОЭСР венгерские данные нуждались в некоторых изменениях.

Автор анализирует:

а) Сходные, т. е. принимаемые за общие, черты потребительской структуры стран с различным уровнем экономического развития, в той или иной степени действительные для всех стран, и в то же время показывает различия, национальные особенности, имеющие место в структуре потребления отдельных стран. На основе сходства и различия потребительских структур автор группирует с помощью кластерного анализа страны. В результате страны со сходной потребительской структурой попадают в общий, а с различной структурой — в разные кластеры.

б) Насколько тесна связь между сложившемся на основе кластерных расстояний порядком стран и порядком, определяемым уровнями их экономического развития. Таким образом, вопрос может ставиться и так: является ли потребительская структура экономически более развитых стран также «более развитой»?

в) И, наконец, автор определяет место Венгрии среди полученных группировок стран, а также формулирует выводы, которые могут быть сделаны на основе этого относительного места.

В сходстве или различии потребительской структуры групп, полученных на основе кластерного анализа, находит выражение комплексное воздействие многих факторов. Из них важным является эффект уровня экономического развития и — через него — уровня потребления и доходов, роль относительных цен, различные географические и климатические особенности, потребительские навыки.

У автора не было возможности дать анализ таких важных факторов, как, например, относительные цены, и из перечисленных факторов автор прежде всего анализирует воздействие на структуру потребления уровня экономического развития.

JOINT PRODUCTION AND LABOUR VALUES

E. ZALAI

This paper investigates the problem of labour value determination in the presence of joint production. The purpose is to clarify the main problems involved, and critically review some recent proposals. In the case of joint production the inputs can not be divided between products in a natural way. As a result, none of the three alternative definitions given by *Marx* for labour values can generally be applied in this case. This means that the definition of labour values has to be generalized. The author points out that any such generalization will contradict some original Marxian proposals; therefore, there is no Marxian solution to the problem. One could still attempt to find a generalization Marxian enough in its spirit. The author lists some criteria that such a generalization could be tested against. He points out that the solution suggested by *Morishima* fails to meet most of the above criteria. It will be argued that a solution which relies on a price dependent division of inputs between products is closer to the general spirit of Marxian analysis.

The renewed interest in Marx's economics has contributed a lot to a better understanding of the content and scope of his economic concepts. Formal models have proved to be especially instrumental in this process, as exemplified by the pioneering works of *Bródy* [1] and *Morishima* [2]. There remained, however, quite a few problems not satisfactorily solved. In connection with the labour values heterogeneous labour and joint production have traditionally been sorted out as two major problems posing serious challenge to their general conceptual validity. In a related paper, I have addressed the first issue (*Zalai* [3]), in this paper I will deal with the second.

Joint production is a common phenomenon in our modern times, for in most production processes there are some inputs which can not be directly divided between the produced goods. The theoretical importance of joint production is also underlined by the fact that the proper treatment of durable capital goods itself leads to a model of joint production. This point was already emphasized by Marx but it was not until the works of von *Neumann* [4] and *Sraffa* [5] that this issue started to be seriously studied. It can thus rightly be expected that a value or price theory can accomodate the case of joint production as well.

Marx himself paid little attention to the problem of joint production. The alternative definitions of labour values given by him only apply directly to such a situation, in which the commodity and labour inputs necessary for the production of various commodities are separately given for every single commodity. Later analysis revealed that these definitions would not, in general, give meaningful results, if joint production is present. Thus, in short, there is no Marxian solution to the problem.

Dealing with the problem of value determination in the case of joint production Bródy [6] left the question basically open and only noted the possible arbitrariness in assigning values to joint products. Láng [7] took this issue further and proposed to consider labour values as a set rather than a single point. He defined this set by all the solutions one could get from an input-output model based on arbitrary divisions of joint inputs between products. Morishima [2] and later Morishima and Catephores [8] proposed to generalize the definition of labour values in a linear programming framework, partly in response to Steedman [9], who produced negative "Marxian" labour values as an evidence of their fallacy.

In this paper we will first review Marx's alternative definitions of labour values and point out the related problems caused by joint production. Then, the various proposals, especially those of Morishima, will be critically investigated. It will be argued that his suggested solutions do not meet some important Marxian criteria and are, therefore, not acceptable. Finally, a possible 'second best' solution will be discussed.

Joint production: a test of Marx's triple definition of values

Three alternative definitions of labour values can be distilled from Marx's *Capital*: labour content, labour required for the final (net) output and total (direct and indirect) labour input. These three concepts, which also appear in input-output analysis, are known to produce the same result in the case of single production. In the case of joint production, however, they do not always provide operational concepts. It will be also interesting to see how different these concepts in fact are.

Let us define an output (**Z**) and input (**Q**) matrix containing m rows and n columns each, where the rows refer to commodities and the columns to production processes, respectively. Similarly, let a row vector $\mathbf{w} = (w_j), j = 1, 2, \dots, m$ contain the homogeneous labour inputs and denote labour values by vector $\mathbf{p} = (p_i), i = 1, 2, \dots, n$.

The *first*, the labour content definition of value given by Marx rests upon his assumption that if a commodity is produced under socially average conditions, then the labour entering into its production is conserved by the value of the product. Suppose that every process considered operates under socially average conditions—an assumption to which we will come back later. To find these labour conserving values then means to solve the following system of equations (labour inflow = labour outflow):

$$\mathbf{pQ} + \mathbf{w} = \mathbf{pZ}, \quad (1)$$

where, of course, we expect \mathbf{p} to be positive (or at least nonnegative).

The *second* definition is based on Marx's assumption that in a given period the value of the net product of a society is equal to the amount of (live) labour that created

it. Let us assume that the input and output coefficients remain unaffected by the change in the general intensity (level) of production in every process. Based on this assumption the value of any commodity could be determined as the labour required to produce one unit of final (net) output of the given commodity. Let us denote by vector t_i the level of the various processes, at which one unit net output of commodity i will be produced. Thus, the value of the i^{th} commodity is $p_i = \mathbf{w}t_i$, where

$$\mathbf{Z}t_i - \mathbf{Q}t_i = \mathbf{e}_i, \quad (2)$$

and \mathbf{e}_i stands for the i^{th} unit vector. Again, the solution of (2) is expected to be nonnegative.

One can immediately see that neither of the two equation systems (1) and (2) will always have a solution, and if it does this may have negative elements, and the solution may not be unique. To guaranty in general the solvability of (1) one should assume that the rank of the matrix $(\mathbf{Z} - \mathbf{Q})$ is equal to n (i.e. $m \geq n$), whereas in the second case its rank should be equal to m (i.e. $m \leq n$). Thus, except for the specific case when $(\mathbf{Z} - \mathbf{Q})$ is a quadratic, nonsingular matrix, one can not expect in general that the two solutions will coincide. Even in such a case, the solution may be meaningless from the economic point of view, because some of its elements may be negative.

It is also clear that the *third* definition, which is based on the phase-by-phase calculation of the labour input, can not be used if there are joint products, since one can not tell how much labour was used for the production of the single commodities.

Thus, none of the three definitions given by Marx proves to be universally and meaningfully applicable to the case of joint production. Based on this observation one can rightly conclude that there is no Marxian solution to the problem of labour values in the case of joint production. In what follows we will turn our attention to various interpretations of this conclusion.

Steedmans example: negative labour values?

Steedman [9], challenging the basic Marxian thesis that the source of profit is the surplus value, produced a simple numerical example, which contained two processes and two commodities. The data in his example were as follows:

$$\mathbf{Z} = \begin{pmatrix} 30 & 3 \\ 5 & 12 \end{pmatrix} \quad \mathbf{Q} = \begin{pmatrix} 25 & 0 \\ 0 & 10 \end{pmatrix} \quad \mathbf{w} = (5 \quad 1)$$

To determine the labour values he mechanically applied the above discussed Marxian definitions (it could be interpreted as either of the first two, since in this case they coincide). As a result he got $p_1 = -1$ and $p_2 = 2$. On the basis of these "labour values" he then showed that the surplus value was negative.

Morishima [10] and Wolfstetter [11] pointed out that his claim that these numbers are the labour values is unfounded, because he applied Marx's definition to a

case different from what Marx considered. From our previous discussion it should also be clear, that for the joint production case one has to use a generalized notion of labour values, in order to get an operational concept. Wolfstetter has also pointed out that the negative value in Steedman's example may be attributed to the fact that the first process is not efficient in the net sense, i.e. the second process yields larger net output using the same amount of labour. (Applying one unit of labour the net output of the second process is 3 and 2, whereas that of the first is only 1 and 1 from the two commodities, respectively.)

One can easily generalize Wolfstetter's point for the case of any invertible $(Z - Q)$ matrix. Let us assume that the "labour value" of some commodity, say the i^{th} , is negative, i.e. $p_i = w(Z - Q)^{-1}e_i < 0$. Define $x = (Z - Q)^{-1}e_i$ and $x_1, x_2 \geq 0$ such that $x_1 - x_2 = x$. Clearly, we have $w x_1 < w x_2$ and $(Z - Q)x_1 \geq (Z - Q)x_2$, which means that the composite process of x_1 is more efficient than that of x_2 . Conversely, let us assume that there is an inefficient collection of processes in the technology, i.e. we may find $x_1, x_2 \geq 0$, such that $(Z - Q)x_1 \geq (Z - Q)x_2$ and $w x_1 < w x_2$. From this it follows that $w(x_1 - x_2) = w(Z - Q)^{-1}(Z - Q)(x_1 - x_2) < 0$. Because $(Z - Q)(x_1 - x_2) \geq 0$, $w(Z - Q)^{-1}$ must contain at least one negative element.

There is an important consequence of the above phenomenon in the context of labour values. We have emphasized that the labour content definition is based on the assumption that the various processes operate under socially average conditions. This assumption, however, cannot be maintained if a process (or a group of processes) is clearly less efficient than another one. In such a situation, according to Marx, negative and positive extra-surpluses emerge in the various processes, thus one could not use equation (1), which does not contain such extra-surpluses. Steedman's example, therefore, violates the Marxian concept of labour values in this respect, too.

Based on this observation one may even wonder whether or not Steedman's example can picture a market economy in equilibrium at all. The answer to this question is affirmative. Based on the Sraffian concept of producer's prices Steedman showed that his example can be regarded as an equilibrium state of an economy. Suppose, workers get 3 and 5 units out of the 8 and 7 units net output of the two commodities, respectively. Then $p_1 = 1/3, p_2 = 1$ prices, $p_0 = 1$ wage rate and $r = 0.2$ profit rate satisfy the following equilibrium price condition:

$$pZ = (1 + r)pQ + p_0w$$

and wages are equal to the cost of consumption. Thus the question remains how one could define labour values in a more meaningful way for such a case.

Morishima: optimal and true values

Morishima followed the second definition of labour values, that is, the one based on the labour requirement of net output. In accordance with this definition the labour value of any bundle of commodities (\mathbf{b}) is determined in two steps. First, such activity levels have to be determined which give rise to a net output vector \mathbf{b} . As indicated earlier, this problem may not have meaningful (nonnegative) solution and/or it may have several solutions. Thus, in this form, it will not provide a universal method for the determination of labour values.

Morishima, therefore, proposed to reformulate the above problem into an inequality system in the fashion common in modern mathematical economics, i.e. allowing for excess supply, as follows

$$(\mathbf{Z} - \mathbf{Q})\mathbf{t} \geq \mathbf{b}. \quad (3)$$

If the production system examined is productive, i.e. there exists a $\mathbf{t}^* \geq \mathbf{0}$ such that $(\mathbf{Z} - \mathbf{Q})\mathbf{t}^* > \mathbf{0}$, then the above inequality system will always have nonnegative solutions. The only problem that remains to be solved, according to Morishima, is to select an appropriate solution, because the inequality system (3) will, as a rule, have many feasible solutions. He proposes to choose such a solution that minimizes the amount of labour. This minimal labour required to produce at least as much net output as in vector \mathbf{b} is what Morishima calls the *true* labour value of the commodity bundle \mathbf{b} . Let us denote it by $p(\mathbf{b})$, which is thus defined as follows:

$$p(\mathbf{b}) = \min \{ \mathbf{w}\mathbf{t} : (\mathbf{Z} - \mathbf{Q})\mathbf{t} \geq \mathbf{b}, \mathbf{t} \geq \mathbf{0} \} \quad (4)$$

In his earlier work [2] he proposed to consider the dual solution of problem (4), that he called *optimal* labour values, as the generalization of labour values. The optimal value of a commodity bundle is equal to its true value. However, the optimal values are not always uniquely determined, unlike the true values. This is why he switched to the latter concept. Morishima viewed thus his true labour values as the proper generalization of the Marxian labour values for the case of joint production. To justify his claim he referred to a passage in the "Poverty of philosophy", which reads as follows: "It is important to emphasize the point that what determines value is not the time taken to produce a thing but the minimum time it could possibly be produced, and this minimum is ascertained by competition." (Marx [12], p. 66.)

It should be emphasized that the context of the above quotation suggests that Marx was concerned with market values, that is, with the centre of prices rather than with values defined as socially average labour contents. This double interpretation of values, i.e. natural center of prices *versus* average labour content, is a source of confusion and debates among Marxist economists, since these two concepts seem to be qualitatively different. Nevertheless, in this paper we will stick to the second interpretation of values and show that Morishima's true values might fit in with the above concept of market values but not with that of average labour content which appears in most places of *Capital*.

In the next section we will define some criteria which we believe this latter concept of labour values should fulfill. To prepare the ground for the assessment of Morishima's true values it should be noted that they are not additive, that is, in general

$$p(\mathbf{b}) \neq \sum p(\mathbf{e}_i)b_i.$$

Also, if \mathbf{y} is the observed net output, the true value of \mathbf{y} is in general smaller than the labour actually used for its production. Thus, for example, even if all the net output is consumed by the workers, Morishima's true values might indicate exploitation (surplus labour). On the other hand, it can occur that with the true values one is not able to identify surplus labour even if there is capitalist consumption. These features seem to contradict the Marxian analysis.

Morishima's true values are based on a marginal rather than average concept of valuation. They can in fact be interpreted as marginal values only if the technology exhibits constant returns to scale. Such an assumption, however, is not needed in order to determine labour values in the case of single production. It is easy to show that one does not even need to know the input coefficients. In order to determine labour values one can solve an equation system based on the actual amount of inputs and outputs. Let us denote the output vector by \mathbf{q} in this latter case. The labour values are simply defined by the following equation:

$$\mathbf{p}\langle\mathbf{q}\rangle = \mathbf{p}\mathbf{Q} + \mathbf{w}$$

where $\langle\cdot\rangle$ denoted a diagonal matrix.

To see the essential difference between Marx's and Morishima's labour value concept clearly let us consider an economy with alternative, but *single* product technologies. The same commodity is thus produced with different input requirements. In such a situation one can easily tell (*ex post*) what the socially average input requirement of various products was in a given period. Thus, the determination of labour values can be reduced to the familiar input-output scheme. Once the values have been determined one can evaluate the different processes. The individual processes will, as a rule, exhibit positive and negative extra-surpluses. It is, in fact, these extra-surpluses that allow us to judge which processes are operated under better or worse conditions than the social average.

We think that in the above situation the outlined approach should be followed in the spirit of Marx's related analysis. Following Morishima's definition of true labour values one would arrive at a completely different result. His true values should be determined by solving a linear programming model based on a von Neumann-Leontief technology, which is a problem familiar from the "nonsubstitution theorem" (see, for example, Gale [13]). In that solution one would only find negative extra-surplus, i.e. only the most labour efficient processes would 'conserve' the labour input. This is in sharp contrast with the Marxian average concept outlined above.

Criteria for testing the generalizations

There should be no doubt: both the optimal and true labour values of Morishima generalize the Marxian values in the general sense. If joint production and technological alternatives are absent, both of them result in the same valuation system as the Marxian labour values. This is a necessary but not sufficient condition that a generalization should meet. The crux of the matter is that we are dealing here with a situation in which we want to find not only a more general labour value concept, but—to paraphrase Morishima—a “true Marxian” labour value concept.

Since Marx did not give a general definition and he is not alive any more, this problem will remain unsolvable or a matter of subjective judgement. Nevertheless, one might still try to set up a few fundamental criteria, based on the original Marxian concept and surrounding analysis, against which various generalizations could be tested. A partial list of criteria is provided below as an example.

1. The values are uniquely determined, once the socially necessary input and output data are known (*unique existence*).

2. The values are nonnegative, but positive if labour is indispensable for the production of the given commodity (*positivity*).

3. The joint value of a bundle of commodities is the quantity-weighted sum of the unit values (*additivity*).

4. The total value of outputs is equal to the sum of the value of commodity inputs plus live labour input, if and only if a production process is operated under socially average conditions (*average property*).

5. If some processes do not operate under socially average conditions, then both positive and negative extra-surpluses arise (*symmetry of average property*).

6. The value of the actual net output of the economy is equal to the amount of labour actually used (*net product identity*).

7. If there is (no) surplus product, the surplus value is positive (zero) (*surplus identity*).

8. The values are independent of prices (*price independence*).

The readers of Marx's *Capital* will most probably agree on that the above principles are fundamental characteristics, almost axioms of the Marxian value concept. It is therefore not necessary to comment on them in more detail here. One could probably add a few more items to the list or question the reasonability of some criteria listed. But this is not the real issue here. Our aim was to collect those Marxian statements, the validity of which have been questioned in one or another way in the foregoing analysis. The only exception to this rule is the criterion of price independence, which will only later enter our discussion.

* The surplus product is a vectoral magnitude. If there are both negative and positive elements in it, one can not tell whether or not surplus is produced. This is probably why the concepts of surplus value and surplus labour were introduced by the classical economists.

Let us now briefly summarize Steedman's and Morishima's understanding of labour values in the light of the above criteria. Steedman, as we have seen it, extended mechanically Marx's original definition to the case of joint production. This approach would result in a concept that would violate several of the above criteria. Neither the existence, uniqueness nor the nonnegativity of values is guaranteed by such a concept. It would not bear the average property either, as we have already shown (see the basis of negative values). The surplus identity would not be fulfilled either. Steedman himself has shown with his example that there may be negative surplus value associated with positive surplus product. If the values can be determined at all, they will thus only satisfy the additivity, net product identity and the price independence criteria.

Unfortunately, Morishima's concept does not score much better at all in the above test either, as we have already seen. Although the true values will always be uniquely determined and nonnegative, but only for a bundle of commodities (not additively). They do not fulfill, in general, the average requirements, the net product and surplus identities. Apart from these, Morishima's concept rests upon the assumption of constant input and output coefficients, and on the choice of techniques which is rather alien to the Marxian analysis, too. It is much closer to a neoclassical price theory and to the notion of opportunity cost. It can certainly not explain the source of the social net product (the actual labour input—according to Marx), which is distributed among the classes of capitalist society through rents, profits and wages.

What other solution is left?

On the above ground we may thus conclude that the challenge posed by joint production to the Marxian labour value concept, articulated forcefully by Steedman, was not successfully met by Morishima's otherwise interesting generalized notion. It seems to be almost certain, too, that any revision or extension of Marx's original definition will lead to conclusions, which will not be in full conformity with those of Marx. The question is therefore how one could find such a solution that is reasonably close to the spirit of the Marxian analysis and way of reasoning.

This is admittedly a matter of taste as well, because it rests upon subjective judgement. At present I can not think of any better solution than to resort to Marx's original definition. We have emphasized at the beginning that Marx's original definitions can only be used if the commodity and labour inputs are divided among the produced commodities. This division takes place in real life through the cost and price calculations according to socially agreed principles. One could, therefore, rely on this social mechanism in defining labour values, in a similar vein as Marx included the social, historical elements into the determination of the necessary consumption of labour.*

* This solution was first proposed by the author in an unpublished dissertation in 1980 (Zalai [14]). Flaschel [15] has independently also argued in favour of such a solution as against Morishima's true values.

Such a solution could be objected to on the basis that it brings in the prices into the definition of values, i.e. values are no more price-independent. But how could one deny at all that prices indirectly influence the size of values? The decisions about what to produce, what technologies to use and so on depend to a large extent on prevailing and expected prices, and these decisions form the necessary costs of production, which in turn determine values. The logical priority of values to prices in Marx's economics should not be interpreted as some kind of a causal precedence. Prices and values represent two interrelated (dual, as Morishima calls them) valuation system in Marx's economic theory. We do not think, therefore, that one would depart too far from Marx making this relationship explicit in defining labour values for joint products.

To illustrate this solution let us come back to Steedman's example again. Suppose we accept the Sraffian equilibrium prices ($p_1 = 1/3$, $p_2 = 1$) as the basis of cost division between products. Aggregating the total inputs according to the produced commodities we arrive at the following input data:

$$Q^* = \frac{1}{39} \begin{bmatrix} 650 & 325 \\ 30 & 360 \end{bmatrix} \quad w^* = \frac{1}{39} [133 \quad 101]$$

The total production is 33 and 17 units of the two commodities, respectively. From these data one can already determine the labour values. The result is $p_1 \approx 0.24$ and $p_2 \approx 0.59$.

It is also interesting to note that by evaluating the original processes at these values we will find that extra-surplusses emerge (defined as $pZ - pQ - w$). In the case of the first process this is negative (≈ -0.884 , which is about 9 percent of the total surplus), whereas it is of the same order of magnitude, but, of course, positive in the case of the second one. This is clearly what we expected, since we have seen that the first process is less efficient than the second.

We may conclude from the above analysis that the proposal based on a properly justifiable division of inputs among joint products is probably a less elegant and appealing concept than Morishima's true values, but it may save more of Marx's original concepts.

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СОПРЯЖЕННЫЕ ПРОДУКТЫ И ТРУДОВАЯ СТОИМОСТЬ

Э. ЗАЛАИ

В последнее время во всем мире оживился интерес к марксовому понятию стоимости и величине стоимости. В данной статье рассматривается проблематика сопряженных совместно производимых продуктов и величины стоимости, в первую очередь с целью уточнения понятийной стороны проблемы и критической оценки различных точек зрения. В то же время делается попытка распространить определение стоимости в соответствии с марксовыми положениями и анализом на сопряженные продукты.

В случае совместно производимых изделий основная трудность состоит в том, что мы не можем «естественным» образом распределить затраты по той или иной деятельности между производимыми продуктами. Поэтому нельзя непосредственно применить три альтернативных определения величины стоимости Маркса, вернее, их применение привело бы к бессмысленным решениям. Например, Стилдман на этом основании делает вывод об ограниченности понятия стоимости Маркса и ставит под сомнение ее теоретическое значение. А Моришима и другие правильно, по мнению автора, видят в этом только подтверждение необходимости обобщения определения стоимости. В то же время автор указывает и на то, что нет такой возможности обобщения, которая бы не противоречила тому или иному существенному положению Маркса, то есть у Маркса нет решения вопроса, мы можем говорить в лучшем случае лишь о распространении понятия в духе Маркса.

Затем автор суммирует критерии, играющие особо важную роль в анализе стоимости Маркса, и которые могут служить мерой распространения понятия (однозначность, положительное значение, аддитивность, принцип средней, симметричность принципа средней, однозначность вновь созданной стоимости, взаимопредполагаемость прибавочной стоимости и прибавочного продукта, независимость стоимостей от цен). Автор показывает, что принятое почти всюду в международной литературе обобщение Моришимы нарушает подавляющую часть вышеуказанных критериев. В противоположность этому автор считает более приемлемым решение, при котором сначала затраты распределяются между продуктами в соответствии с традиционной практикой и тем самым определение стоимости сводят к привычной форме. Такое решение не удовлетворяло бы лишь последнему критерию, который, вообще, несостоятелен.

AN ESSAY IN MACROECONOMICS

A. BRÓDY—K. MARTINÁS—K. SAJÓ

Theoretical tools of constructive thermodynamics can be applied to analyze the change of the macroscopic variables of a given economic subsystem. In close analogy to the entropy function a Z potential function, depending only on the macroscopic variables, may be set up and shall be clearly increasing during regular economic processes.

Macroscopic variables of economic systems

The description of economic system by macroscopic variables in the sense of thermodynamics is not without precedent: *Neumann* [1], *Samuelson* [2], *Georgescu-Roegen* [3] are pioneering contributions. Our exposition is only more explicit and systematic.

Macroscopic variables emerge quite naturally in economic models contemplating sets of products. Economic activity analysis for instance considers solely addition and transformation of vectors, representing inputs and outputs of economic processes, and may be viewed as a special thermodynamic model. Its origin in phenomenological thermodynamics has been clearly indicated by *Neumann* [1. p. 29]. The correspondence is profound because, according to *Giles* [4] "...any verifiable assertion of thermodynamics can be expressed in terms of states with the aid of the operation $+$ and the relation \rightarrow alone".

Our approach allows for non-linear relations and is therefore more general than activity analysis. Certain preliminary remarks concerning the measurement of macroscopic ("extensive") variables have to be made at the outset:

i) sound measurement has to settle appropriate time/space intervals: big enough to allow summation of a sufficient number of minor events and small enough not to suppress information about intrinsic changes;

ii) only a finite number of extensive variables may be considered which possess proper and integrable balance equations, meaning that they may be measured in natural units thus their respective changes may be added up with proper signs;

iii) the set of extensive variables, measured at any one point of time, constitute a vector, the theoretical ensemble of possible vectors spans the n dimensional space R_n^+ , the so-called phase space where n is the number of distinct parameters.

If we now consider a productive economic subsystem (be it a household or an enterprise, a branch of industry or a national economy) its state will be characterized by its available resources: building, plant, equipment, inventory of materials, semi-

finished and finished products, prepaid labour and other services, monetary funds—in short: its tangible assets.

We therefore formulate *Proposition 1*.

The state of a productive subsystem is unequivocally characterized by the list of various commodities and services $N_i (i = 1, \dots, r)$ in its possession and its monetary resources M .

One could include also accounts payable and receivable but at this point of exposition let them subsume as additional forms of money. Credit relations are thus disregarded.

All these characteristic variables are extensive quantities as defined above.

Let the system now move in the state space (of $r+1$ dimensions) by carrying out various processes and interacting with the outside world. During an infinitesimally small process the system will alter its capital value, C , in the following manner:

$$dC = \sum_{i=1}^r \mu_i dN_i + dM \quad (1)$$

Here μ_i is the internal price and dN_i the change of the variable i , dM the change of money. Let us emphasize that all the internal prices (or “weights” or “intensive parameters”) are themselves subject to change, depending on the macroscopic variables. Thus theoretically $\mu_i = \mu_i(N_1, \dots, N_r, M)$ though we usually do not know the shape or exact form of the latter functions.

All this is not new to economists. The reason thermodynamic concepts have to be introduced is the following. Though dC , the change of capital value is the direct sum of the properly weighted changes of the extensive variables, its integral $\int dC$ depends on the actual movement (path) of the subsystem as traced among changing parameters and prices. Therefore C itself does not qualify for an extensive variable because its balance equation cannot be integrated if we know (measure) only the initial and end points of the movement.

To perform such an integration, we either have to observe the exact trajectory of the system, burdening us with the impossible task of continuous measurement, or have to resort to methods perfected by thermodynamics.

The vital problem, approached here in a new way, is long familiar to economists and is called the “index-number problem”: if an index of volume has to be prepared and any one of the prices (or “weights”) changes during the period considered, then comparison of the endpoints is rendered ambiguous.

The approach offered by thermodynamics

The plan to proceed is indicated by standard thermodynamic reasoning (see f.i. *Fényes* [5], *Landau-Lifschitz* [6] or *Landsberg* [7]). We first discern currents and sources and determine with their help the surplus generated by an infinitesimal process. We also define external prices to separate commercial and productive surplus. This allows to set up an equation analogous to the *first law*. We then seek an integrating factor which transforms equation (1) into a total differential. This necessitates the definition of an economic equivalent of adiabatic processes and irreversibility. Finally we find an economic analogue to the *second law*. This helps to prove the existence but not yet the uniqueness of an entropy-like function. A short postscript will then indicate some further observations about the formal structure thus secured.

Currents and sources, the first law

N_i may change in two ways. Firstly by interactions with the outside world. These changes are called "currents" and are designed by J_i according to thermodynamic tradition. We may visualize them as purchases and sales or, more generally, as inputs and outputs of commodities and services. entering and leaving the subsystem.

Secondly they may change by the activity within the system itself: it may create and consume commodities and services. These are called "sources" or "sinks" and are designed by S_i . Thus

$$dN_i = J_i + S_i \quad (i = 1, \dots, r) \quad (2)$$

To fix signs: purchases are positive, sales negative, creation positive, consumption negative.

Separation of commercial and productive surplus requires the introduction of external or "market" prices, they will be designated by $\bar{\mu}_i$ and may—but do not have to—deviate from internal prices.

Commercial surplus, dR , originates in price-differences:

$$dR = \sum_{i=1}^r (\mu_i - \bar{\mu}_i) J_i \quad (3)$$

That is: if internal prices are higher than external ones, this entails gains when purchasing and losses when selling.

Productive surplus, dK , originates in the internal working of the system:

$$dK = \sum_{i=1}^r \mu_i S_i \quad (4)$$

The amount of money is also altered, and we could write $dM = J_M + S_M$ but money is

usually not created in an economic subsystem, so $S_M = 0$ and this does not bring much new insight. Another classification will be more revealing: money might change because of commercial activities and also because of receiving pure monetary inputs (that is: investments into the subsystem). Thus:

$$dM = - \sum_{i=1}^r \bar{\mu}_i J_i + dI_M \quad (5)$$

The amounts collected under the summation sign comprise all the commodity and service transactions with the outside world, dI_M designates pure monetary input from outside.

This may be considered as an "Economic first law".

Deducting (5) from (3) we obtain

$$dR - dM = \sum_{i=1}^r \mu_i J_i - dI_M$$

hence

$$\sum_{i=1}^r \mu_i J_i + dM = dR + dI_M.$$

So we are ready to rewrite equation (1) by substituting (2) and in consequence of (4) and (5)—(3) as

$$dC = \sum_{i=1}^r \mu_i (J_i + S_i) + dM = dR + dK + dI_M \quad (1^*)$$

Discussion and the second law

The increase of capital value stems from commercial and productive surplus and new investment. This, of course, is an economic truism and we could have set out directly from equation (1*). The lengthy derivation has been necessary only to show non-trivial parallels with thermodynamic reasoning and to facilitate interpretation.

Observe, namely, that commercial surplus and new investment are both transference of values from an "outside reservoir". They increase the capital value of the subsystem to the "detriment" of the outside world and correspond to the transference of heat in the *first law of thermodynamics*, while productive surplus originates from work performed within the system itself.

An *adiabatic process*—in an economic sense—will consist therefore of a process characterized by $dI_M = 0$, that is no investment from outside.

A *reversible process* will be characterized by $dK + dR = 0$, the absence of surplus. This can be visualized as a pure rearrangement of the extensive variables, without loss or gain which rearrangement then can be easily carried out in the reverse direction. Any commercial activity, if it exists, is pure barter.

An *irreversible process* will be characterized by $dK + dR > 0$. The existence of a productive surplus signals the lasting impact on the world which cannot be "taken back" by simple barter or rearrangement of the commodities or services. (It may be, though, "taken back" by some further sequence of other irreversible processes.)

To forge ahead toward integrability and the *second law* we need further special assumptions.

Proposition 2a

No regular economic process is undertaken in which the sum of commercial and productive surplus is negative or zero.

The proposition therefore prescribes $dR + dK > 0$. But this is still insufficient to secure an integrating factor for dC . In thermodynamic theory it was the work of *Caratheodory* [8] which finally articulated the necessary and sufficient conditions for the existence of an integrating factor. He proved that if the topology of the phase space is such, that for every point in phase space there are points in the neighbourhood that cannot be reached by the system on a trajectory for which $\int dC = 0$, then an integrating factor must exist.

We may exploit our former definitions in the following manner. A reversible adiabatic process entails $dK + dR = 0$ and $dI_M = 0$, thus according to equation (1*) $dC = 0$. That is a reversible adiabatic process cannot have the same result as an irreversible process for which $dC > 0$.

We may in the vein of *Caratheodory* state our *Proposition 2b* securing an integrating factor:

Close to every point in the phase space there is another point which can be reached only by a regular economic process in the sense of *Proposition 2a*.

Economic temperature and entropy

Propositions 1, 2a and 2b together ensure the existence of an integrating factor, say T , by which dC can be transformed into a total differential and thus integrated between two points in the phase space *irrespective of the actual path*.

Thus:

$$dC/T = dZ \quad (6)$$

where Z is a differentiable function.

We may call T the *economic temperature* and Z the *economic entropy* imitating thermodynamic labels.

Mathematical reasoning, as applied to thermodynamics, shows also that equation (6) leaves much freedom of choice in the function T . Yet the "index number problem" may be solved only if a consensus can be reached in selecting a unique function T . If we wish for Z to qualify for an extensive macroeconomic variable, that is to be a homogeneous function of degree one of all the other macroeconomic variables, then T must be homogeneous and of degree zero, as befitting for an intensive variable. If we further wish T to be positive throughout, then for regular economic processes Z must increase, economic accumulation therefore is interchangeable with increasing Z values.

Postscript

We pursued only a very general yet basic form of thermodynamic reasoning, open and offered for each and any system that can be described by interacting macroscopic variables and balance-equations.

The help to be expected from thermodynamics does not stop here. Among other advantages it may also provide instructions for performing and interpreting measurements carried out on the system under investigation.

It would be particularly important to explore the family of potential functions that are candidates for representing economic entropy and with them the various forms and meanings of the temperature function.

We hope that by suitable theoretical and practical considerations these families could be further restricted. We also believe that the approximation, tabulation and analysis of the second partial derivatives,

$$\frac{\partial^2 Z}{\partial N_i \partial N_k}$$

would be helpful in solving this task.

This could be undertaken on hand of time-series and cross-sectional data for economic systems (say: multi-country historical data). It may also shed new light on considerations of economic stability.

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ОЧЕРК О МАКРОЭКОНОМИИ

А. БРОДИ—К. МАРТИНАШ—К. ШАЙО

Теоретический аппарат термодинамики может быть применен к анализу изменений макроскопических переменных данной экономической подсистемы. В тесной аналогии с энтропийной функцией функция потенциала Z , зависящая только от макроскопических переменных, может быть определена и должна строго возрастать в ходе регулярных экономических процессов.

SOME QUESTIONS OF ENERGY POLICY IN EAST EUROPEAN COUNTRIES*

Energy supply and foreign economic policy

A. KÖVES

The worries of energy supply in the smaller European CMEA countries are related to the fact that—in spite of radical changes in their international (world economic and CMEA) environment—no similar radical changes were pursued in their economic policy strategies, approaches and planning concepts and, in consequence, in their energy policies either. Until quite recently, the smaller CMEA countries, instead of reducing per unit energy (oil) consumption, tried to maximize primary energy and raw material imports. These efforts were related to the possibilities and interests of the USSR as exporter, and to the concept of CMEA cooperation, which considers its basic task to satisfy the, mostly physically determined, demands of member countries from intra-CMEA sources to the greatest possible extent.

After 1973 when the oil price explosion shook the world economy, in the countries of Eastern Europe the view was prevailing for a while that the crisis would only afflict the Western world and the troubles which caused there stagflation, uncertainty of supply and confusion of economic policy, a dynamic growth of unemployment etc. would not spread eastward across the rivers Elbe and Lech. By now we have learnt that Eastern Europe has not remained exempt from the growth difficulties faced by other countries and regions of the world dependent on energy imports, either. Rising oil prices, tensions in the energy situation, deteriorating terms of trade, external indebtedness, slowdown of economic growth, and necessary restrictions on the domestic use of the national income both for consumption and accumulation have become characteristic of the East European economic situation in the last ten years.

Energy supply, economic growth and economic structure

While in the Western world an increasing number of signs indicate a slight alleviation of the energy problems, i.e., the fact that the conditions of the oil market have changed in favour of customers and analysts are concerned more with the economic consequences of a possible decrease of oil prices rather than with those of a new oil price explosion, there are no indications of a significant improvement of the energy situation in Eastern Europe.

*For the purposes of this paper Eastern Europe includes the European member countries of the CMEA, except for the Soviet Union (i.e., Bulgaria, Czechoslovakia, the GDR, Hungary, Poland, and Romania).

There are a lot of things which allow us to draw the conclusion that the troubles are surviving: the published program documents and official statements in the individual countries—as well as the joint declarations on CMEA level—speak about the energy problem as one of the most important issues of economic development and cooperation. The economic development plans give priority to investments in energetics—often expressly at the expense of other sectors, mainly the manufacturing industries and the infrastructure.* Planners and economic analysts are of the opinion that the East-European countries can only satisfy their energy requirements under increasingly severe conditions in the next five-year plan period (1986—1990).

First of all, however, everyday experience calls attention to the difficulties. The energy situation continues to be tense in several East European countries, shortages occur in the energy supply repeatedly, energy consumption has to be restricted from time to time, causing difficulties both in industrial production and in the supply of the population (in electric supply and in provision with fuel and combustibles).

We all remember that these tensions appeared in a particularly sharp form in the very long and cold winter-time of 1984—85. What gives even more food for thought is not merely the instability of the energy supply but rather that the supply difficulties increased even though the statistical data published on the economic development of the preceding period seemed to prove a certain recovery of the situation. Namely, after the poor growth performance between 1980—1982 and the sharpening crisis of indebtedness, a double objective was formulated in the countries of Eastern Europe: on the one hand, economic growth was to be revitalized, or at least moved from the trough at the turn of the decade (or, in some countries, recession was to be stopped) and on the other hand, the international financial situation of these countries was to be improved by reaching a considerable trade surplus. As a result of this policy, economic growth became more rapid, as compared to that in the preceding two years, almost everywhere in 1984** and the surplus in trade with the advanced industrial countries exceeded that of the preceding year by doubling its value, and reached a record level. Both results, however, burdened the energy balance of Eastern Europe. Parallel to the acceleration of economic growth, domestic energy consumption again increased in several countries, while pressing the exports of fuels played an important part in achieving the surplus in foreign trade. Even though the production of certain kinds of primary energy was also growing (production of brown coal in the GDR, hard coal in Poland, natural gas in Hungary), in their totality the possibilities of expansion in energy supply (either through production or imports) proved to be scarce in

*For instance, in the early 1980's in Hungary 35—42 percent, in Poland 36—39 percent of industrial investments were spent on the sector of energetics. [1,2] According to the plans in Poland, the investments into energetics have to be doubled in the course of the coming five years to maintain the current level of coal production. When comparing the data of the two countries it must be taken into account that Poland is a major exporter of coal. Therefore, the investments into energetics are export-oriented, to a certain extent. In Hungary, energy investments merely serve for import substitution.

**Except in Poland where the growth rate was lagging behind that of 1983 by a few tenths of points (and where the level of the national income was still 14—15 percent lower in 1984 than the peak in 1978).

comparison to the increasing demand. All this not only strengthened the tensions in energy supply but contributed to the repeated slowdown of economic growth and to the diminishing hard currency trade surplus of Eastern Europe in 1985.

Thus, the problems of energy supply are closely linked to the most important questions of economic growth. The still high energy-intensity of economic growth* indicates, among others, that the progress in economic restructuring is rather slow, whereas it would be much more urgent here than in several other regions: owing to the development strategy followed for many decades in the countries of Eastern Europe the weight of the sectors with high energy demand is extremely high by international comparison. In respect of the microstructure neither the pace nor the direction of structural changes are adequate, and this can most directly be seen in the rigid commodity pattern of exports. The exports to Western countries were boosted not by adding new, up-to-date, and much-called-for manufactures to the export product list, but in the traditional manner and commodity structure, *inter alia* by increasing the export of materials and primary energy.

Economic political responses to the rising oil prices: the cases of Western and Eastern Europe

The tensions in energy supply are at the same time connected with the energy policy, among other things, with the energy policy adjustment: and these are the questions we are going to focus on in the following part of our paper.

Let us, first of all, briefly compare the typical response of the West and East European oil importing countries to the oil price explosion. Let us disregard the differences between adjustment mechanism deriving from the varying systems,** and also the non-negligible difference that—as a result of what we have said in the introduction—even the idea of the necessity of adjustment came to the fore much later in Eastern Europe than in the Western countries of Europe. Here we are only interested in *what* the particular countries, facing the rising prices, considered necessary to adjust to, and through *what course* of economic policy action.

For the Western oil purchasing countries the oil price explosion meant on the one hand a sudden rise of import prices, hence, a deterioration in the terms of trade and in the balance of payments: on the other, an uncertainty of supply. The latter result, as it is well known, was a consequence of the fact that the sources of oil purchase became largely concentrated into the OPEC countries in the last decade which proclaimed a more or less open confrontation with the consuming countries. Hence, it is only natural that the importing countries formulated the *strategic policy objective to reduce*

*According to the computations of the Hungarian economist É. Ehrlich the 1980 per capita energy consumption in the small East European countries exceeded the average of other countries on the same level of economic development by more than double, which was the case 10 or even 20 years earlier, too.

**For our standpoint on this, see [4].

dependence on OPEC oil. To achieve this objective, various tasks were to be accomplished. It was necessary to decrease specific (per unit) energy consumption, and particularly oil consumption; to cover an increasing share of energy needs from domestic production, or, as an instrument for achieving this objective, to reach a rapid development of the so-called alternative sources of energy. Also the endeavours aimed at a geographic diversification of oil imports and at reducing the share of OPEC oil proved to be successful. The most conspicuous result of the adjustment policy which has radically changed the market conditions was, however, the fall of oil imports as a result of the decline in specific oil consumption (which, to a minor extent, could also be attributed to the slowdown in economic growth).

The adjustment efforts in the East European countries followed other directions. Purchasing oil from the world market became more expensive and more uncertain for them, too. But they—with the exception of Romania—never imported significant volumes of oil from the world market in a broader sense of the word, nor did they from the Middle East. The conclusion they have drawn from the increase in oil prices was only that they would not do so even further on. The plans to import OPEC oil, formulated in the early or mid 1970s, were gradually revised.*

The reasons why these plans came into question at that time at all concern the basic dilemmas in the energy policies of the East European countries. These countries purchased the vast bulk of crude oil (and other imported raw materials) primarily from within the CMEA, mainly (as regards crude oil, exclusively) from the Soviet Union. By the early 1970s, however, it became known—and was officially declared on the Soviet side—that the possibilities for increasing Soviet oil exports to Eastern Europe are limited; and even if deliveries might grow up to the end of the decade, the rate of growth would be much lower than the extent to which the East European countries planned to increase their oil consumption. The recommendation given by the Soviet Union to the East European countries to purchase the part of their oil demanded and not covered by the Soviet deliveries from the Middle East was also related to this fact.

While the response to the rising oil prices in the economic policy of the West European countries was to review the forecasts and plans regarding the future development of their oil imports in order to reduce them, this was not characteristic of Eastern Europe. At least in their intraregional (intra-CMEA) relations, the countries of the region did not change their purchasing policy; on the contrary, they rather tried to reinforce it. Although the rise of oil prices and the deterioration of East European terms of trade going on even today started soon after the first OPEC price explosion even within the CMEA, no efforts were made to reduce or diversify imports but were aimed at increasing and concentrating them (i.e., at maintaining the earlier geographical structure), as far as it was possible. Thus, contrary to the oil imports of

*This revision was not at all easy nor unambiguous. Hungary and Czechoslovakia signed a contract with Yugoslavia on the building of the Adriatic oil-pipeline in 1974, i.e. already after the oil price explosion. The pipeline was completed by 1979. And Hungary renounced the use of the pipeline in 1983, when the oil market situation began to change.

Western Europe which decreased between 1973—1980 by 25 percent and have continued to decline in the 1980s, too, in Eastern Europe the oil imports coming from the Soviet Union grew by 40 percent after the oil price explosion up to 1980 and even the decrease in the volumes of later deliveries were not the results of East European efforts, but took place in spite of them.*

This does not mean as if the East European countries had forgotten the necessity of keeping the specific (and total) consumption of energy and, especially of oil within certain limits (or reducing them), or of increasing the domestic production of energy i.e. the same objectives which resulted in diminishing the unfavourable dependence on OPEC oil in Western Europe. On the contrary—though with a certain delay—, they also adopted these objectives and tried to develop the arsenal of economic policy instruments which might be useful in achieving them. By watching the press, studying the plans and statistical reports of the CMEA countries, it can clearly be seen that the rationalization of consumption and boosting the production of energy is a priority and one of the most important aims of economic policy in these countries. The endeavours at adjustment were, however, first of all linked to the impossibility of achieving the desired level of imports: purchases from the Soviet Union were delimited by the latter's capacity to deliver and purchases from the world market by the state of the balance of payments of Eastern European countries. And since they adjusted to the limited nature of imports, rather than to its cost, the primary goal of the domestic energy policy was to expand sources and avoid future shortage situations**.

Hence, in determining the alternative solutions to the energy problems, policies and measures were preferred which served before all the security of supply, while their efficiency was from the outset dubious: the forced, expensive development of the fuel producing sectors in some countries, often neglecting environment—among these the rather difficult exploitation of poor-quality brown coal—, the administrative regulation of energy consumption, prescription of compulsory savings standards, etc. In the meantime the restructuring activities taking into account the new price and demand relationships in the international economy were pushed to the background, what is more, in several aspects oil intensive development was continued. One of the examples of this was the further building out of the petrochemical industry.

*In 1982—84 (after the reduction in the Soviet oil deliveries), the volume of East European oil imports from the Soviet Union exceeded the level of 1973 by about 27 percent. The imports of natural gas which amounted to 4 billion cu.m in 1973 grew to almost eightfold by the early eighties, as a result of building up the Orenburg gas pipeline. This may be compared to the net oil imports of the countries of Western Europe which in 1982 amounted to 59 percent of that in 1973, while the total imports of primary energy were only 67 percent of the level reached before the oil price explosion. [5, 6, 7, 8]

The above comparison is justified because the exploitation of the North Sea oil after 1973 may rightly be considered as part of the adjustment process to the high oil prices. But even if we assume that it was only by chance that the exploitation of the North Sea oil concurred with the period following the price explosion and, therefore, it has to be omitted from the comparison, the picture is similar. In 1982, disregarding the United Kingdom and Norway, the net oil imports of the West European countries were 78 and energy imports 90 percent of the volumes in 1973.

**Later on, we will come back to some general reasons of this kind of adjustment.

**CMEA prices and world market prices:
a common explanation for the different responses**

How can the response to the rising oil prices of the East European countries—quite different from that of the Western world—be explained, whereas they also had to face troubles rather similar to those of Western Europe—i.e., growing import prices and deteriorating purchasing conditions?

It is apparently very easy to answer this question, since it is widely discussed in the literature that, owing to the particularities of the CMEA pricing mechanism, in the period of rocketing rise in world market prices it was much more advantageous for the East European countries to buy oil and other raw materials from the Soviet Union than from the world market.

As it is known, the so-called contract prices in intra-CMEA trade are determined on the basis of the world market prices of a previous period. Before 1975 the contract prices were fixed for five years on the basis of the world market prices of the preceding five-year period. From 1975 on, the system of sliding prices has been introduced in which prices are determined annually, always setting out from the world prices of the preceding five years. The aim of the new system was that the contract prices within the CMEA should follow the dynamic world market price rises more rapidly than in the case they were fixed in advance for five years. It is not the price system but the OPEC which is responsible for the fact that in the second half of the seventies and in the early eighties significant differences came about between the conditions of purchasing energy and raw materials from within the CMEA and from the world market—to the advantage of the former.

The period of the oil price explosion coincided with the rapidly growing indebtedness of the East European countries to the West. The task of putting a brake on the process of indebtedness, or to stop it, made it particularly justified that the East European countries should strive to purchase possibly everything that is available there from within the CMEA against rouble payment and only a lesser part should be bought from the world market where imports must be paid for in dollars, increasingly in want.

The relative advantages of purchasing oil (and raw materials) from within the CMEA are owing not only to the fact that the oil (raw material) prices within the CMEA are lower than those in the world market but also to the condition that deliveries within the CMEA can be compensated with products which could only be sold under much more unfavourable conditions in the Western market. Undoubtedly, if they had had to purchase fuels and raw materials at world market prices against dollar payment, and to sell the products, originally manufactured for exports within the CMEA, on Western markets, the East European countries would have faced much more severe economic difficulties than was actually the case.

These are indeed well known facts. In numerous analyses, for establishing whether and how the mutual advantages assert themselves in the trade within the CMEA (more precisely, between the East European countries and the Soviet Union)

the basis for comparison was the difference between the world market and the intra-CMEA prices.* Anyway, the foregoing only explain why imports from the Soviet Union were preferred in Eastern Europe to purchases from the world market. With a certain simplification one might say this was the reasonable businessman's behaviour. Every businessman knows that other conditions being equal, the cheapest one of the possible sources of supply must be chosen. This triviality, however, involves no suggestion as to *what quantity* should be purchased from this cheapest source. This is quite a different question, the answer to which depends on the conditions of the transaction and on the interests, aims and preferences of the partners involved.

Growing purchasing difficulties within the CMEA

Nevertheless, let us accept: it is not always easy in economic practice to distinguish between *more favourable* purchasing conditions (than those in the world market) and *favourable* ones (owing to the internal structure of relations): when the world market prices were sky-rocketing, to increase the purchases from the CMEA markets may have seemed advantageous relative to the former even under deteriorating conditions for quite a long time.** From the changes in world market prices between 1973—1981 many people have drawn the conclusion that the world market prices of oil and other raw materials may only grow even in the long run. It seemed, therefore, logical that the conditions of purchasing raw materials from within the CMEA, however they may deteriorate, will always be more favourable than those of the world market and this in itself was a justification to buy as much as possible in the CMEA-market. Besides, with the so-called consolidation credits granted by the Soviet Union up to the late seventies it was relatively easy to bridge over the problem created by the fact that the *prices* of imported oil and other raw materials were rising at such a rapid rate with which the growth of East European exports could not keep pace in terms of volume.

We must emphasize, however, that all these facts do not explain the essence of things. Namely, the deterioration in the conditions of purchasing oil and raw materials from within the CMEA was far too tangible, even if the results of the rising world market prices were only felt with some delay, owing to the sliding price basis. The gradualness might have entailed the advantage of leaving enough time for the economic policy adjustment needed because of the changing international environment. Practically, however, at least up to the end of 1978 no such adjustment was

*See first of all the book of *Marrese and Vaňous* [9] and the critical reactions to it [10, 11].

**Not to mention the fact that importing more primary energy from the Soviet Union seemed to be favourable with good reason in comparison to the extremely expensive and uneconomical development of the traditional domestic resources (first of all of brown coal). According to the estimations of the Soviet economist A. *Zubkov* [12] the higher share of solid fuels in the energy consumption in itself is responsible for about one-fourth to one-third of the much higher specific energy consumption of Eastern Europe than that in the Western European countries.

made. Thus, the main effect of the delay was that *the foreign economic difficulties of the East European countries reached the highest point both within and outside the CMEA at the same time, in the early 1980s*. Between 1980—1984, at the time when certain countries became insolvent towards the West and were forced to request a re-scheduling of their debts and also others could only maintain their solvency with great difficulty, and all of them were forced to reduce their imports from the West radically in order to make consolidation possible, the CMEA countries had to increase the volume of their exports to the Soviet Union by more than 30 percent; at the same time, the volume of their imports from there remained practically unchanged and only exceeded the level of 1979 by 2.3 percent in 1984. During these five years their terms of trade with the Soviet Union deteriorated by 23 percent (and by 46 percent between 1975 and 1984). In 1982—which was perhaps the most critical year in view of their payments to the West—they increased the volume of their exports to the Soviet Union by 14 percent, while imports therefrom diminished by 4 percent.*

The worsening purchasing conditions within the CMEA cannot be confined to the rising prices and the deteriorating terms of trade only. The aggravating conditions are shown even more by the fact that to increase the imports of several raw materials, what is more, to maintain the level already attained is often only possible for the East European countries if they participate in the investments of the Soviet Union by delivering machinery, consumer goods, materials, or by performing direct construction work. In the opinion of East European economists participation in investments as well as the deliveries aimed at stabilizing the imports of various raw materials make the purchasing conditions approach those of the world market. Modification of the traditional structure of deliveries to the Soviet Union from the East European countries, which had evolved according to the Soviet demand, became an officially stated condition of maintaining Soviet deliveries of energy and raw materials.** It is not the otherwise understandable demand for structural changes which causes difficulties, but rather its conditions. The range of the products demanded is often not in conformity with that of those commodities the production of which can be efficiently increased in the East European countries. The prices of these products do not always compensate for the rather significant efforts made by the East

*Computed on the basis of Soviet foreign-trade yearbooks [13]. Soviet statistics show the volume indices of total trade with the CMEA countries, including the East European countries *together with the non-European CMEA countries* (Cuba, Mongolia, Vietnam). The index of the terms of trade calculated by us also refers to the trade between the Soviet Union and all the other CMEA countries. For reasons, into the details of which we cannot enter here, we think that the trends indicated by the above data are also characteristic of the trade between the Soviet Union and Eastern Europe.

**Cf.: "In order to create such economic conditions which ensure the realization and continuation of deliveries of several kinds of raw materials and primary energy from the Soviet Union covering the import needs to the degree agreed upon through plan coordination and in long-range agreements, the member countries of the CMEA will gradually and consistently develop their product and export structure; they will take the necessary steps in the sphere of investments, in rationalizing and restructuring their industry for the sake of providing the products needed by the Soviet Union, among other things, food, industrial consumer's articles, certain structural materials, machines and equipment of excellent quality and corresponding to world standards." [14]

European countries for the sake of increasing their exports. The Soviet efforts to reduce, or even to eliminate the trade deficit with the East European countries are strengthening.

All in all, in order *to maintain* the volume of imports coming from the CMEA region the East European countries have to solve increasingly cumbersome tasks for increasing their exports. But a growing intra-regional specialization of the economy in exports—without a corresponding growth of imports—is in contradiction with the primary objective of East European economic policy, namely, the necessity of increasing exports to the West—partly because of the structure of this demand which is at variance with that of the world market, with the different levels of requirements, but first of all perhaps because of the particularities of the mechanism of CMEA cooperation.*

Survival of the conventional economic policy approach and strategy

The foregoing make it perhaps obvious why we think that the explanation of the East European energy policy based on the difference between CMEA prices and those of the world market is unsatisfactory. This policy of purchasing energy—which, in order to increase, or rather to maintain, the level of energy and raw material imports took upon itself the above presented strong and comprehensive deterioration in conditions and thereby itself also became one of the factors causing it—was only *partly* a reaction to the oil price explosion and to the differences between the purchasing conditions within the CMEA and in the world market. *Partly*—and very likely this is the major part—it can be explained by the fact that, despite the radical changes in the international (world economic and intra-CMEA) economic environment, no radical changes were made in their economic strategy, way of thinking, conception of planning, and, consequently, in their energy policy.

Let us refer to the already mentioned fact that it was not in 1973 that the endeavours of the East European countries for maximizing the energy and raw material imports from the Soviet Union started. Ever since the CMEA has been existing they have always made efforts to increase the imports of Soviet primary energy and raw materials. Even today, the starting point in planning economic development in Eastern Europe is the volume and composition of primary energy and raw materials that can be acquired from the Soviet Union.

It must be emphasized, however, that developing the trade in energy and raw materials within the CMEA was based not merely on the interests and endeavours of the importers. These endeavours have largely coincided with the possibilities and interests of the exporting country. It was not only because East European countries,

*Regarding the nature of the conflict, see [4, 11].

despite their more or less general scarcity in raw materials, pursued a highly energy- and material intensive development policy and their economies were characterized by waste of energy and materials, that the axis of the trade flows within the CMEA became the exchange of Soviet energy and raw materials against East European manufactures and—partially—foodstuffs. This also happened because the Soviet Union was rich in raw materials and was able to specialize in supplying raw materials—in addition to certain machinery and equipment serving for the purposes of some sectors of the heavy industry. Moreover, the East European endeavours at maximizing their energy and raw materials imports from the Soviet Union are inseparable from the politically motivated concept of CMEA cooperation that sometimes is summarized by the slogan of technical-economic independence and that regards the covering of the, mostly physically determined, needs of one another as far as possible from sources within the CMEA as the basic objective of economic cooperation. Regional self-sufficiency (on CMEA level) to avoid dependence on suppliers outside the CMEA is, according to this concept, particularly important in the case of such strategic articles as primary energy and raw materials.

Let us mention another problem too, which may also be helpful in explaining the East European behaviour maximizing the imports from the Soviet Union. Even a superficial observer may notice that in the CMEA countries primary energy and raw materials are treated as some kinds of extraordinary commodities,—to use the customary categorization of the intra-CMEA trade—as hard goods, which are always and everywhere in short supply. This shortage is a factor which most seriously endangers economic development, what is more, even the operation of the economy. Hence, no price is too high and no effort too strong for eliminating this shortage.

Anyone remembering only very slightly the panic which followed the Arab oil embargo in 1973, may think that oil was then treated in the same way in the West and the slogans clamouring for independence from OPEC oil were so dramatically formulated for this reason. But in the Western world this was just a single reaction to an actual event and there it soon became obvious that however important a commodity oil may be and however dominant place OPEC was able to ensure for itself in the oil market, in the wake of changing circumstances oil will behave like any other commodity. In the CMEA countries, however, raw materials are considered as special commodities, apart from time and space; the oil price explosion only brought about so much change that some analysts thought it possible to prove continuous and increasing hardness of these goods by referring to the trends in world economic development.

The substance of the matter is, however, quite different: namely, in the national economies of the CMEA-countries the shortage of energy and raw materials is indeed regularly and repeatedly produced. This is, of course, linked not to the particular character of these commodities but to the operating system of these economies. It is pointed out by a number of East European economists that in these economies, owing to causes inherent in the system, there is a continuous endeavour to press for more

investments, to speed up economic development, to increase the growth rate and this endeavour collides, ever and again, with the shortage of energy and materials (and of convertible currency).^{*} We are witnesses to the same phenomenon in 1985, too. It appears as if the shortages caused the unavoidable slowdown, whereas—on the contrary—the shortages are caused by the economic policy and the economic mechanism (*Csaba*, [15]). The energy-intensive economic structure also plays a role in approaching energy and other materials as hard, “shortage” goods. A particularly severely felt shortage can be created if some economic leadership does not revise the concept of economic development based on cheap oil supply even despite a rapid growth of energy prices (and an increasing uncertainty of supply)—e.g. a rapid development of the petrochemical industry took place in several East European countries precisely in the analysed period, very uneconomically and creating excess capacities.^{**}

Hardening purchasing conditions or energy situation growing milder?

We have mentioned in the introduction that, despite recent changes in the world market situation, some East European economists think that energy purchasing conditions within the CMEA will not improve for their countries even in the following years; they will rather become harder. This conclusion may be considered as a criticism of East European energy policy followed up to now which failed to reduce dependence on external sources, and, while the burdens of purchasing increased significantly, very little happened for the creation of a more rational, less wasteful energy consumption.

This conclusion takes into consideration the above mentioned particularities of trade within the CMEA, and, the non-price factors of the aggravating purchasing conditions, too. Namely, it can only be understood by setting out from these particularities that if the oil prices on the world market will decline in the coming years (most Hungarian researchers agree in that the most likely alternative in the development of oil prices is a further slight fall of world market prices), and, according to the prevailing price-setting formula, the prices within the CMEA must also decrease—why the energy trade within the CMEA should then continue to harden, why the purchasing conditions should become more difficult for the East European countries.

Finally, it also takes into account that, owing to the stagnating oil production of the Soviet Union (even a decline in 1984–85)—and that in spite of that, precisely because

^{*} See for instance *Bauer* [16].

^{**} We mention another—well known—reason for the special treatment of raw materials only in the form of a footnote, namely that, in contrast with the manufactured goods the selling of which in the world market is rather difficult for the CMEA countries, raw materials and primary energy are considered as such goods which can always be sold against convertible currency.

of the unfavourable world market price trends from the Soviet point of view, the increase or maintenance of the volumes of oil exports to the West remains a priority task for Soviet foreign economic policy—the chances of the traditional import maximizing policies of the smaller CMEA-countries are becoming worse.

But it also follows from the foregoing that the unchanged import maximizing energy policy of the purchasing countries can only add to the further aggravation of purchasing conditions. Only another type of policy may lead to the mitigation of the East European energy problem. This policy should be more open in its foreign economic orientation, and aimed at providing security of supply not by increasing imports and uneconomical production or by administrative restriction on domestic consumption, but above all by using economic instruments for decreasing the specific (per unit) consumption of energy. Such a policy seems possible in the expectable world economic environment.

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НЕКОТОРЫЕ ВОПРОСЫ ЭНЕРГЕТИЧЕСКОЙ ПОЛИТИКИ МАЛЫХ СТРАН-ЧЛЕНОВ СЭВ

A. КЕВЕШ

В то время, как на Западе все больше признаков говорит об определенном ослаблении энергетических проблем, о том, что условия на нефтяных рынках прочно изменились в пользу потребителей, энергоснабжение в малых странах СЭВ не улучшается. Такое положение связано с ответом экономической политики на повышение цен на нефть: с тем, что в отличие от политики западноевропейских стран, значительно сокративших — прежде всего за счет снижения удельного потребления энергии (нефти) — импорт нефти, в основном из стран ОПЕК, страны-члены СЭВ по прежнему стремились по мере возможности увеличить ввоз советской нефти (и других сырьевых материалов). Это стремление к максимизации импорта можно лишь отчасти объяснить тем, что за последнее десятилетие сложилась значительная разница между условиями поставок на мировом рынке и из СССР. Условия поставок внутри СЭВ (как соотношение индексов экспортных и импортных цен, так и не связанные с ценой условия) становятся все более строгими. Вторая часть объяснения состоит в том, что несмотря на радикальное изменение их международной экономической среды (мирохозяйственной и внутри СЭВ) в экономической стратегии этих стран, в их подходе к планированию — и вследствие этого и их энергетической политике — не произошло коренных изменений. Стремления малых стран СЭВ к максимизации импорта энергии и сырья были связаны с возможностями и интересами СССР как экспортера, а также с той концепцией сотрудничества в рамках СЭВ, которая считает основной задачей этого сотрудничества достижение как можно большей степени удовлетворения взаимных, в большинстве случаев выражаемых в натуральном измерении, потребностей из источников внутри СЭВ.

CHANGES IN THE STRUCTURE AND INTENSITY OF EAST-WEST TRADE*

A. NAGY

The first part of the article is a summary of the changes in the European socialist countries' (Yugoslavia excepted) strongly aggregated import and export trade patterns between 1960 and 1980, with special regard to the trade with the advanced industrial countries. The second part attempts to quantify the effects of trade policy on East-West trade relations during the same period. The third part applies the analytical method presented in the preceding parts to the Franco-Hungarian relations in the years 1975 and 1982.** The author stresses that the effect of political factors hindering East-West trade is very strong, the political estrangement of the 1980s and strengthening protectionist tendencies may stop or slow down earlier improvements in it.

Structural transformation in the trade of Eastern European countries

The structure of imports

The structural transformation of Soviet imports is shown in *Table 1* in which total trade (TW) was divided into two large groups: primary products (PRIM: SITC 0—4) and manufactures (MANUF: SITC 5—8). The socialist countries' (TS) share in Soviet imports fell from 72 to 46 percent in 20 years in which, of course, an important role was played by the slow-down of trade with China. (In 1960 19 percent of the imports still came from Asian countries, in 1980 only 2 percent.) As against this, the non-socialist world's share was steadily rising: that of developed countries (TD) went up from 19 to 39 percent, and of developing countries (TG) from 9 to 15 percent.

Within Soviet imports, the share of agricultural and primary products coming from socialist countries fell conspicuously: almost to one-third (from 58 to 21 percent), the decrease of this share in manufactures was only 24 percent. The non-socialist countries' share grew at a corresponding rate. One of the most important factors of the

* The present article is based on the paper presented at the Congress of French-speaking Economists held on May 27 through 29, 1985 in Budapest.

** The data base of the first two chapters relies on UN information of world trade flows by regions and groups of commodities (published annually in March and May in the *Monthly Bulletin of Statistics*, UN, New York), which is stored at the Computing Centre of the Hungarian Academy of Sciences. The indicators of trade intensity were calculated from these data. The indicators of French and Hungarian trade were computed from the dollar figures of the UN Trade Statistics.

Table 1
Distribution of imports by regions of origin

Exporting regions	Years	Importing regions					
		SU*			EE**		
		PRIM	MANUF	TW	PRIM	MANUF	TW
TS	1960	57.98	81.03	71.63	72.38	77.12	74.15
	1970	39.18	69.70	59.95	67.94	71.47	69.88
	1980	20.78	61.25	45.59	64.27	65.24	64.75
TD	1960	19.71	18.53	19.01	18.86	21.82	19.97
	1970	21.15	26.93	25.08	19.78	26.81	23.66
	1980	43.10	36.86	39.27	21.02	33.36	27.24
TG	1960	22.31	0.44	9.36	8.75	1.06	5.88
	1970	39.67	3.38	14.98	12.29	1.73	6.46
	1980	36.12	1.90	15.14	14.72	1.40	8.01

* SU = Soviet Union

** EE = Eastern Europe without the Soviet Union

changes was that which took place in the structure of food imports: as a consequence, in the 1960s the developing countries' share grew in the imports of primary products (from 22 to 40 percent), and in the next decade the developed industrial countries' share more than doubled (from 21 to 43 percent), while that of the socialist and of the developing countries was decreasing.

In the Soviet imports of manufactures the share of socialist countries fell from four- to three-fifths, while that of advanced industrial countries almost doubled (from 19 to 37 percent). The imports of manufactures from the developing countries remained at a very low level. It is striking, that while in the 1960s they rose from 0.4 to 3.4 percent, in the next decade they fell to 1.9 percent, i.e. almost by a half. It is worth contrasting to it that, within the manufactures imported by developed countries, the share of developing countries was 19 percent in 1980, i.e. tenfold of the above-mentioned figure.

In the imports of Eastern-European countries the change observed in Soviet imports also took place, yet to a smaller extent: the share of socialist countries fell from 74 to 65 percent in twenty years (within it, imports from the Soviet Union only slightly: from 41 to 39 percent), while that of the developed industrial countries rose from 20 to 27 percent. The change was comparatively more intensive in manufactures, in which the share of developed industrial countries increased from 22 to above 33 percent. Where this change is the most intensive is, however, not with machines: on the contrary, there it is the slightest (the share of developed countries grew from 21 to 24 percent). With chemical products the change meant a rise from 36 to 64 percent in twenty years and with goods of the light industry from 18 to 39 percent. The share of developing countries in the imports of manufactures is very low there, too; however,

neither the increase of the 1960s, nor the decrease of the 1970s were so strong as in the case of the Soviet Union.

It will be instructive to examine also the composition by main groups of commodities of the imports of the Soviet Union and of the other European socialist countries, as well as its changes (*Table 2*). The Soviet Union buys much more manufactures, and at an increasing rate, from the socialist countries than from the developed industrial countries (82 percent in 1980, as against 58 percent). Behind this fact lie the high food imports, the greater part of which came from the developing countries in 1970, and later the share of the imports from the developed countries grew fast.

Table 2
Distribution of imports by main groups of commodities (percent)

Exporting regions	Years	Importing regions			
		SU		EE	
		PRIM	MANUF	PRIM	MANUF
TS	1960	23	67	61	39
	1970	21	79	44	56
	1980	18	82	49	51
TD	1960	42	58	59	41
	1970	27	73	37	63
	1980	42	58	38	62
SU	1960			70	30
	1970			57	43
	1980			67	33
EE	1960	25	75	42	58
	1970	19	81	25	75
	1980	16	84	20	80

Although the share of manufactures in Eastern European imports from the developed countries greatly increased (from 41 percent in 1960 to 62 percent by 1980), it remained far below the share in their mutual trade, which rose from 58 to 80 percent in twenty years. The latter increase was the result of the growing share of machinery trade (growing from 33 to 55 percent), since the share of the goods of the chemical and light industry remained invariably at 25 percent of their imports. To the 55 percent share of machinery imports of the Eastern European countries among themselves in 1980, it may be worth contrasting that in their North-American imports machinery only had a 13 percent share, in their West European imports it was 31 percent, and in their imports from Japan 41 percent.

The export pattern

Table 3 shows the distribution by major regions of the exports of the Soviet Union and of the other East European countries, featuring total trade and the two main groups of commodities, similarly to the table of imports.

The major structural transformation in Soviet imports also took place in exports: in twenty years, the Eastern European countries' share fell sharply, while that of the developed and developing countries was growing, though to a somewhat lesser extent than on the import side. The decrease in the share of the Eastern European countries is of a larger scale in Soviet raw material exports, than in that of manufactures. As against this, the share of manufactures was growing faster on the markets of the developing countries, than on those of developed countries. To this we may add that while in Soviet exports to the developed industrial countries manufactures only amounted to 14 percent in 1980, in the exports to Eastern Europe they reached 36 percent, and on the markets of the developing countries 58 percent.

Table 3
Distribution of exports by regions
(percent)

Importing regions	Years	Exporting regions					
		SU			EE		
		PRIM	MANUF	TW	PRIM	MANUF	TW
TS	1960	68.27	84.67	74.07	61.65	80.95	73.65
	1970	61.10	62.25	61.61	46.98	77.59	67.97
	1980	45.03	57.47	48.80	38.49	71.44	61.98
TD	1960	26.59	6.10	19.34	34.19	11.14	19.86
	1970	29.64	13.76	22.63	47.12	14.01	24.42
	1980	46.99	17.23	37.98	50.07	17.13	26.59
TG	1960	5.14	9.23	6.59	4.16	7.91	6.49
	1970	9.25	23.98	15.76	5.90	8.40	7.71
	1980	7.98	25.30	13.23	11.44	11.42	11.43

The largest item of Soviet exports to the advanced industrial countries are fuels. In 1980 they reached 71 percent, and in 1982 already 78 percent of total exports. Beside the growth of volumes, a significant role was played in this by the two oil price explosions. It is worth noting that in 1960 as well as in 1970, fuels only amounted to 28 percent of Soviet exports to the developed countries. Structural transformation in this field is further demonstrated by the fact that while in 1960 the bulk (69 percent) of all exported fuels was delivered to the Eastern European countries, in 1980 more than half (54 percent) was directed to the developed, 7 percent to the developing countries, and only 39 percent remained for the Eastern European countries.

The second largest group of goods in Soviet exports is made up of machinery: in 1980 it amounted to 2 percent of total exports. 61 percent of this, however, was bought by the Eastern European and 29 percent by the developing countries.

Structural change is of a much lesser scale in the Eastern European countries' exports than in the case of the Soviet Union: exports to the developed countries grew from 20 to 27 percent between 1960 and 1980, and not to 38 percent, as in Soviet exports. The difference is especially striking in view of the two major groups of goods: in agrarian and raw material exports the advanced countries' share rose from 34 to 50 percent, while in manufactures the same share grew from 11 to only 17 percent in twenty years and is not higher than in the case of the Soviet Union. It is another striking fact that while 25 percent of the Soviet exports of manufactures go to the developing world, this is only 11 percent in the case of Eastern European exports of manufactures.

On examining the primary products in a more detailed commodity breakdown, it can be observed that the developed countries' share in agricultural products did not grow in twenty years, but decreased in the commodity pattern of Eastern European exports: from 43 to 38 percent, while it grew from 24 to 71 percent in fuels. Their share in manufactures is very low (on average 17 percent in 1980) because, though it reaches 30 percent in chemical and light industry products, it is only 9 percent in machinery, while the latter has a much greater weight in total exports. The share of machinery exports to developed countries is not only very low but did not grow to any considerable extent, in twenty years, either: it was only 7 percent in 1960.

Table 4 shows the distribution of exports by major groups of commodities. The extent and growth of the share of manufactures in the Eastern European countries' trade among themselves and with the Soviet Union are conspicuous (see: the lower six rows of *Table 2*). The greater part of Eastern European exports still consists of agricultural goods and raw materials, though the share of manufactures shows a

Table 4
Distribution of exports by major groups of commodities
(percent)

Importing areas	Years	Exporting regions			
		SU		EE	
		PRIM	MANUF	PRIM	MANUF
TS	1960	60	40	32	68
	1970	55	45	22	78
	1980	64	36	18	82
TD	1960	89	11	65	35
	1970	73	27	61	39
	1980	86	14	54	46

rising tendency. As for the latter, the exports of chemical and light industry products grew faster than machinery exports.

The change in the commodity pattern of Soviet exports was strongly influenced by the oil price explosion since, as it has been mentioned, this commodity has an extremely large weight in the total exports. This is the reason why the growing tendency of the share of manufactures stopped after 1970 and the weight of raw materials has increased.

As it is to be seen in *Table 2*, the share of manufactures was rising extremely high (80–84 percent in 1980) in the trade of Eastern European countries among themselves and with the Soviet Union. Within it, the trade in machinery was dominating, rising in itself to 56–58 percent of the total exports to this area in 1980. This share is higher than, for example, in the Western European countries' exports to the developed countries, where manufactures had a 68 percent share in 1980, and machinery a 31 percent one.

Impacts of trade policies on East-West trade

The trade policy impacts in East-West trade, often motivated by political factors, can be approached by several methods. Within the limited framework of the present article, we shall analyse the question from a usually neglected aspect, that of trade intensities, this offering the advantage of rendering the trade policy impacts and their change over time measurable.

The indicators of trade intensity are used in examining the structure of trade flows between countries or regions, in an effort to find out in which way historical, political and cultural factors influence these flows, or their change over time. (1, 2, 3, 4, 5, 6, 7) In the course of calculating the indicator, the actual flow is compared to a fictitious, "normal" flow which would develop between the two countries if it were not influenced by the above-mentioned factors summarily called trade policy impacts. It is assumed that the share of this hypothetical "normal" flow in world trade would be equal to the share of the exporting region's exports in world trade multiplied by the importing region's share: $(x_{i.}/x_{..})(x_{.j}/x_{..})$. Where $x_{i.}$ denotes the total exports of region i , $x_{.j}$ the total imports of region j and $x_{..}$ total world trade.

Thus, the indicator of trade intensity is:

$$\delta_{ij} = \frac{x_{ij}/x_{..}}{(x_{i.}/x_{..})(x_{.j}/x_{..})} = \frac{x_{ij}x_{..}}{x_{i.}x_{.j}}$$

where x_{ij} denotes i country's exports to j country. (The indicator can of course, be similarly calculated for each commodity group.)

If trade policy factors (discrimination, integration, colonial past, cultural relations), geographical distance* or quality problems have no particular impact on

* Geographical distance is, of course, no trade policy factor, though it strongly influences the size of the intensity indicator. But it does not change in time; therefore, the change over time of intensity indicates changes that have occurred in the other factors.

the trade between two countries or regions, the indicator will take a value about one. If, however, such factors restrict trade, the value of delta will be less than one, and in the opposite case, higher than one. According to the indicators of intensity, a system of flows would be of "normal" size, if importing regions accord the same treatment to all exporting regions, i.e. they buy up the same share from the supply of each region.

In fact, the value of the coefficients often deviates from one, since importers give preference to the products of certain regions, and therefore buy less from other countries.* It is these deviations that enable measurement of the trade intensities which show, of course, the results of a wide range of effects. Yet they make it possible to define, how many times greater or smaller each bilateral trade flow is than what could be expected on the basis of the assumed "normal" case.

Table 5 shows trade intensity indicators for total trade and for the two major commodity groups in East-West trade.

In the 1960s the Soviet export intensity on the developed countries' markets was of a low level and did not change to any considerable extent, while in the next decade it rose remarkably. The change was mainly due to the oil price explosion and to the growth of fuel exports to Western Europe; a part was played in it, however, by the economic policy effect of the political *détente*. It is a remarkable fact that the export intensity of fuels (SITC 3) supplied to Western Europe rose from 0.66 in 1960 to only 0.70 by 1970, but reached 1.10 in 1975 and 1.24 in 1980. Accordingly, the fuel import intensity of Western Europe decreased in relation to North America, Africa, Latin America and even to the Middle East. The higher intensity of the Soviet total trade was primarily due to fuel and other raw material exports. This is, of course, also related to the fact that 86 percent of exports to the developed economies consisted of primary products in 1980.

The intensity of Soviet imports from the developed industrial countries grew considerably too, primarily in corn and raw materials, but also in manufactures. In the case of the Soviet Union, two fundamental factors played a role in the rising trade intensity: first, political *détente* gave an impetus to import intensity already in the 1960s, second, the improving terms of trade, primarily because of rising oil prices, enabled quite a considerable growth of imports as well as a redirection of a great part of trade towards the developed industrial countries.

The Eastern European countries' trade intensity indicators with the developed countries were growing at a more even, while also at a much lower rate than those of the Soviet Union: from 0.30 in 1960 to 0.39–0.43 in 1980. Their trade intensity with Western Europe has, of course, always been higher, owing not only to geographical proximity and stronger cultural and information ties, but also to political factors. However, improvement was slight in the period under investigation: indicators rose from 0.41–0.44 in 1960 to 0.54–0.55 by 1980. In other words, the policy factors

* One advantageous property of these indicators is that their weighted average gives one for exports as well as for imports.

Table 5
Trade intensity indicators
Total trade

Exporting region	Importing region	1960	1965	1970	1975	1980	1982
SU	TD	0.28	0.29	0.31	0.44	0.54	0.53
SU	WE	0.39	0.38	0.39	0.59	0.77	0.80
TD	SU	0.27	0.29	0.34	0.56	0.60	0.61
WE	SU	0.38	0.33	0.43	0.61	0.67	0.65
EE	TD	0.31	0.32	0.34	0.37	0.39	0.39
EE	WE	0.44	0.44	0.49	0.52	0.54	0.57
TD	EE	0.30	0.32	0.33	0.46	0.43	0.31
WE	EE	0.41	0.46	0.48	0.64	0.55	0.43
<i>Agricultural goods and raw materials*</i>							
SU	TD	0.36	0.37	0.39	0.54	0.64	
SU	WE	0.49	0.46	0.46	0.76	0.96	
TD	SU	0.36	0.41	0.36	0.79	0.96	
WE	SU	0.53	0.37	0.43	0.74	0.88	
EE	TD	0.48	0.53	0.63	0.65	0.70	
EE	WE	0.69	0.74	0.89	0.96	1.06	
TD	EE	0.36	0.36	0.36	0.50	0.50	
WE	EE	0.51	0.54	0.51	0.67	0.55	
<i>Manufactures**</i>							
SU	TD	0.10	0.15	0.19	0.21	0.26	
SU	WE	0.13	0.21	0.28	0.29	0.34	
TD	SU	0.21	0.23	0.31	0.44	0.44	
WE	SU	0.30	0.29	0.40	0.53	0.56	
EE	TD	0.19	0.19	0.21	0.25	0.26	
EE	WE	0.27	0.26	0.29	0.34	0.34	
TD	EE	0.26	0.30	0.32	0.43	0.41	
WE	EE	0.39	0.44	0.47	0.61	0.57	

* SITC: 0-4

** SITC: 5-8

hampering trade still keep it at half of its "normal" level, even though a rise of about 10 percent took place in this field in twenty years.

The changes in the intensity indicators show strikingly that it is in agricultural products and raw materials where the Eastern European countries' export results showed a considerable improvement; the relevant indicators rose almost to the "normal" intensity level by 1980 (the transport costs of overseas trade keep these transport-intensive products below the "normal" level of intensity). The intensities of manufacture exports to the developed countries stayed at a rather low level, in spite of a considerable rise: from 0.19 of 1960 they rose to 0.26 by 1980. The protectionist and discriminatory trade policy measures of the developed countries obviously played a

role in this, but the poor quality of certain manufactured goods of the socialist countries, the low flexibility of their production and the backwardness of their marketing methods may have played an even greater one. It cannot be read from the intensity indicators, to what extent these two factors impeded trade, or what contributed more to the increase of intensity: reduced discrimination or improved quality. As much can be read from them, however, that there still are important tasks to be solved and to what extent both trade restricting factors can be reduced.

As for the trade in manufactures with the developed countries, it is not only export intensity that is low, but also import intensity, though the latter was not only of a higher level, but was rising at a higher rate, too. In spite of the improvement, the developed countries sold almost 60 percent less manufactured goods to Eastern Europe in 1980, than they would have sold without the trade political barriers; the value of exports thus missed can be estimated at \$33,6 thousand million.* To assume a trade of "normal" intensity in manufactures with the developed countries should not be considered over-optimistic since the average intensity of the developing countries rose on these markets to 0.93 already in 1980, what is more, it reached 2.51 in Japanese imports and 1.85 in North American imports.

Table 6
Intensity indicators of trade in manufactures in 1980

Exporting region	Importing region	Chemical products (SITC 5)	Light industry products (SITC 6 + 8 - 67 - 68)	Machinery (SITC 7)
EE	TD	0.48	0.42	0.15
EE	WE	0.58	0.49	0.20
TD	EE	0.74	0.52	0.29
WE	EE	0.98	0.66	0.43

Remarkable differences can be found, however, in the intensity of East-West trade in manufactures, if the different groups of products are taken separately into account (see *Table 6*). Trade is most intensive, in both directions, in chemical products, followed by light industrial products, and the intensity of trade in machinery is strikingly low. The machinery export intensity of the Eastern European countries only attains a half or a third of the export intensity of chemical or light industrial products. It would be hard to separate the trade restricting effects of discrimination and of the

* This value can probably be only accepted as a lower limit of estimation since assuming an unchanged total trade volume, it only takes into account the effect of a market redistribution. The elimination of the trade barriers could, however, exert quite a considerable impact on the growth of total trade.

quality factors, we are hardly wrong, however, in assuming that the latter are the primary cause of those differences. It is surprising how much the Eastern European machine import intensity lags behind the intensity of other manufactures (that of chemical articles already rose to a "normal" level by 1980), as well as behind that of the agrarian products and of raw materials. The average intensity of the developed countries' exports of machinery is much reduced towards Eastern Europe by the two large machinery exporting regions: North America and Japan (0.07 and 0.09 in 1980). The export indicator of Western Europe is also low (0.43), the lowest of all the groups of products. One can hardly allege that this, too, resulted from poor quality. The American machinery exports were certainly quite strongly restrained by the various and lately tightened discriminatory and embargo measures, though these had little affected West European exports up to the 1980s (this is one reason why the two indicators are so widely different). The other reason is the socialist countries' highly intensive machinery trade among themselves, i.e. from their preference for trading with each other. For example, it is a characteristic fact that in 1980 the machinery trade intensity indicator of the Eastern European countries with the Soviet Union was above 10 in both directions, and the intensity of machinery trade among themselves was 6.6. This means that among themselves they trade 6,6 half times and with the Soviet Union 10 times as much machinery as corresponds to the "normal" case.

Changes in the intensity of Franco-Hungarian trade

If the effect of trade policies is examined for large regions and major groups of commodities, as it has been done, a lot of contrary effects are levelled out through aggregation, details get blurred, and measurement shows less conspicuous effects than if more detailed examinations were carried out. Let us therefore examine, in this chapter as an example, the influence on Franco-Hungarian trade exerted by the many kinds of factors summarily called in the foregoing trade policy effects.

Table 7 shows the trade intensity indicators between the two countries* in 1975 and 1982 according to the one-digit SITC commodity groups. Trade intensity between France and Hungary is very low: trade between the two countries only attained 25–32 percent of the value of "normal" flows in 1975, though the intensity shows a rising tendency: in 1982 the indicators reached 31–44 percent. Comparing this with the figures of *Table 6*, the intensity of Franco-Hungarian trade was far below the average of trade between Eastern and Western Europe (0.55 in 1980). The intensity of French exports to Hungary is remarkably, i.e. by 30–40 percent higher than that of the flow in the opposite direction, suggesting that trade policy obstacles to French exports are

*In this *Table* and in the following ones, countries are denoted by their initials as used on cars.

Table 7
Franco-Hungarian trade intensity indicators by commodity groups

Exporting country	Importing country	Commodity group (SITC classification)	1975	1984	Percentage weight of the group in total trade in 1982
F	H	total trade	0.32	0.44	100.0
H	F	(0-9)	0.25	0.31	100.0
F	H	agricultural	0.32	0.18	4.2
H	F	goods (0 + 1)	0.55	0.41	28.1
F	H	raw materials	0.35	0.38	3.9
H	F	(2 + 4)	0.34	0.62	9.7
F	H	chemical products	0.62	0.63	33.3
H	F	(5)	0.24	0.27	10.2
F	H	light industry	0.24	0.33	20.8
H	F	articles (6 + 8)	0.14	0.38	29.5
F	H	machinery	0.26	0.45	36.7
H	F	(7)	0.02	0.06	5.1

Note: trade in fuels (SITC 3) was insignificant.

Source of data: Commodity Trade Statistics, UN, New York, 1975 and 1982.

slighter on the Hungarian market than those Hungarian exports must struggle with on the French market. It may well be, of course, that the difference is not in the obstacles, but in the push the exporters exert, i.e. in the method and success of their marketing efforts, in other words, in that the French export "push" is stronger than that of the Hungarian one.

Also the percentage weight in 1982 of each group of products is shown for information in the last column of *Table 7*. This shows that 91 percent of French exports consist of manufactures, in the intensity of which there are considerable differences. The chemical products, making up one third of French exports, are of the highest export intensity (above 0.60), showing no change during the period under examination. The export intensity of French machines and light industry products was much lower (0.25) in 1975, while it showed remarkable improvement in the ensuing seven years: it rose to 0.45 with machines and to 0.33 with products of the light industry. The weight of materials is negligible, yet it is striking that the intensity of agrarian products sank from the average level much below it (to 0.18) by 1982.

The composition of Hungarian exports to France is, of course, much different from that of trade in the opposite direction: the share of primary products amounts to 38 percent. Agrarian products and raw materials showed constantly a much higher export intensity than manufactures while the intensity of agrarian products decreased between 1972 and 1982, that of raw materials increased and reached a relatively high level (0.62). Among manufactures, the export intensity of chemical products stayed

almost unchanged at a low level, while the intensity of light industrial exports rose from a very low level to well above the average.

The extremely low level of the intensity of Hungarian machinery exports to France deserves special attention: in 1975 total Hungarian exports amounted to 25 percent of the value of the "normal" flow, while the machinery exports only reached 2 percent of what could be expected without the restricting effect of trade policy factors. In other words, the trade hindering effect was ten times stronger in the case of machinery, than in the average of Hungarian exports. Though by 1982 the intensity indicator had grown to threefold (0.06), Hungarian machinery exports still were five times as strongly restrained on the French market, than the average of Hungarian exports, and seven times stronger than French machinery exports to Hungary (0.45). It is, however, not only relative to the other items of Hungarian exports that the intensity of Hungarian machinery exports is extremely low, but also in comparison with the Eastern European countries' machinery exports to Western Europe, as it can be seen in *Table 6* (0.20 in 1980).

For properly evaluating the intensity of Franco-Hungarian trade, it is worth examining both countries' trade relations with their other partners. This is shown in *Tables 8* and *9*. In comparing the intensity of Franco-Hungarian trade with the intensity of French trade with other socialist countries, it turns out that in 1975 the intensity of trade with Hungary was higher than that with Czechoslovakia, while it was far below that with Romania and the Soviet Union. By 1982 the situation had changed: the intensity of French exports on the Hungarian market considerably increased, while it lowered on the Romanian and Soviet markets so that the intensity of trade with Hungary grew higher. As for French imports, the situation was different: Romania could maintain its relatively high export intensity, and the Soviet Union even increased it on the French market. Thus the Hungarian export intensity stayed below that of the above-mentioned two countries, while it surpassed that of Czechoslovak exports, which even decreased in the period under examination.

France's trade intensity with the FRG is comparatively high, and shows a rising tendency with Great Britain—a natural consequence of the preferential Common Market relations. The intensity of Hungaro-FRG and Hungaro-Italian trade is much higher than that of Franco-Hungarian trade. It is remarkable that the intensity of the West German exports surpassed the "normal" level on the Hungarian market in 1982 (1.16). On the other hand, the intensity of British-Hungarian trade lags far behind that of Franco-Hungarian trade, especially in regard of Hungarian exports. In all this, of course, geographical distance as well as historical and cultural traditions play a role, but further also the fact that the FRG and Italy have no such "protected" markets as France has in its former and actual colonies. This is seen in the case of the selected three African countries: the intensity indicators of French trade with Algeria, Morocco and Tunisia are extremely high (between 2.6 and 6.08), i.e. a multiple of what could be expected under "normal" conditions, and the intensity of these flows show no

Table 8
French trade intensity indicators with selected countries

Exporting country	Importing country	Intensity indicators	
		1975	1982
F	CS	0.28	0.14
CS	F	0.17	0.12
F	RO	0.56	0.31
RO	F	0.53	0.52
F	SU	0.52	0.40
SU	F	0.38	0.52
F	D	1.95	1.74
D	F	1.84	1.75
F	GB	1.07	1.33
GB	F	0.96	1.15
F	DZ	5.35	3.94
DZ	F	2.60	4.33
F	MA	5.28	5.16
MA	F	4.18	4.67
F	TN	6.08	5.85
TN	F	2.93	3.14

Note: DZ indicates Algeria, MA Morocco and TN Tunisia.

Source of data: Commodity Trade Statistics, UN, New York, 1975 and 1982. Yearbook of International Trade Statistics, UN New York, 1975 and 1982.

Table 9
Hungarian trade intensity indicators with selected countries

Exporting country	Importing country	Intensity indicators	
		1975	1982
H	CS	7.54	6.62
CS	H	6.48	4.44
H	RO	4.00	2.93
RO	H	5.74	3.07
H	SU	9.17	7.92
SU	H	9.17	6.23
H	D	0.62	0.86
D	H	0.69	1.16
H	I	0.79	0.73
I	H	0.73	0.68
H	GB	0.16	0.17
GB	H	0.35	0.38
H	A	2.18	3.54
A	H	4.33	5.18

Source of data: see Table 8.

decreasing tendencies. It is thus natural that less French supply and demand is "left" for other countries, and it is no wonder that intensity indicators are lower there.

Hungary's trade intensity with the other socialist countries is extremely high, one might say, to a forced extent, though a decreasing tendency may also be observed.* The intensity of trade with the Soviet Union is particularly high, and that of trade with Romania is comparatively low, motivated by economic, and by noneconomic factors. It is worth calling attention to the singularly high intensity of Austro-Hungarian trade; in East-West economic relations there is hardly any other market with such intensity, and it is still rising. In 1982, for example, the intensity of Austro-Hungarian trade surpassed that of Hungaro-Romanian trade quite considerably, in both directions. This is, of course, not to be explained by geographical distance, since both countries are neighbours of Hungary.

This is a good example for that, beyond historical traditions, the Austrian neutrality and good-neighbourly policy can really give stimulus to the development of trade between two countries with different economic and social systems.

The extremely great differences in the trade intensities as presented above must give an idea of the significance of the curbing and stimulating effects of trade policy instruments in bilateral relations. They also make it clear, what opportunities might open up for the development of trade, if artificially created impediments were gradually eliminated. Hungary is obviously not a big market for France, and the French market is only one of the big markets towards which the growth of Hungarian exports may be directed. It nevertheless gives food for thought that if, apart from any trade stimulating effects, bilateral trade between the two countries had risen to the "normal" level in 1982, it would have allowed \$250 million more French, and \$380 million more Hungarian exports.

Summary and conclusions

Let us briefly sum up the main statements we made by relying on an examination of the changes in the structure and intensity of East-West trade.

1. In the twenty years between 1960 and 1980 the European socialist countries' trade turned "outwards" to a considerable extent: the share of the developed and developing countries nearly doubled in their trade.

2. The change was more conspicuous in the exports and imports of the Soviet Union, than in those of the other Eastern European countries. One of the reasons was that the Soviet Union earned a considerable additional income through the two sudden rises in oil prices, so that it could largely increase its corn and machinery imports from the advanced countries.

3. The East European countries were faced with grave difficulties in consequence of the worsening terms of trade and, since they were only slowly adapting themselves to the new conditions, and the reform movements aimed at increasing efficiency halted,

* For the "normalization" tendency of intensity indicators, its causes and the counteracting factors, see [6].

they opted for grave indebtedness—though with considerable differences by countries—rather than to reduce consumption. And, because this coincided with economic recession in the developed industrial countries, they could redirect mainly agrarian products and raw materials in their export structure, while their trade in manufactures and machinery was in most part transacted among themselves.

4. The examination of trade intensity demonstrates that political factors hampering East-West trade have a strong influence. The volume of trade is about half of what it could be without the artificial constraints. In the 1960s, trade intensity hardly changed, in the 1970s it grew at a higher rate, especially in the case of the Soviet Union and in the trade with Western Europe.

5. The socialist countries could increase the intensity of their exports mainly in primary products: the intensity of Soviet oil exports to the West European market rose above the “normal” level after 1975, and the other Eastern European countries could also raise their raw material exports to Western Europe to near the “normal” level. Among primary products it is only the agrarian products that are hit by trade policy restriction to any considerable extent.

6. The socialist countries’ export intensity in manufactures is very low on the developed countries’ markets. Our methods of analysis do not allow us to separate the role played in this by Western protectionism and discrimination from that played by the poor quality and backwardness of the products of the exporters, and by the deficiencies of their marketing methods. All these factors together are responsible for the fact that the exports of manufactured goods to the developed market economies only amount to a quarter of what could be sold without such hampering effects.

7. There also are trade policy obstacles to the exports of Western manufactures to the socialist markets. In this respect it is not quality, or marketing methods that hinder trade but, on the one hand, low revenues from Western exports, the lack of convertibility, and the demand constraint because of import restrictions on the part of the socialist countries—and, on the other hand, the open or concealed efforts at imposing embargo on advanced technologies, on the part of the Western countries.

8. Franco-Hungarian trade intensity stays far below the average trade intensity between Western and Eastern Europe. In the bilateral trade, the obstacles to French exports seem to be smaller than those that hinder Hungarian exports. The intensity of French machinery exports could increase at a high rate, while the intensity of Hungarian exports could show a considerable increase only in raw materials and light industrial products. The intensity of Hungarian machinery exports to France is extremely low, not only in comparison with other groups of products, but also relative to the average machinery exports of the Eastern European countries to Western Europe.

9. The intensity of Franco-Hungarian trade takes about a middle position in comparison with France’s trade intensity with the other socialist countries. The intensity of French exports has been growing, however, in recent years at a higher rate on the Hungarian market than in other socialist countries’ imports. The comparatively

low intensity of French trade with Eastern Europe is partly a consequence of a highly intensive trade transacted with the Common Market countries, and partly of the especially high intensity of trade with past and present French colonies.

10. Hungarian trade intensity with the other socialist countries, especially with the Soviet Union is "exaggeratedly" high, though a "normalization" tendency can be observed. Trade intensity with the FRG and Italy—traditional partners of Hungary—rose to nearly the "normal" level, and grew very high with neighbouring neutral Austria.

Summing up the conclusions of our analysis, we can say that, though a structural transformation of East-West trade started as a consequence of the "détente", barriers to trade decreased considerably, this could increase trade rather unevenly, making use of only a relatively small part of the opportunities and advantages. It is to be feared that in the 1980s renewed political estrangement, worsening credit conditions and rising protectionist tendencies might stop or slow down the trends towards improvement in East-West trade, and lengthen or even increase the losses arising from seclusion.

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ИЗМЕНЕНИЯ СТРУКТУРЫ И ИНТЕНСИВНОСТИ ТОРГОВЛИ ВОСТОК-ЗАПАД

А. НАДЬ

Статья написана на основе доклада, представленного на состоявшейся в Будапеште 27–29 мая 1985 г. конференции франкоязычных экономистов. В первой части состоящей из трех разделов статьи автор в свободной форме показывает изменение структуры импорта и экспорта европейских социалистических стран в период 1960–1980 гг., обращая особое внимание на оборот с развитыми

капиталистическими странами. Во втором разделе делается попытка количественной оценки эффектов торговой политики в торговых связях Восток-Запад за тот же период. В третьей части этот метод количественного анализа применяется к французско-венгерским связям в 1975 и 1982 гг. В итоге автор подчеркивает, что воздействие политических факторов, мешающих обороту между Востоком и Западом, весьма сильно. Он отмечает: есть основания опасаться, что в 80-е годы новое политическое похолодание, усиление протекционистских тенденций остановит или замедлит ранее улучшавшиеся тенденции торговли Восток-Запад.

REVIEWS

THE EXPLOITATION OF LICENCES AND ECONOMIC POLICY IN HUNGARY

J. NYERS—T. SZATMÁRI

The amount of money spent on foreign technical knowhow was dynamically growing in Hungary till the late seventies, an increasing number of companies availed themselves of the opportunity offered by purchasing licences. There was a growing interest in this promising form of international economic relations on the part of both the economic leadership and companies as well as technical experts. This was manifest in the growing frequency of licence purchases. Several studies have been made in Hungary in recent years about the trend of licence purchases, exploring the methods and experiences of developments carried out in different segments of the economy and the policy-making process concerning engineering and intellectual products. The findings of the different partial studies were summarized in a synthetic treatise [1] by the National Committee for Technological Development (OMFB) in which the role and results of the use of foreign licences in the Hungarian economy are reviewed. This paper, based on the said extensive studies, is intended to present the relationship between the turnover of licences and economic policy.

International experience

The flow of technology between countries became significant subsequent to the industrial revolution and especially in the second half of the 19th and at the beginning of the 20th centuries. Its forms showed increasing variety and colourfulness with the entering of industrial espionage on the stage included. International trade in licences in today's sense, however, could hardly be mentioned until the period between the two world wars and the purchasing of licences was rather only a sporadic phenomenon even in the 1920s and 1930s.

International trade in licences was surging in the early 1960s, and its growth rate did not abate in the past two decades. During the last 20 years the international turnover of licences expanded to about 18 fold, at an average rate of 15 percent per year. This growth rate is substantially higher than the rate of expansion of international trade in this same period.

The distribution of the international licence turnover by economic regions and countries practically did not change in the past three decades and the "points of condensation" formed at the early sixties still exist.

The main characteristic of the geographic distribution of licence turnover is that exports are extraordinarily concentrated. 90–95 percent of licence exports is transacted by seven or eight countries. The dominating role falls to the USA, with two-thirds of total exports. Its export is about ten times its import. The balances of two further countries show a surplus: Great Britain, though actually this is also due to the activity of affiliates of North American concerns, and Switzerland, a country which, owing to its tax system advantageous for licence sellers, is the centre of the European licence trade of several foreign countries, mostly the USA, being a sort of a “marshalling yard” for the marketing of licences of advanced countries. The balance of licences of the Netherlands is near to equilibrium and shows in some years a surplus, practically for similar reasons.

More than 80 percent of the licence turnover is transacted among the advanced industrial countries. The share of the socialist countries in licence imports is 4–6 percent and of the developing countries 8–10 percent. The turnover of licences between socialist countries, and their exports to advanced or developing countries are in the range of 1 percent, while between the developing countries such turnover practically does not exist.

In the last one and a half or two decades it has been another characteristic feature of the international trade in licences that the so-called internal, intra-concern licence turnover has become determinant. About four-fifths of US licence sales consist of sales through which the American companies transfer technical knowhow, usually against charges, to their affiliates or to other companies belonging to their respective spheres of interest.

The world's licence import is not as concentrated as its export, though it is apparent also here that the 9 or 10 most advanced countries share among themselves about 60 percent of the licences put into international circulation. Analysing the breakdown of licence turnover of the advanced industrial countries it is found that the sectoral distribution of their imports is usually somewhat less concentrated than that of their exports. Among these countries a kind of specialization has also developed, the spectrum of their offer is narrower than that of their demand, indicating where the “nodal points” of development, representing the top level, can be found in their economic structures.

The share of the socialist countries, possessing about 30–40 percent of the R&D potential of the world, is not in harmony with their economic potential and technical-scientific standards nor with their need for advanced technologies and the latest technical solutions either in the imports or in the exports of licences.

This is obviously owing to the fact that, because of the autarkic ideas that had dominated for a long time in the economic development concepts and, consequently, also in technological research and development, they joined in the international turnover of licences rather late and in a procrastinated manner. That is, the driving and coercive forces which produced a powerful interest of the advanced industrial

countries' companies in purchasing licences and in marketing the achievements of their own development, did not and still do not assert themselves sufficiently.

The development of licence turnover in Hungary

The role of using foreign licences is the most significant in the industrial sectors in Hungary. More than three-quarters of all licences are adopted in this sphere. Concerning the costs of purchasing licences, the share of the industry is in the range of 95 percent.

The proportion of foreign licence purchase costs in technological development inputs has increased at a relatively high rate in the last one and a half decades. Between 1969 and 1972, 4 to 6 percent of the total technological development expenditure was spent on purchasing licences; since 1973 this share amounted to 7 to 10 percent, with some fluctuation. The share of these inputs peaked in the late seventies, in 1979, followed by a gradual decrease till 1981, a rise again in 1982-83, and a slight decrease in 1984. In the last three years the share of spendings on licence charges has been between 7.3 to 8.7 percent and its amount was near 1030 million Forints in 1983.

Table 1
*Technological development inputs and purchasing costs
of foreign licences in industry*

Year	Technological development fund spent (million Ft)	Sum spent from this on purchasing licences	
		million Ft	in percentage of the technological development fund
1970	3,334.3	129.6	3.9
1971	3,816.6	220.1	5.8
1972	4,122.5	253.0	6.2
1973	4,487.9	417.9	9.3
1974	4,859.1	428.1	8.8
1975	5,299.1	398.6	7.5
1976	6,272.7	564.3	9.0
1977	7,125.8	611.0	8.6
1978	8,163.1	732.4	9.0
1979	8,663.1	862.1	10.0
1980	8,850.1	755.0	8.5
1981	10,200.5	641.0	6.3
1982	11,124.3	919.6	8.3
1983	11,834.6	1029.3	8.7
1984	12,456.6	913.3	7.3

Source: Balance-sheet data of the Ministry of Finance, Department of Control.

Licence turnover in Hungary was in 1980 5.9 times the 1970 licence import and 8.5 times the licence export, so its growth rate was much higher in the seventies, than the average growth rate of the international licence turnover.

The intensity of licence turnover is most frequently measured by the share of licence inputs represented in R&D costs, or by its share relative to GDP or to the foreign trade turnover. Comparing such data of Hungary with those of a few advanced industrial countries it seems that, despite the fast development, Hungary's lag is still considerable. In the case of countries similar to ours, from the point of view of population and other conditions, the values of these indicators are multiples of the values for Hungary. The Hungarian licence import is small, especially if compared to the high R&D inputs. It is questionable, however, how much the amount of R&D inputs is internationally comparable owing to differences in the interpretation of turnover and in computational methods. The share of Hungarian licence purchases relative to the GDP which may be compared with a higher degree of methodological safety, is much more favourable by international comparison and the lag is substantially smaller than if estimated on the basis of the former indicator.

The licence purchases of Hungarian companies are dominated by imports from non-rouble areas, the share of the advanced industrial countries ranging between 81 to 96 percent. According to the number of licences bought, the share of the advanced industrial countries was smaller relative to the breakdown of inputs and represented 56–82 percent per annum. Two-thirds of the technical knowhow originating from the non-rouble area were bought from 6 Western countries, and the Federal Republic of Germany has the biggest share in the Hungarian licence imports.

The licences originating from the socialist countries represent a smaller share from the points of view of both value and number. From the CMEA countries, the most important licence partners of the Hungarian industrial companies are mainly enterprises of the German Democratic Republic and the Soviet Union.

The licence purchases are sectorally rather concentrated. The majority of foreign technical knowledge, i.e., 60–85 percent is used by research-intensive and fast developing engineering and chemical companies. In these two sectors the spectrum of manufactured products is extremely broad, the technologies employed are intricate, and their development has been greatly promoted by the import of intellectual products. The purchases of metallurgy, the light and food industries amounted to a relatively small percentage of the total licence import.

In 1976, from the total licence costs of the industry, 68.2 percent emerged in the engineering industry. In the period between 1976–1981 the share of the chemical industry showed extremely dynamic growth and also the share of the light and food industries increased in the costs of licence purchases. Thus the outstanding share of the engineering industry decreased, while the share of the chemical, light and food industries increased. The licence purchase costs of the engineering industry were in 1982 higher than, and in 1983 still as high as, the extraordinarily high 1976 values of 68.5 percent, resp., 64.8 percent shares, and thus the weight of the chemical and food

Table 2
*Distribution of costs spent on buying licences**

Branch of in industry	In the year					
	1976	1979	1980	1981	1982	1983
Metallurgy	10.6	3.7	9.9	7.4	5.2	3.0
Engineering industry	68.2	59.0	59.0	42.6	68.5	64.8
Building materials industry	7.1	2.8	2.7	1.3	0.5	0.4
Chemical industry	6.4	26.2	19.2	29.3	15.2	1.7
Light industry	3.0	3.8	2.7	11.0	6.1	16.0
Food industry	3.6	4.1	3.9	5.7	2.8	2.7
Other industries	1.1	0.4	2.6	2.7	1.7	1.4
Total industries	100.0	100.0	100.0	100.0	100.0	100.0

* On the basis of the single and continuous costs of licences purchased in the given year and in previous years.

industries diminished within the total. In 1983 the licence purchases of light industrial companies showed a striking increase, their inputs amounted to 16 percent of the total of industrial licence fees.

The use of foreign licences and knowhow is still limited in the Hungarian industry, and restricted to relatively few companies or fields of production. In 1983, 14 percent of business units belonging to the industry employed foreign technical knowhow backed up with contracts. Between 1976 and 1979 the number of companies adopting licences increased nearly one and a half times. However, from 1979 to 1981 a decline followed in this respect, then in the last three years the sphere of companies using licences has increased again.

The number of licences used in production increased faster than the sphere of companies using licences: in 1976 the average number of licences per one company was 2.2, in 1983 3.0. With respect to the number of licences used the roles of the engineering industry and of the chemical industry also were dominating between 1976 and 1983. In the period examined the number of products manufactured under licences doubled, and the number of kinds of products increased from 340 kinds in 1976 to 780 till 1983. This growth exceeded the expansion of the number of licences used in production.

The price receipts from products manufactured on the basis of foreign technical knowhow were relatively modest, amounting in 1981 and 1982 to about 5 percent and in 1983 to 6 percent of total sales. In the approximately 60 billion forints of yearly price receipts the biggest share was attained by the chemical industry, with about 38 percent in the past three years, and not the engineering industry as in the previous years. In the chemical industry the sales price receipts from products manufactured under licence (henceforth: license products) grew to almost three-fold between 1976 and 1983, while in the engineering industry their level was practically stable.

In the socialist industry (state-owned firms and cooperatives) almost 97 percent

Table 3
Sales data of products manufactured under licence in the industry

Sector	Sales of products manufactured under licence					
	distribution			share in total sales		
	1976	1981	1983	1976	1981	1983
	(percent)					
Metallurgy	3.2	13.2	12.3	1.2	7.4	8.3
Engineering industry	63.0	33.5	35.0	8.9	7.2	9.2
Chemical industry	24.2	36.1	37.8	5.8	8.7	11.0
Light industry	3.5	8.9	8.2	0.8	3.1	3.8
Food industry	5.1	5.5	3.4	1.0	1.5	1.1
Other industrial sectors	1.0	2.8	3.3	0.5	0.9	1.1
Industry, total	100.0	100.0	100.0	3.7	4.9	5.9

of the price receipts from licence products came from those manufactured under licences purchased from Western countries and 3.5 percent were attributable to the use of technical knowhow originating from the socialist countries. (For a realistic evaluation of the data it has to be taken into account that most of the licences originating from the socialist countries are technological licences, consequently the range of the manufactured products is more difficult to define, furthermore, also that the use of technical knowhow obtained from the socialist countries is not shown in the licence statistics in every case.)

In the price receipts of licence products the share of export sales was high in the whole period under study, ranging between 36 and 37 percent, except for the slightly smaller rate of 31—33 percent in the years 1980—81. The high share of external sales resulted from the exportability of the relevant products of engineering companies. The share of export sales in the price receipts of these companies was in the range of 45 to 52 percent.

In the export sales markets of licence products a remarkable shift occurred in the second half of the seventies. While in the mid-seventies the dominating trend of export was sales on the rouble market (representing a share of 8.6 percent in 1977), from 1977 to 1981 the non-rouble export of licence products increased steadily and dynamically. This favourable trend somewhat halted in 1982, owing to growing difficulties in external markets, but in 1983 it went on and the share of non-rouble export was again 67.9 percent. In the years between 1977 and 1983, export accounted in convertible currencies tripled and the export for roubles of products manufactured with foreign technical knowhow decreased to about the half. In 1983 half or two thirds of the export of licence products consisted of non-rouble sales in nearly every sector analysed. (In the engineering industry this share was 57 percent, and in metallurgy and the light industry more than 90 percent.)

Table 4
Exportability of licence products

Sector	Share of exports in the price receipts from products manufactured under licence			Share of non-rouble exports in the export price receipts from products manufactured under licence		
	1977	1981	1983	1977	1981	1983
Metallurgy	9.2	13.6	18.1	81.4	96.5	92.3
Engineering industry	46.0	52.0	51.3	13.4	68.4	57.1
Chemical industry	28.7	29.6	36.8	22.8	65.2	73.1
Light industry	37.9	26.6	33.4	68.5	85.1	90.1
Food industry	0.3	5.5	2.7	0.0	66.3	51.9
Other industrial sectors	25.6	11.3	11.9	72.9	92.4	80.4
Industry in total	37.9	32.9	37.3	18.4	70.3	67.9

In the non-rouble exports of licence products turned out by the industry the share of deliveries to the Western licence sellers (product buy-back) is relatively high. In 1982 this amounted to 25.9 percent. The use of the marketing network of the partner is particularly significant in the food industry (for here 100 percent of the non-rouble export of licence products is delivered to the partner), in the light industry (48.5 percent) and in the engineering industry (33.9 percent).

The time required for the effective use of licences is in Hungary extremely long by international comparison, and this has an adverse influence upon the exportability of the manufactured products and also on the price that can be attained. In the 1970s there was no appreciable change in the time needed for the domestic introduction of licences.

The transfer of new technological knowhow in the form of licence cannot take place but at best in 2—5 years, another 3—4 years elapse between the selection of the licence and its actually utilization, thus increasing the time of closing up to 5—9 years even in the cases of the most advanced findings of foreign research. Under the conditions of accelerated technical progress such a delay can damage the profitability of licence-based, originally promising, developments badly. Slow implementation is also detrimental because the production time of licence products has become shorter as against the early seventies.

Correlations between the purchasing of licences and economic development

Like the majority of the socialist countries, Hungary was rather late in joining the international trade in technical-intellectual products because the flow of technical information and the development of licence relations emerged very slowly between the

CMEA countries. The most essential factor in this was that the so-called Sofia price principle, the free of charge transfer of scientific results and technical documentations, limited the interest of member countries in the exchange of research results.

Owing to the cold war atmosphere and the well-known political tensions, East-West commercial and economic relations began to develop one decade later, in the early sixties. The adaptation of licences originating from the advanced Western countries developed in a spontaneous manner, such transactions were sporadic, and with respect to content they meant the transfer of the technical documentation of some products and production processes. In the contemporary wording, these were so-called "pure licences", i.e., the foreign partner generally did not cooperate in providing the conditions of production. The adaptation of the purchased technical knowhow often failed, partly because buyers had not assessed realistically the absorptive capacities, and partly because the technical specifications alone did not provide sufficient information and financial-technical basis for organizing the industrial production. Moreover, in that period the legal backgrounds and means of the transfer of foreign licences were more or less unknown.

Licences originating from advanced Western countries were used in Hungary in a broader sphere as from the late sixties. The purchasing of foreign technical knowhow became significant in 1968—71 and its use was surging in 1970—72.

The more and more extensive deepening of the cooperation process among the CMEA countries greatly promoted the buying of licences. In the socialist countries the said period of time about coincided with the depletion of reserves of extensive economic development and the accentuation of efficiency requirements. For solving the problem substantial changes were required in the old foreign trading practice and this necessitated a wider participation of the different countries in the international division of labour. In that period the economic development strategy was formulated in Hungary on the basis of intra-CMEA cooperation. On the grounds of specialization agreements, grand central development programmes were drawn up which had powerful influence on the positions of the companies concerned, and even on entire industries.

The majority of products introduced in the framework of socialist cooperation were based on technical knowhow purchased from advanced western countries. Along with the expansion of East-West economic relations a spectacular technological development was launched through licence purchases in some sectors and products as against the previous technical standards of the Hungarian industry, and export capacity to the rouble market increased in the areas affected by the central development projects considerably.

At the same time the central development projects based on specialization and cooperation and supported by inter-state agreements provided the participating companies with the means necessary for achieving the objectives aimed at. Owing to the centralized nature of decision-making and provision of resources, joining the projects promised big volumes and safe marketing, and enterprise development

without running any risk. This was enhanced by the fact that in this period price stability was typical in cooperations established with the CMEA countries. Under the influence of the said conditions international relations served as solid supports of the concerned companies' medium and long-term development plans.

In addition to the considerable developments oriented towards socialist export, most Hungarian companies were decisively interested in the early seventies in satisfying the domestic demands. The "traditions" of the previous stage, the conserved monopoly positions, the strengthening responsibility for domestic supply and the lack of coercion toward competition and innovation did not inspire many companies to avail themselves of the benefit of foreign licences. Adaptations of licences took place mostly in cases when, owing to the obsolescence of products, profitability decreased or ceased and the business units were trying to improve their position by introducing new products.

In this period there were only a few instances of any significant sale in Western markets of licence products originating from abroad. This opportunity was actually only availed of by small and medium companies that were not affected by the specialization and cooperation agreements, or which did not have to accept responsibility for domestic supply of their own assortment of products, and which had the capacities whereby to exploit the prosperity in the western markets of the early seventies.

In the sphere of big companies the Western export of products manufactured as a result of domestic research work or under foreign licence was relatively insignificant. Owing to the profitability of socialist exports and domestic sales the companies were namely not interested, in spite of special incentives, in expanding the Western exports that involved more risk. Where export was still made, it was mainly for the purpose of balancing the convertible currencies spent.

The Western licence deals transacted between 1973 and 1975 were motivated on the Hungarian side mostly by import substitution. Purchases were shifted from basic commodity groups and technologies to the background industries of priority projects. In this field the direct outcome of the adaptation of licences was not so spectacular, the impact of developments showed mainly in an increased exportability of the end product or in a diminishing Western import content that was initially relatively high. The foreign relations assisting the development of preceding phases had been based mainly on enterprise initiatives, and in the case of the priority projects such developments were, as a rule, powerfully encouraged by the manufacturers of end products.

It has been another trend typical since 1973 and asserting itself even today, irrespective of the fluctuations in investments, that the companies propose to introduce such foreign licences as are suitable for helping the development of certain partial processes, elimination of production bottlenecks, improvement of the quality of units built in the end products. The licences and organizational knowhow affecting certain parts, measuring instruments and test equipment usually involved little investment

costs and represented an insignificant proportion in the price receipts of the business units. Such licence adaptations had in most cases a beneficial influence upon enterprise business; however, owing to their nature, they did not contribute much to the technological development of the adaptors or to the promotion of international competitiveness.

The development of the Hungarian economy in the second half of the 1970s may be considered as the initial stage of a correction of the development path. The readjustment process started in the middle of the decade with a powerful modification of the set of conditions. The explosive increase of raw material and energy prices as from 1973 affected the Hungarian economy adversely through losses in terms of trade and a worsening of foreign trade balance problems. From 1976 on the requirement of halting the unfavourable trends and enhancing Western export capacity has been cast a more and more important role.

The majority of companies carrying out development projects oriented towards socialist exports and selling most of their products at home were in the mid-seventies unprepared for a change in the directions and proportions of sales, for the correction of the path, and for business management under more and more rigorous competitive conditions. Influenced by the economic development objectives formulated already in the beginning of the 1970s, the Hungarian enterprises were, namely, interested in a powerful increase of the volume of output, in exploiting the economies of scale, connected with central development projects, and with specialized CMEA cooperations. However, the initial ample opportunities for expanding the volume of production conserved the technical standards of products and technologies in many fields. To exploit the economies of scale, the companies participating in CMEA cooperations were prompted to allocate their available investment funds primarily to provide conditions for production in big batches and this pushed the steady updating of products to the background. This impact was amplified because the recognition of higher technical standards in prices met with obstacles. Moreover, it frequently happened that the partner representing the weakest link from the point of view of up-to-dateness determined the technical standards of the products manufactured in common, and thereby also the endeavours at further developing the products were obstructed. Consequently, the products manufactured in the most significant cooperations were turned out in almost unchanged form during the long partnership.

Under the influence of the said factors the CMEA specializations and cooperations, of which many were built from the technical point of view on a Western licence, failed in several fields to guarantee a satisfactory acceleration of technological development and the achievement of the targeted dimensions of production.

Since 1976 substantial changes have taken place in the system of objectives and conditions of the allocation of central development funds. This may be illustrated by the fact that in the fifth five-year plan period (1976—80) nearly half of the investment credits—that play an important role among the central means of development—was directed toward increased production of commodities, exportable against convertible

currencies, while in the previous plan period only a fifth of the credits allocated to enterprise investments has been distributed on the basis of bids to expand Western exports.

The economic control agencies tried to achieve the boosting of commodities also competitive in the Western market and improvement of the external economic equilibrium through a development that was slower than in the previous five-year plan period yet was still dynamic and powerful. This dynamic expansion was served by the credit line created in 1976, the so-called 45 billion forint credit for increased production of commodities exportable against convertible currencies. In a considerable part of developments financed from this source, its use was coupled with the purchasing of Western licences.

In the engineering industry that benefited the most from the export credit, four-fifths of the companies belonging to the sector and raising investment credit between 1976 and 1978 also signed licence and cooperation contracts with Western companies for the sake of backing up their export developments from the technical and marketing points of view.

However, the expansion of manufacturing old traditional products or of updated versions of such products by manufacturing companies did not produce any export offensive in view of the postulates of a dynamic export expansion. As long as the primary motive for buying licences was to satisfy the domestic demands for quality and assortment and to establish capacities for the purpose of socialist exports, the adaptation of foreign technical know-how provided favourable conditions for achieving these objectives. However, the economical expansion of Western export on the basis of licences requires the provision of several other factors and a favourable turn in conditions, such as better sales conditions in external markets, investments carried out quickly and in a systemic approach, or in the case of licences applied on an existing production basis, prompt introduction of the products, flexible and dependable relations between manufacturing companies, proper organization inside the company, civilized work, and local further development of the foreign licences. In the second half of the 1970s the majority of companies using licences could not but partly, or often absolutely not, provide these conditions.

The December 1978 resolution of the Hungarian Socialist Workers' Party Central Committee put into the centre of economic activity the improving of the external economic equilibrium and, in that context, of the balance non-rouble trade, as well as the curbing of the growth of debts payable in convertible currencies. The resolution also determined the instruments to be used, namely, the curbing of domestic use, as well as a slow-rate increase of imports and a fast-rate increase of exports.

Since 1979 the said conditions have determined enterprise developments. The curbing of domestic use and the limited sales quotas in the rouble markets practically confined the ground the companies could gain in markets in principle to that attainable through the expansion of exports to the non-rouble area. However, an opportunity to increase Western exports could have only been exploited through accelerating the

innovation processes, therein by increasing foreign licence purchases, elimination of production bottlenecks having come about in the course of previous developments, and through flexible adjustment to market requirements. However, no progress was made in translating the results of research work into practice, on the contrary, the process of product updating and replacement slowed down even more in the economy. The robust decrease in the number of foreign licences purchased in the allocations for that purpose in the two years after 1979 contributed to the stagnation of the technical standards of products turned out by the Hungarian companies. In this period there were substantial changes in the external conditions of licence transactions. Under the impact economic recession and the deterioration in political tensions the export opportunities of licence products became more difficult in the non-rouble markets and the problems related to the buy-back of products (turned out under licence) the western partners became worse, constraining the scope of manoeuvring of the Hungarian companies with respect to purchasing licences.

As a result of the dwindling enterprise development funds, preference has been given in recent years mainly to purchasing licences for which the investment projects involved could be realized by measures in the company's own sphere of authority, that is, such as could be adapted to the existing machine park or implemented by some modest use of the company's own development fund. To this was added the endeavour of the business organizations to manufacture licence products "free" from productive imports in order to preserve national economic liquidity. The licence-based developments where a big volume of import for convertible currency is required for production are often suppressed and are hard to purchase.

Owing to the governmental expectations towards the expansion of the volume of exports, the companies try to enhance the increase of foreign exchange receipts in the short run. It is a subordinate aspect in their activities that the licences should favourably influence the general technological progress of the respective company also in the long run, and should contribute to concentrating their productive assets to the desirable degree. Naturally, the adapting of licences contributes, even in such circumstances, to the satisfaction of domestic demands and to reducing shortages. At the same time, however, the competitiveness of the Hungarian companies decreases in both external market regions and their lag behind the pioneering ones and the rivals increases.

The aggregate data on the introduction of licences show that the time required for the local adaptation of foreign technical knowhow is less advantageous than in capitalist countries on similar level of development. Several factors have led to the slow implementation of developments. The procrastination of decisions on approval and development is very frequently one of the reasons.

Among the powerful interventions of the state supervisory and fiscal authorities, especially harmful are the implications of those that give preference to the versions requiring the least inputs, as well as of those that insist by all means on exports for convertible currency and on the buy-back commitment of the seller of the licence. On

the enterprise level though it is possible to estimate the volume of input factors and of the external sales of licence products, efficiency still is often relegated to the background among the criteria of decision-making.

The practice that became established in the first half of the 1980s often makes it impossible to let the licence sellers compete and to let the business units select their most suitable and most advantageous licence seller. Profitability is thus almost inevitably marred and this results in the multiplication of pseudo-cooperations circumventing the import of licences and goods; and companies are driven towards simpler forms of cooperation (such as job work). Over and above this, judgement is extremely capricious, requirements are changing, and approvals are a matter of bargaining rather than of definite criteria. The "threshold value" of approving propositions to purchase a licence basically depends on the company's conformity with expectations formulated by the state administration, or power relations of companies, and so on.

Business policy reduced to the short term because of the need to preserve solvency has also marked the decision process of licence purchases. After 1979 adaptations of licences that produce quick returns with the smallest input (of foreign exchange) and result in immediate buy-back have been given preference. A priority of foreign trade considerations enforced in this manner is likely to do more and graver harms to technical progress than in other spheres of business.

The main tasks of the licence policy

The recession of the external market in the first half of the eighties has had unfavourable impact also from the point of view of the marketing opportunities of Hungarian manufacturing companies. The marketing of mediocre products has become more and more limited or entailed price sacrifices causing terms of trade losses. Under such circumstances the economical expansion of external sales requires considerable efforts from the Hungarian business units, to be achieved in the first place by introducing and spreading products with a higher intellectual labour content. The quick utilization and further development of technical knowhow purchased from abroad is an essential resource of improving the technical culture. Our reserves are significant in this field as well.

In the past years of this decade relatively few manufacturers could comply with the higher requirements. It is generally typical that no fundamental change took place in the incentive conditions of the Hungarian research base in this period.

Concerted development of several fields of economic control and management is necessary in the interest of changing the several-year-old unfavourable processes in buying and using licences, for increasing the performance of the business units and, in this context, for making better use of the opportunities offered by the purchasing of foreign technical knowhow. The problems cropping up in carrying out the licence

transactions cannot, namely, be solved by some concrete economic political decision (the central resolutions concerning promotion of the turnover of licences of this kind) or by the extension of special regulatory instruments affecting licence purchases (such as increasing the bonus fund on licence imports, or the introduction of profit tax facilities for research institutes.) This has been unambiguously proven by the practice of recent years.

Technological development is decisively an enterprise task, an activity subordinated to business policy and, indirectly, to market impacts. Its implementation and intensity are hinged upon the incentives and coercions of the companies. The task of the state is to determine the main lines of technical progress and to facilitate their implementation. The usually isolated single actions that directly affect the technological development of companies (such as centrally launched programs and special incentives) cannot but produce limited results when the entire functioning of the economy does not work in this same direction, they do not give sufficient impetus to the acceleration of technical progress.

In the course of the further development of the system of economic control and management it must be attained that the control authorities of the state should not interfere with given development actions (that is, for example, with individual decisions in the course of approving, licence purchases) but they should exercise indirect control through the general regulation of the terms of business management on the one hand, and limited number of interventions in the spontaneous processes of the market on the other hand. The modified role of the state's control authorities could be described as follows: instead of the presently prevailing function mostly consisting in approving and directing, their function should be dominated by assistance, preparation and supporting of the carrying out of enterprise aspirations.

The development opportunities of business units will increase as a result of broader technical and market information and with a higher degree of company freedom of decision. An opportunity will be offered for much more extensive comparison and confrontation of enterprise development objectives, and their respective versions regarding implementation, than at present, and in this framework up-to-date (e.g. computerized) methods of decision preparation and decision-taking, pondering many considerations, can be applied.

Endeavours must be made in the course of updating the system of control to simplify the chain of decisions on the adaptation of foreign licences, to render the decision criteria of different authorities more concerted in the process of allocating funds, and to make the procedure of the transaction more flexible. It must also be endeavoured to establish a system of decision-making where the purchasing of a licence remains in the technological and development category, i.e., it should form an alternative to domestic R&D, and should not be degraded into a mere foreign trading transaction merely because the licence is imported from abroad.

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A NEW PERIODICAL OF ECONOMICS: FORUM FOR PLANNING

Is the practice of planning in our days able to offer effective help to economic policy? The question is formulated by many people in the precarious world of our days and put by one of the studies in the new economic quarterly, *Forum for Planning*. By calling the new periodical into life, its founder, the *National Planning Office* demonstrates that it is aware of the weight of this question, and of the urgency of the task on the agenda, i.e. to renew planning on the levels of the national economy, the councils and the enterprises.

The periodical intends to promote this lengthy learning process of social dimension by providing a forum for the related theoretical and methodological scientific discussions, and an opportunity for the confrontation of views.

The first issue of the new periodical was also compiled in the spirit of such considerations, consciously taking the blame in each case for publishing concepts and opinions which are still in the state of maturing or which might be questionable.

The views and informations formulated in studies dealing with problems of the *true plan alternatives* and the so-called *growth-rate alternatives*, experience gained through the nationwide discussion of the draft medium-term plan, or the possibilities of planning energetics and the trends in the development of agriculture, are all directly linked to the daily tasks of planners in the various sectors of the national economy. The periodical, however,—as it seems at least from the first issue—intends to achieve much higher objectives, wishes to be built on broader foundations. An article in the column *Economy and society* for instance, written by László Antal, discusses the role of money and monetary policy in creating and preserving economic equilibrium and in dynamizing the economy; it points out, among other things, that to eliminate the factors restricting the regulatory role of money is a condition of the success of the attempt to dynamize the economy. Another study of the same column—the author being Iván Illés,—calls attention to some structural changes occurring in the last few years and which, though hidden behind an economic policy casting lime-light on equilibrium, will determine the scope of movement of the Hungarian economy even in the long run.*

* This paper will be published in English in the next issue of *Acta Oeconomica*. Ed. note

The subject of three papers published in the column "Workshop" of the periodical is the *centre of interests in enterprise management*. The authors, among them Sándor Kopátsy, unanimously challenge the opinion according to which a reconciliation of interests between society, enterprises and individuals can be solved, under the present circumstances, by *profit-orientation*. Experience and studies so far have proved precisely that the interests of the smaller or larger communities are decisively *short-term* ones. The situation could be changed by making them interested in wealth (in augmenting fixed capital) and the authors describe possible methodologies in order to create the necessary conditions.

In the column "Micro-world" of Forum for Planning senior economic experts of six industrial enterprises express their opinion on competitiveness of their company in foreign markets and on the profitability of their exports. A characteristic and instructive picture evolves from the answers, supporting the opinion that in the long run the solution of balance of trade problems can only be expected from well-considered, coordinated programs, based on strategic considerations, instead of earlier "fire-fighting" emergency measures.

Some of the main subjects of the column called "Panorama" dealing with issues of the world economy are: theoretical foundations of the economic reform evolving in China; lessons of the reformatory economic measures intertwined with a restrictive economic policy in Yugoslavia; and experience of stimulating technological development in the Soviet Union. In addition, several reviews on books and periodicals are published.

A. SZ.

NEWS ABOUT THE HUNGARIAN ECONOMIC SCIENCE

The 145th General Assembly of the Hungarian Academy of Sciences (6.5.1985–10.5.1985) has elected corresponding members Katalin Falus-Szikra and Mihály Simai ordinary members of the Academy. Róbert Hoch, doctor of economic sciences, Deputy Director of the Institute of Economics, has been elected corresponding member of the Academy. He has achieved considerable results in the research of national economic planning, price policy and living standard policy. Mihály Simai is chairman of the editorial board of this periodical while Róbert Hoch has been its member ever since its foundation.

Academician Iván Berend T., internationally renowned scholar of economic history has been elected new Chairman of the Academy. This election is a recognition of the increased role of social sciences, since ever since 1949 the chairman of the Academy had been elected from among the representatives of the natural or applied sciences, social sciences had always been represented by the vice chairman. At this General Assembly Academician József Újfalussy, musicologist, has been elected

deputy chairman to represent social and classical sciences. Academician József *Bognár* has been elected member of the Presidium.

László *Kapolyi*, Minister of Industry and András *Prékopa*, mathematical statistician have also been elected ordinary members of the Academy.

The General Assembly recommended the Council of Ministers to appoint present acting Secretary General István *Láng* Secretary General of the Hungarian Academy of Sciences for the next five years. A similar recommendation has been made in respect of Kálmán *Kulcsár* who will continue to be Deputy Secretary General for social sciences. The Council of Ministers have approved the recommendations.

The Department for Economics and Law of the Hungarian Academy of Sciences has elected the new Committee for Economics.

Chairman: Rezső *Nyers*

Vice-chairmen: Róbert *Hoch*, János *Hoós*, Antal *Mátyás*

Secretary: Tamás *Földi*

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The Economic Committee have reelected the Editorial Board of *Acta Oeconomica* in the following composition:

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Editor: Tamás *Földi*

Csaba *Csáki*, new member of the Editorial Board has been appointed the new Rector of the Karl Marx University of Economics, Budapest.

János *Kornai* has been appointed Professor of Economics at Harvard University. By a joint appointment he will share his time between Harvard University and the Institute of Economics, Budapest.

Béla *Csikós-Nagy*, member of the Hungarian Academy of Sciences, has been elected *doctor honoris causa* of Vienna University.

BOOK REVIEWS

VOSZKA, É.: *Érdek és kölcsönös függőség. Átszervezési tapasztalatok* (Interest and interdependence. Experience of reorganizations). Közgazdasági és Jogi Kiadó, Budapest 1984. 275 p.

While some events are recalled and quoted in Hungary all over again, other stories concerning the present or the future become victims of a collective forgetfulness. Éva Voszka selected one of that "sunken-into-oblivion" kind of events of the recent economic and industrial history for the subject of her treatise and study, namely, the industrial reorganization in the years 1962 to 1964. The number of state industrial companies was then reduced from 1286 to 863 and that of industrial cooperatives from 1089 to 882 in two years. The effects of rapid centralization are still felt after more than 20 years: the enlarged big companies established at that time in large numbers certainly do not make matters easy for those who wish to give impetus to market competition.

But why this collective forgetfulness, what is the reason why the book of Éva Voszka is the first systematic treatise on this extremely significant event?

The analysis relying on expert and broad-scale research based on archives, numerous interviews and a thorough mastery of the contemporary economic literature (limited to the industry supervised by the Ministry of Metallurgy and Engineering) shows that one of the reasons of forgetting was the failure of the operation.

Great expectations were attached to enterprise amalgamations decided on the highest level. Éva Voszka gives the following summary of the advantages the drafters were expecting (pp. 28—29): "The increased size of business organizations

will, firstly, bring technical-technological advantages because a big unit concentrates and implements investments, research work, product and production development more rationally, and the profitability of production will also be enhanced because costs can be reduced by the division of production lines, through elimination of parallel production, production in big batches, and a better utilization of fixed assets which accompanies the increase of enterprise size. On the other hand, the standard of management will be improved on the level of production units, this can be achieved through the concentration of administration, financial and commercial tasks."

However, the technical advantages did not show up after the reorganizations: "the process of production itself did not change appreciably, and the productive organization of factory units was not usually altered. Specialized workshops could be set up only in a few fields, rather in auxiliary or peripheral areas." (p. 77). The improvement of productivity measured by lower inputs and higher efficiency also failed to come about. Through reorganizations, "as against the objectives, the disadvantageous processes could not be halted and reversed, and conditions which could have resulted in any remarkable improvement of business efficiency were not provided either during the reorganization or in the following years till 1967". (p. 141) Nor did the role of the Ministry change much: "lobbying" remained one of its functions. After the reorganization, just like before it, "the Ministry of Metallurgy and Engineering openly stood up in the interest of certain companies also at higher forums and undertook a role in formulating decisions to suit them." (p. 220).

Failure, however, seems to be only part of the reason of forgetting. The analysis of Éva Voszka

focusing on the *interests* of the actors also shows that the painfulness of facing facts, the always unpleasant experience of even a temporary shattering of some beliefs and illusions was an explanatory factor of no less importance. To put it more accurately: the idea that there is actually no limit to intervene in the economy and that the transformation of an organization is only a matter of decision, is still common in Hungary, and not only among the actors of the reorganization still active but also among the new generation of bureaucrats. This belief in the actual "excessive power" of the centres of economic control (or that of company centres) was the source of the new wave of centralization in the seventies, just as it is now the source of splitting up some firms, or of the so-called "manual" guidance of relations between enterprises.

For those stricken (or blessed?) with this inclination to interfere—we know that they are not few—it is awkward to recall or to think about the story which Éva Voszka presents in thorough detail—not only because of the failure but also because *almost nothing* happened in a manner as the intervenors of the time had planned. Even the start was not in accordance with the notion of unlimited interference for even the actual date of beginning concentrations cannot be established. Enterprises had been amalgamated (tentatively or only out of routine) as early as in 1959–60, but the grand operation of amalgamations evolved in 1962–63. Neither the results after the tentative mergers nor the initial results of similar operations carried out at about that time in the other socialist countries were too promising. However, this was not the main reason for the slow setting up of the organization directing the mergers and of its most cautious initial activity.

It is an important discovery of Éva Voszka that here, the apparatus of the Ministry of Metallurgy and Engineering deployed a wait-and-see policy, a favourite weapon of asserting interests of lower strata in hierarchical organizations: "till 1962 it is not quite clear how much their function—their sphere of authority relative to other controlling authorities exercised mainly over the enterprises—changed. It was only ascertained after coordination through several years, and confirmed by the party and state decisions passed in 1962 in conclusion of these negotiations, that the Ministries

need not be afraid from changes that might be disadvantageous from their point of view. Then, and only then, they unambiguously took the side of the concept of reorganization and headed the process of implementation." (p.55)

In its recommendations the Ministry endeavoured to develop forms of control and supervisory power that were the most suitable for itself: "four of the Deputy Ministers will directly supervise the business organizations. Each leader can be in charge of 12 to 14 units in a depth required by the system of control. Therefore, in the field covered by the Ministry of Metallurgy and Engineering no more than 40 to 50 organizations subordinated to direct ministerial control may function." (p. 79).

While the Ministry of Metallurgy and Engineering reverted to stonewalling methods to impede the inclination to interfere on higher levels of economic control, the enterprises—as against the Ministry—hoped to neutralize the interferences that were disadvantageous from their point of view partly through *interpretation* of decisions, and partly through the *counter-actions* of other elements in the power system. Consequently, more and more authorities, e.g. regional party organizations and councils, participated in the interpretation of reorganization tasks, and thus more than once also in conveying the interests of companies belonging to them.

It was even more important that the Ministry interpreted the reorganization decision as one aimed first of all at the creation of "easy-to-control" big enterprises. On the other hand the already existing medium-level control organizations, the industrial directorates, were trying to save their power. On the other hand the companies felt the decisions stipulate the setting up of looser forms of control and especially of trusts. "From the intentions of industrial directorates and enterprises the endeavour to... safeguard unity and to prevent detachment were of the same direction. This ran counter to the idea of the Ministry to set up several specialized companies." (pp. 94–95).

The resistance and the "interpretation strategy" of enterprises and industrial authorities proved to be effective: a significant number of industrial directorates continued to carry on their activities also after the reorganization, while "the concepts of the Ministry were modified".

The branch Ministry did not give up its ideas

easily. Through quick and secret preparation—excluding those affected—and by carrying out the reorganization as a campaign it managed to break the resistance of many companies. On the other hand many production units originally planned to become specialized small companies were also merged in the big organizations. The reason was: “to prevent precedents: if a few small companies were allowed to survive, that could serve as a basis of reference also for others”. (p. 130).

Éva Voszka also points out that the resistance of lower levels had to be acknowledged and recognized not only by the sectoral Ministry. A similar power contest also took place between the new enterprise centres and the factory units. The managers of the new or enlarged enterprises—also not free from planning interference—tried to set up homogeneous organizations, “real big enterprises”, in which the production units would only be cast the role of implementation. On the other hand the factory units “emphasized their detachment and organizational integrity” and they “tried to prevent any powerful internal centralization of spheres of authority.” (p. 149). They sought and often found supporters for their concepts in the Ministry or in the area’s party organizations. Their reasoning was centered on the negative implications of excessive centralization. The latter “originated chiefly in the loss of direct relations with suppliers and buyers... as a rule, a centralized agency cannot have the necessary insight into the new big company nor is their actual professional knowledge sufficient for taking decision on matters of substance.” (p. 165).

The author calls attention here to a very effective element of the strategy of plants, namely formal acceptance, “which disguised not inactivity but confrontation.” (p. 167).

Resistance proved to be successful also on this level. After a while “managers of big enterprises usually did not insist on breaking up the organization of factory units. However, by doing so they actually relinquished the production-technical objective of the reorganization, the implementation of actual concentration, and they conserved the basis of resistance.” (p. 168).

It is one of the most important lessons of the book by Éva Voszka that the interests of the controlled ones must be reckoned with on the higher levels of any reorganization. The lower levels are capable of neutralizing the disadvantageous effects

of the interference by a variety of methods. It is not rare meanwhile that the influence of the supporters—in our case of the area’s party organizations—increases. Of course this does not imply that the story transmitted by Voszka suggests the zealous administrators to keep passive observance. Éva Voszka, as a reporting and analysing economist and historian, only notes the hazards of brutal interference. Nothing else but social movements can force the holders of power to use different methods of exercising power, e.g. self-control or a division of power guaranteed by democratic institutions.

M. LAKI

CSILLAG, I.—LENGYEL, L.: *Vállalkozás, állam, társadalom* (Enterprise, state, society). Közgazdasági és Jogi Kiadó, Budapest 1985. 252 p.

The book examines, from the aspect of enterprises, the behaviour of state and society in the treatment of enterprises, the nature of enterprises, the enterprising activity and the accompanying organizational framework. The authors do not examine all the changes taking place in the course of history, but try only to grasp the most important “model points”. In selecting them, two important considerations played a role. First, to investigate the most important periods of economic history, and second, to analyse forms of government and social systems of peripheral importance, yet interesting for Hungary because of their nature and apt for drawing some conclusions. It is the principal thought of the book that a functioning market is necessary for enterprises and that the system of enterprises is to a large extent determined by changes in the market mechanism, and by the interventions of state and social organizations. Therefore, the optimum form of enterprises is not independent of space and time: they cannot be grasped as an organizational construction independent of the historical medium.

The first chapter of the book discusses the early bourgeois development in England. It is highly instructive to study the process of England’s internal development even apart from historical considerations. It is, namely, to be stressed, in agreement with the authors, that the British efforts

to create an efficient economy promoted the spreading of enterprises and the clearing away of obstacles in the way of commodity production. It has to be admitted, too, that the market creating activity of British foreign policy—including the protection of domestic markets, as well as the acquisition of export market and commercial rights—was an important factor in speeding up development. The third supporting pillar of English development—the great power position and its perspectives—is demonstrated by the fact that it was the other bourgeois state (Holland) that had to suffer the most serious losses because of British foreign policy, while its remaining perspectives may be attributed to an almost unlimited support of British foreign policy conceptions.

The second part bears the title: "From factory to holding company (the dual nature of the capitalist enterprise)". In this part the organization of actual production and of value production in general is discussed. It derives from the dual nature of the capitalist enterprise that these functions can separate. Certain organizations grow into a hull of the process of value production, while others rather represent an intricate framework of production.

The organizational forms of the capital market are only slightly connected to the natural reality of the invested capital, and are rather embodiments of appropriation of the surplus value produced. The authors link the development of this dual character to the Kondratieff-cycles connected to the intensive methods of capital accumulation and to the most important technical results. As capital concentration progresses, different types of enterprise will be prevailing. It is to be noted, however, that none of the types is exclusive in any of the periods.

The new types of enterprise are the results of overcoming the difficulties in the way of capital accumulation, and there is a group among the new organizations breaking away from the natural forms of capital investment to an increasing extent and becoming the embodiment of the process of capital self-realization.

As frameworks of the process of production, organizations reduce the amount of labour necessary for making a certain product by using an increasing amount of fixed capital. Since, however, the existing technical-technological optimum sets a limit to direct capital concentration in production,

and the given market organization is unable to absorb the huge masses of products, organizational innovation is shifting towards dominating and shortening the process of realization, that is, of trade.

In the third chapter the authors discuss the Italian economic organization between the two World Wars. They analyse the conflicts caused by the duality of a pluralistic economic organization and an authoritarian political system. A political mechanism wishing to maintain individual enterprise and recognizing a certain sphere of authority of the market, while also wishing to regulate enterprise and market will necessarily be compelled to operate a comprehensive political-economic management and intervention system. According to the hypothesis, the corporative form represents the organizational and institutional solution in which agreement is possible between the two parties with opposing interests, with the state's impartial and balancing attitude. The Italian corporative state and corporate enterprise was the first experiment of directing several types of enterprise organizations authoritatively. Mussolini's version of the corporative system had to solve several problems arising one after the other in the course of the functioning of the established system. Various strivings, springing from the very nature of the system, had to be kept under control. It had to be achieved that the central interventions deriving from the expansion drive of the corporate forms of management, regulation, and market control and from a multitude of emergency measures (economic crisis and wars) should not lead to some kind of "planning" corporation. It was another central question in which way to integrate the traditional and the new organizations so that the state monopolistic corporate intervention could be duly asserted, and in which way the party and the state could set limits to the growing power of the corporate technocracies and their leaders.

In the final account, in a system determining prices, wages, and credits forcing contracts made in physical terms, "...subsistence production is substituted for trade. Instead of price, labour becomes the centre of economic life, and use value replaces the production of value. Thus the economy will seek the best organization of production, quantitatively and qualitatively, from the aspect of meeting the needs of both the individual and the

community..."—says Napolitano Gaetano, quoted by the author.

One of the most interesting chapters of the book analyses a relatively neglected field of sociological research. It is entitled "Russian traditions and Soviet-Russian experiments before war-time communism". The chapter is an adaptation of György Lukács's idea in proving that "...there is no continuum without moments of discontinuity, and not one moment of discontinuity does unambiguously break continuity." It is examined, in which way pre-revolution and pre-war Russian political-economic conditions affected the institutional system established after the revolution.

It was a characteristic feature of pre-war Russian economy on the way to capitalist development that enterprises and economic bodies were less dependent on the market than on the Tsarist state. Large-scale industry could not assert its superiority over other sectors on the market and in commodity exchange; enterprises were surrounded with privileges and guaranteed markets. Thus in Russia capital was based on the maximum exploitation of peasant labour, while, on the other hand, for lack of competition, it was practically incapable of improving productivity.

The way of growth of Russian economy was expansion to ever larger fields, of the mostly "imported", more advanced methods of production and economic management.

Thus, beyond the exclusion of market effects, and state subsidies, granted to the big industries, another characteristic feature of the economy was its dependence on foreign capital (and technological know-how).

After the revolution, the financial basis of the dictatorship of the proletariat was ensured through the system of the workers' control. It was the necessity of rendering the monetary processes easy to survey that led to the merger of all the banks into a central one. Neither the workers' control, nor the placing under state control amounted to nationalization of private property.

The idea of the workers' control is a formula of political realism in Lenin's work which is a proof that, in fact, Lenin was hesitating as for the practicability and efficiency of state (administrative) enterprise management.

The ensuing chapter of the book centres attention on the development of the Yugoslav

system of self-management, analysing the debates accompanying the further development of this system, as well as the reform propositions and reforms elaborated and carried into effect, concerning its development and amendment. The reader is acquainted with the organizational aspects of the self-management system, the ways of handling conflicting interests, and the changes in enterprise sizes. The questions of property and income, considered to be of primary importance from the aspect of ideology, are treated separately. Employees in the work organizations are not wage workers but associated producers, having not only a right of say and control, but also a proprietary right of disposing of the capital equipment. In the Yugoslav interpretation, however, this does not amount to say, that either the primary organization of the associated labour, or the participating workers become owners of the capital equipment. Therefore, in the final account, social property has no subject.

The primary organization of associated labour is a peculiar unit of the Yugoslav economic and political life. What does this concept exactly mean? It is 1) the basic unit of work organization; 2) the basic unit in the representation of interests of self-management, 3) a basic unit in planning; 4) sending delegates to the local commune; 5) the basic organizational unit of party and the trade union; 6) an independent legal entity.

In the following, the authors prove their proposition according to which the Yugoslav system is a commodity producing and market economy, while it differs from the capitalist system in the functioning of its market. The elements of self-management, though deeply rooted in the Yugoslav economy, have not become organic nor comprehensive.

The closing, and perhaps most interesting, chapter of the book presents the beginnings of small enterprises (ventures) in Hungary. It is a point of interest that the authors are not merely researchers, but they were active participants in the theoretical debates preparing the grounds for small enterprise, and later also in carrying the idea into effect. This, however, did not hinder them in discussing the matter through an objective approach, concentrating on the essential motives and events of the process.

For scientific investigation and economic

management the actual beginnings may be reckoned from the time when the necessity of a more active presence on the world market made the problems of the background industry acute. The lack of an adequate background industry was attributed, among other things, to the primitive state of specialization and the defects in the network of producers supplying parts, components, etc. In view of the world market demands, and the need for development of the background industry, innovation came to the foreground, and, to stimulate it, the necessary environmental conditions had to be created. The conceptions according to which the stimulation of the background industry was a condition of accelerating the innovation processes set the aim that budget resources should not be used for end-product manufacturing and for founding large-scale establishments, but for the creation of small organizations serving the manufacture of end-products. However, because of the already allocated resources, the development of the background industry could not be included in the delayed wave of the central development projects, and furthermore it was pointed out in certain analyses that this could be achieved even without a centralization of the state resources. The background industry can, without difficulty, be based on the autonomous activity and enterprise of private individuals or collectives; the only thing needed thereto was the elimination of the hampering factors.

The spreading of small ventures was further promoted by the relatively wide scope of the second economy. Additional work voluntarily undertaken in order to improve or maintain the living standards came to the centre of attention, while it became clear, too, that the majority of activities listed under second economy were in fact some kind of useful work.

The first important step exploiting entrepreneurial autonomy in Hungary was taken in retail trade. The substance of the new conceptions of the late 1970s was to try to combine the private entrepreneur's flexibility with state property. This conception was based on the form of commission retail trade existing in the GDR. By that time, Tibor Liska's conception of "socialist undertaking" had also become known. Thus a contractual form of operation based on the entrepreneur's partial autonomy, and the enterprise's capital equipment was created. This was a new development in

organizational forms as well as in those of ownership. Earlier, there had been economic partnerships based on the combination of state and cooperative property, and specialized agricultural groups on that of cooperative and private property. Now also state property and private property were combined, and thus the economy has become plural in respect of forms of organization and ownership (though not in respect of proportions).

In the last years, small enterprise has spread in Hungary to an extent that allows us to draw a few conclusions from practical experience.

The problem has remained that most small entrepreneurs do not take any substantial financial risk.

This is mainly caused by a general uncertainty as to whether small enterprise is indeed a lasting and stable element of the economic policy. Further, parallel to the spreading of small enterprise, the necessity to maintain the country's solvency has led to a set of resource-limiting and administrative measures, badly prejudicial also to the institutional system and base of small enterprises.

On the whole, the statement can be made of the present situation that small enterprises contribute in the Hungarian economy to the demolition of monopoly situations. They promote competition and flexibility on the market, as well as the formation of flexible organizations prepared to run risks; and it is hoped that they can help in driving back the administrative forms of central economic control and management. At the same time, corruption and abuse, the lack of expertise, social differences in wealth and living standards are highlighted, forecasting a thorough transformation in the traditional system of values.

GY. KIRÁLY

HÖHMANN, H.-H.—VOGEL, H. (Hrsg.): *Osteuropas Wirtschaftsprobleme und die Ost-West Beziehungen*. Nomos Verlagsgesellschaft, Baden-Baden 1984. 308 p.

The book in which well-known West German, American, English, French and Austrian experts of studies on East Europe investigate how the opportunities of and prospects for East-West political and economic relations are affected by the growing

economic difficulties of the CMEA countries in the early 1980s, appeared as the 14th volume in a series published by the "Bundesinstitut für Ostwissenschaftliche und Internationale Studien", Cologne, FRG. Being a compendium of papers, it is only right that the authors should develop diverse standpoints as regards both concepts and conclusions. However, they all share the conviction that it is not in the interest of the West European countries that economic tensions should grow into a crisis in the other part of the continent, further that the confrontational policy of the Reagan Administration, based on the belief that, by its adding to the domestic economic difficulties, it can shortly bring about the collapse of the social systems of the Soviet Union and the other CMEA countries, rests on a serious miscalculation. All the authors emphasize that the practice followed by the present US Government and also by some other analysts, that consider CMEA as a monolithic block ("Ostblock") and neglect the substantial differences determining the specific situation of each country, is unjustified. Thus, it is hardly a surprise if economic restrictions mostly afflict not those intended to be punished: as *Hardt, Vogel, Bornstein* and *Schröder* prove it in detail, the main burden of the commercial, credit and other restrictions has been so far borne by the small countries of Eastern Europe. Obviously, the same applies to the reverse: it is Eastern Europe that is to profit more from détente. This is inevitable as, owing to their size, these are the countries that are far more dependent on the international division of labour. When adhering to their commitment to promote East-West economic relations despite the American pressure West-European traders and banks as well as the governments supporting them, do so not in order to do the East European countries a favour but because they pursue their own interests and assert their political opportunities.

The authors of the volume wish to advise the governments of the NATO countries in the question "What the West can do". They demonstrate in detail the hopelessness of the policy of sanctions, moreover that the confrontational line is based on false assumptions. In addition, it is particularly interesting for the East European reader that even while maintaining absolute loyalty to the NATO, what is more, while proving it meticulously and with obligatory exercises, how incredibly multi-coloured

a system of arguments bears evidence to the fact that neither West European, nor the realistically formulated American interests can be asserted by a military and ideological polarization of the great powers or by reviving cold-war mentality. While they are right in repeatedly emphasizing that in recent years the elbow room of the small countries has expanded in Eastern Europe, they also demonstrate with good reason that both the individual Western countries and their community can only slightly influence the political and economic transformations within the CMEA countries, the latter being primarily a function of the domestic factors. Precisely on this account, it does not imply an anti-Soviet tendency if Western business quarters and governments consciously take into consideration the differences between the situation and endeavours of the particular CMEA countries. As it is known, the multiple variants of development paths within CMEA is appreciated, what is more, positively supported also in the Soviet Union.* This is the reason for our accepting the introductory remarks of the editors, *Vogel* and *Höhmman*, that such a differentiated "Ostpolitik" is not (cannot) be aimed at undermining the EE countries' alliance with the Soviet Union, as it would follow from the American cold-war concepts, rather it is the West European self-interest proper that induces such a division of labour between Eastern and Western Europe, which grows increasingly independent from the great power relations. Of course, it is also true that the main hindrance to an expansion of trade and financial relations is primarily the poor export performance of the CMEA countries rooted chiefly in structural factors, as it is strongly emphasized by *Hanson*, *Schröder* and *Betkenhagen*. The policies of governments stimulating or restricting trade can therefore only slightly and indirectly broaden or reduce the common field of interests stemming from the system of interfirm relations and from the real economic conditions.

The book is divided into three main parts: analysis of the economic situation, review of the political consequences following from it and an assessment of the Western governments' opportunities. The Soviet economic situation is investigated

*See e.g.: O. T. Bogomolov: *Soglasovanie ekonomicheskikh interesov i politiki pri sotsializme. Kommunist*, 10. 1985.

by Höhmann, that of the small East European countries by *Levcik*, Poland by *Zaleski*, and integration policy by *Betkenhagen*. The central idea of Höhmann's analysis, focusing somewhat too much on occasional short-term processes, is that the significant slowdown in the Soviet growth rate between 1979—1981 cannot fully be attributed to the long-term systemic and institutional factors, as it has had several concrete, non-recurrent reasons. By eliminating them, the growth rate can be restored to a level higher than the deepest point was in the 1979—1981 period, even under unchanged management methods. Improvements can though undoubtedly be carried out even in the framework of the prevailing mechanism, performance figures of 1984—1985 already indicate that an acceleration may not develop automatically.

Levcik traces back the East European economic tensions to structural reasons, to the world-economic recession—which in the meantime ceased to exist—and to import restrictions. He was right in predicting that following the 1982 low, a cyclical upswing was to take place in the East European countries, even though its substance might be as controversial as the authors' qualifying the situation in the CMEA as a crisis.* The suggestion on page 54 according to which the East European countries might even seriously consider suspension of their debt repayments is also questionable. Following the Latin American debtors' conference of August 1985, held by countries being in a far stronger bargaining position than ourselves, this has become more obvious than ever. He is right, however, that although the improvement of great power relations is a favourable development, it does not directly help in overcoming the problems of the region. It is also true that without radical changes in the economic mechanism it is impossible to overcome the factor-intensive character of economic growth in the CMEA states.

In his lengthy study *Zaleski* presents the critical analyses of Polish economists and his views on the limits to reorienting Polish foreign trade towards the CMEA. He points out with good

reason that the Polish crisis only affected the economies of the other CMEA countries indirectly, mainly by its secondary effects deriving from insolvency.

Betkenhagen's paper on integration policy sets out from the fact that in the decade of the détente the world market share of the CMEA countries continued to decrease, despite the significant gains of the Soviet Union from development of the terms of trade. Thus, the objective of the economic policy of the détente period to integrate the CMEA countries into the world economy closer than in the 1960s, failed to materialize. This is primarily to be explained by problems of the CMEA countries' export structure and their following low competitiveness on the international markets which seem to remain determinant factors also for the 1980s. Conditions for East-West trade are thus unfavourable. Demand for primary products representing 90 percent of Soviet exports to the West declines, worldwide oversupply cuts down prices, whereas the room for manoeuvre by the East European countries is from the outset constrained by the lasting excess supply of the mass products they offer for sale in the West as well as, by the effects of spillover side-effects of their import restrictions of the 80's and by the necessity to service the Rouble debts. Discussing with A. Köves* he restates his earlier conviction that the Soviet market will unavoidably gain further ground in the total trade of the East-European countries, even if at the expense of convertible-currency trade. However, he does not challenge the arguments of Köves in merits, so that, apart from my own, slightly different concerns, that are not to be detailed here,** the procedure of substituting the discussion of the contrasting view for repeating one's own standpoint might hardly be seen as extremely convincing. On the other side, his arguments against the views qualifying the dependence of Western Europe on Eastern imports as exaggerated and against the detrimental discrimination of CMEA countries in the EEC deserve serious attention.

The most controversial is, of course, the content of the second part, which discusses the

*The view of the editors expounded in the introduction seems more convincing: since the decline of the national product does not entail a substantial shock of the economic system, one can rather speak of growing economic tensions than about a crisis with an apocalyptic overtone.

* Köves, A.: Turning inwards or turning outwards? *Acta Oeconomica*, Vol. 26. Nos 1-2 (1981).

**Csaba, L.: CMEA in a changing World. *Osteuropa Wirtschaft*, 4. 1985.

political relations of the CMEA member countries. The differences between East and West in ideology, terminology and approach are much too well known to be repeated. It might be more interesting to focus on some of those conclusions that seem acceptable for the East European point of view, from among the analyses written in a conceptually different political approach. The paper of *Schneider* examines how the economic tensions affected the internal politics in the GDR, Poland and the Soviet Union. Even though relying on somewhat poor (mainly secondary) sources the author still arrives at the right conclusion that Solidarity gradually ceased to be a trade union since the resolution of its congress came to question basic principles of the political system as well as those of foreign and security policy. In what seems to be an implicit discussion of fashionable doctrines of the US political science scene he indirectly shows that the Polish political tensions are rooted in the peculiarities of that country so that nothing would justify their spillover to the neighbouring countries. On the contrary, the American author, *Bialer* describes the Polish crisis as typical. In his view it only differs from the tensions in other socialist countries in quantitative and formal terms. (It is a pity that the debate of the two authors did not become explicit, in spite of the fact that the authors of the volume could directly discuss the earlier versions of their chapters at a conference.) This slightly contradicts *Bialer's*—in my opinion right—conclusion drawn from his analysis of empirical processes, that the Hungarian types of solution could actually not be transplanted either into the Polish or into the Soviet environment.

Berner's paper analyses the economic difficulties of the region from the small CMEA countries policy point of view. Similarly to *Betkenhagen* and *Bialer*, *Berner* takes it for granted that the intra-CMEA division of labour is one-sidedly disadvantageous to the Soviet Union, although this is doubted by American and Austrian experts in the volume itself, in addition to Hungarian and Soviet authors, on the basis of strong evidences. It is misleading to assume causal relations instead of temporal succession between political détente and the falling tide of East European reforms. At the same time it is correctly set forth (see p. 178) that the coming to the fore of national interests in the early eighties did not at all

weaken the bilateral relations of the East European countries with the Soviet Union, on the contrary, these connections have strengthened in the period in question.

The third part deals with economic strategy alternatives of Western countries towards Eastern Europe. The director of the Cologne institute, *Vogel* and the head of the Congressional Research Service of the United States, *Hardt* see by and large similar opportunities and offer recommendations showing identical directions. This—and the whole volume—demonstrates that the “front lines” develop not so much in accordance with the contrasts in national but much more with those in professional approaches. The views overwhelmed by security policy and ideological considerations may be collected around the slogan “as much security as possible coupled with as little trade as is unavoidable”. In contrast, the arguments based on the predominance of the economic approach may be concentrated in the formula “maximum cooperation on a par with satisfactory levels of security”. Only the military judgement considers trade to be a political weapon and the gain of one party as the immediate loss of the other. The theory of international trade, however, has always held it for obvious that no one will enter a business deal unless he expects profit from it, moreover it is hardly feasible to establish a transaction unless the other party also does find it profitable for himself. The more insignificant the trade, the more it is apt to be considered a political instrument and *vice versa*,—this is the main reason why, as a rule, East-West trade is being judged from differing perspectives on the two sides of the Atlantic ocean.

The American and the West German authors draw up three kinds of strategies based on different arguments and in differing structures: detrimental discrimination, free-market neutrality, and the Helsinki or trade promoting alternative. The contents of the particular alternatives and the reasons for advocating them are only too obvious, so it is in fact worthwhile only to deal with the difference between the Helsinki and the free-trade solutions. The free-trade alternative would by and large exclude the usual credit guarantees and preferences, for the financing of both agricultural or industrial trade as well as of structural changes. West European foreign trade—except for the FRG—is permeated by state dirigisme to such an extent, points

out Hardt, that it is finally unrealistic to expect the abstaining of governments from these segments of international commerce (their absence may also be strongly restrictive). The alternative of Vogel called "conditional cooperation" somewhat differs from this, since the readiness of the Western governments to cooperate is linked in it to concrete ad-hoc political conditions. In analysing the experience of the Carter Administration he points out (pp. 200—201): the tactics of the stick and the carrot relies on highly subjective judgement and may very easily become a practice of proliferating punitive measures, i.e., may change into total confrontation. Only an atmosphere of general cooperation and not that of calling to account is able to develop an understanding with the countries of the Warsaw Treaty, suggests the West German analyst. And Hardt calls attention to the fact that the 1983 version of the American Trade Act includes attempts at the application of extra-territorial rights, the chances of implementing them are, however, rather slight, especially in lack of willingness in Western Europe to cooperate.

Then three studies raise the question of cooperation *versus* confrontation: in the field of trade the American Bornstein, in that of technology the British Hanson and in finances the West German Schröder. Bornstein expounds that Western imports of machinery and technology to the CMEA countries are just a small portion within their total domestic use, what is more, East-West trade mainly consists of parts, components, semi-products, i.e., of non-technology-intensive goods. Hence, it is misleading to assume that it is by stopping the West-East flow of machinery and technology to the CMEA countries that could significantly slow down their economic growth. Hanson, in addition to several important and interesting trains of thought, emphasizes that impacts of technology are embodied only in the long run, state control over technology flows is thus by definition unsuitable for sanctioning short-term political measures. It is entirely groundless to identify advanced technologies with militarily sensitive ones, since high technology in the Western countries is mostly independent of its military applications. Finally, since it is unfeasible to control exports in a transparent manner, selective embargoing does not work, while for a total embargo the parallel meeting of so many conditions is required

that cannot be achieved without changes that would affect basic institutions of the Western economic order and alliance. Dealing with the limits of using credits for embargo purposes Schröder discusses this idea in detail, accompanying it with the comment that certain actions taken by the American *banks* may force the banking institutions of Western Europe to take "solidarity" measures, quite apart from the government policies. As the Soviet Union cannot be forced to anything by blackmailing, thus the cost of such a course of actions would be shared by the West European banks and the population of Eastern Europe, since the American banks have only placed a fraction of their credits into Eastern Europe. According to the lesson of the 1970s regional risk-assessment has to be abandoned and the creditworthiness of each and every country has got to be evaluated case to case, individually.

In the last chapter the then consul-general of the FRG in Los Angeles, *Joetze*, dwells on East-West political relations. As he says, if, according to current concepts in the USA, East-West trade were narrowed down to the "oil for corn" formula this would entirely squeeze the West-European exporters of manufactures out of the market. Owing to its prevailing concepts on the German question, the FRG opposes any steps which would weaken the economy of the GDR, but she also does not see how greater European stability and peace could be brought about by weakening other countries of the CMEA either. It should be a generally accepted premise that neither domestic economic troubles, nor external political pressure can undermine the political establishment of the CMEA countries: the Western world must follow a policy based on this recognition and extend loans based on economic considerations. It should also be realized that East-West trade and credit relations cannot be used as a political lever either according to the logics of *détente* (by changes through trade) or to that of economic warfare (by way of total refusals). It is profits rather than political beverage that justifies East-West economic intercourse.

This volume of numerous thought-provoking and also of controversial ideas bears the imprint of a tendency of resisting that line of all-out ideological confrontation which has started to dominate governmental quarters of the United States since 1980. It confronts a multi-layer cool and factual reasoning

to the fashionable stereotypes. Built on simple, but false premises, developed on equally simple and mostly emotional grounds, that are thus apt to sell well in mass media it is remarkable, that even its authors of conservative conviction caution against those concrete political measures that are prompted immediately by American messianism. One wonders why this important book was not immediately published in English. Its East European reader gets better acquainted with the hard struggle waged by the realist forces in the other part of our continent and also in the USA for preserving the economic and political achievements of the process of détente. And in this they can count on Hungary as a partner.

L. CSABA

Harmonisierung der Wirtschaftspolitik in Osteuropa. Herausgegeben von Heinrich Machowski. Verlag-Arno Spitz, Berlin, 1985. 86 S. (Osteuropaforschung. Schriftenreihe der Deutschen Gesellschaft für Osteuropakunde. Band 16.)

Die von bekannten deutschsprachigen Experten aus der Bundesrepublik West-Berlin und Österreich verfassten Beiträge, die einer wissenschaftlichen Tagung zugrunde lagen und im Sammelband enthalten sind, entstanden überwiegend gegen Ende 1983, als einerseits die Ost-West-Beziehungen schon seit längerer Zeit beeinträchtigende sicherheitspolitische Debatte im Westen, und ganz spezifisch in der Bundesrepublik ihren Abschluß fand, andererseits, die veränderten Rahmenbedingungen die wirtschaftspolitischen Tendenzen und auch die Entscheidungsprozesse im europäischen RGW-Raum erheblich zu beeinflussen begannen. Probleme, Schwierigkeiten, interne Widersprüche, aber auch latente und mobilisierbare Ressourcen wurden erst deutlich, als eine länger anhaltende Periode des raschen quantitativen Wirtschaftswachstums auch in diesem Teil Europas abgeklungen war. In dieser Situation — so kommt es wenigstens in der Forschungstätigkeit zum Ausdruck — kann man früher verdeckte Zusammenhänge aufzeigen, neue Verhaltensmechanismen erkennen und nicht zuletzt auf einige, bisher wenig ausgearbeitete theoretische Aspekte der sozialistischen Entwicklung und der RGW-Zusammenarbeit aufmerksam machen.

Im einleitenden Beitrag betont Otto Wolff von Amerongen die Notwendigkeit, die Ost-West-Wirtschaftsbeziehungen wieder einmal nach wirtschaftlichen Kriterien zu beurteilen. Dies bedeutet einerseits das Auseinanderhalten wirtschaftlicher Interessen der Bundesrepublik im Ost-West-Handel und politische Loyalität gegenüber den USA, andererseits aber auch die Trennung wirtschaftlicher und politischer Motive hinsichtlich der europäischen RGW-Länder. In den letzten 15 Jahren hat der Ost-West-Handel drei Entwicklungsphasen durchlaufen: die kreditfinanzierte Expansionsphase, die Konsolidierungsphase und schließlich die Stagnationsphase. Trotz unterschiedlicher Haupttendenzen gab es während aller dieser Perioden zwei Sonderbewegungen, die sich mehr oder weniger verselbständigen konnten: der kontinuierlich wachsende sowjetische Anteil am Ost-West-Handel und die außenwirtschaftliche Öffnung der DDR, überwiegend im innerdeutschen Handel. Die zukünftige Dynamisierung der Handelsbeziehungen hängt teils davon ab, ob die Sowjetunion ihre Exportstruktur diversifizieren kann (was in der Tat entsprechende binnenwirtschaftliche Schritte voraussetzt), teils davon, daß sich die kleineren europäischen RGW-Länder in verstärktem Maße an der großangelegten Energie- und Rohstoffprojekten zwischen der Sowjetunion und Westeuropa beteiligen können.

Hermann Clement behandelt die Planungszusammenarbeit und Entwicklung des RGW-Intrablockhandels in den 80er Jahren. Die bisherigen Erfahrungen zeigen, daß die praktizierte Form der Planungskoordination nicht in der Lage ist, den RGW-Wirtschaften dynamische, strukturmodernisierende Impul zu vermitteln. Sie wirkt, im Gegenteil, primär konservierend. „Ähnlich wie bei der EG zeigt sich auch im RGW, daß eine Zusammenführung oder Vereinheitlichung der Koordinationstechniken noch nicht dazu ausreicht, die Dynamik der Volkswirtschaften in den Integrationsräumen in dem erwünschten und möglichem Maße zu beschleunigen. Vielfach erfolgt eine Koordination auf dem niedrigsten konsensfähigen Niveau. Erst eine Harmonisierung der nationalen Wirtschaftspolitiken ermöglicht die volle Ausschöpfung der Integrationsvorteile.“ (S. 20—21) Die Spezialisierungsabkommen beziehen sich einerseits auf den großen sowjetischen

Absatzmarkt, was schon in sich selbst zu strukturellen Parallelitäten der kleineren europäischen RGW-Länder führt. Andererseits konzentrieren sich diese Abkommen auf Enderzeugnisse. In der 80er Jahren wird sich der Anteil der spezialisierten Produkte erhöhen: Preisrelationsverschiebungen und erhöhte Lieferungen an die UdSSR sind als wichtigste Gründe dafür angegeben. Trotz dieser Entwicklung und angesichts der nicht immer günstigen Erfahrungen in gemeinsamen Investitionen wird jedoch die Warenstruktur des Intra-RGW-Handels nur mäßig modifiziert.

In seinem Beitrag „Verrechnungssystem und Hartwährungshandel im RGW“ behandelt Gerhard Fink aus Wien, die Auswirkungen des RGW-Preisbildungsprinzips auf bestimmte Produkte und einige Länder. Überall, auch dort, wo ein einheitlicher Wechselkurs für die Umrechnung der Außenhandelspreise in Binnenwährung festgelegt wurde, wirkt eine Vielfalt von Abschöpfungen und Stützungen, die eigentlich einer Art multipler Wechselkurse gleichzusetzen sind. Der weiterhin starre Bilateralismus und die veränderten außenwirtschaftlichen Bedingungen, wie binnenwirtschaftliche Notwendigkeiten haben gegen Mitte der 70er Jahre zu Verrechnungen in harten Währungen geführt. Der Autor geht hier auf den polnischen, rumänischen und ungarischen Hartwährungshandel im RGW im Zeitraum 1976–1983 ein.

Die Produktionsspezialisierung, ein wichtiger Bereich der GRW-Zusammenarbeit wird am Beispiel der DDR untersucht. Heinrich Machowski stellt fest, daß die DDR der wichtigste Lieferant des RGW an spezialisierten und Kooperationsprodukten ist, während die Sowjetunion fast zwei Drittel dieser Produkte aufnimmt. Der Handel mit spezialisierten und Kooperationsgütern hat sich unter den kleineren europäischen RGW-Ländern nur unterdurchschnittlich entwickelt, wobei nur die rumänischen und tschechoslowakischen Lieferungen in die DDR, bzw. die ungarischen Lieferungen in die CSSR einen nennenswerten Umfang erreicht hatten. Im Handel der erwähnten Güter haben alle kleinen RGW-Länder Überschüsse, während die Sowjetunion ein erhebliches Defizit registriert. Nach der statistischen Erfassung der entsprechenden DDR-Angaben

skizziert der Verfasser die Perspektiven der internationalen Spezialisierung im RGW. Die außerordentlich rasche Zunahme der DDR-Lieferungen von spezialisierten Produkten in der ersten Hälfte der 70er Jahre legt die Hypothese nahe, daß es sich hier vor allem um die Umlenkung traditioneller Exportgüter in „Spezialisierungskanäle“ handelte, und nicht neue Exportkapazitäten erschlossen worden sind. Einerseits kann man zwar dadurch einen bestimmten handelsschaffenden Effekt erwarten (Produktausweitung auf der einen und Produktionsverzicht auf der anderen Seite), andererseits sind aber diese Abkommen wenig durch juristische Vereinbarungen untermauert. Die eigentliche Garantie liegt im „politischen“ Bereich, die sicher nicht vernachlässigt werden darf. Gleichzeitig muß man aber davon ausgehen, daß diese politische Ebene die sonst „normalen“ Wirtschaftsgeschäfte beeinflusst, und umgekehrt, normale wirtschaftliche Handlungen leicht auf die politische Ebene übertragen werden und die letztere belasten können. Vielleicht die wichtigste Feststellung besteht darin, daß die Spezialisierungs- und Kooperationsabkommen nicht das Ergebnis einer internationalen Industrieplanung sind. „Im Gegenteil: Sie haben die historisch gewachsenen Produktionsstrukturen in den Gemeinschaftsländern endgültig und damit auch verpflichtend festgeschrieben. Produktionseinstellungen... haben kaum stattgefunden.“ (S. 50.)

Horst Brezinski behandelt die Wandlungen in den Organisationsformen des RGW, mit besonderer Berücksichtigung der internationalen ökonomischen Organisationen. Diese brauchen eine mehrjährige Aufbauphase, so daß sich die Vorteile erst nach mehreren Jahren bemerkbar machen können. Im Jahre 1960 gab es 5, zehn Jahre später 21, 1982 schon 51 solche internationale Organisationen, von denen fast 60% in der Industrie arbeiteten. Die neuen Formen der Zusammenarbeit konnten die erwarteten Impulse nicht auslösen, weil die Fragen der monetären Beziehungen im RGW weiterhin ungelöst sind. Aber auch die Unterschiede in den nationalen Planungs- und Leitungssystemen haben zu dieser ungenügenden Entwicklung beigetragen. Die Effektivität der Organisationsformen und -mechanismen im RGW sind am Anfang der 80er Jahre wieder stärker in den Vordergrund gestellt

worden: weltwirtschaftliche Veränderungen, RGW-interne wirtschaftliche und andere Schwierigkeiten, technologische Entwicklungen formulieren größere Anforderungen an den Integrationsmechanismus. Die letzten Versuche und Erfahrungen von fast zwei Jahrzehnten haben deutlich gemacht, daß institutionelle Wandlungen in sich, ohne die Verbindung mit adäquaten Integrationsinstrumenten nicht die erhofften positiven Ergebnisse hervorbringen können. In der gegenwärtigen Lage findet man zwar auf der einen Seite eine erhöhte Notwendigkeit der Zusammenarbeit, während auf der anderen weiterhin unterschiedliche Interessenlagen und Ausgangspositionen zu verzeichnen sind — ganz zu schweigen vom schwierigen Problem der Kontrolle der Funktionsweise der Organisation.

Im abschließenden Kapitel analysiert Erich Klinkmüller die politischen und wirtschaftlichen Bedingungen der Zusammenarbeit im RGW. Er versucht auf folgende Fragen eine Antwort zu geben: unter welchen allgemeinen politischen und ökonomischen Rahmenbedingungen vollzieht sich die wirtschaftliche Zusammenarbeit; wie ist die letztere an der Jahreswende 1983—1984 zu beurteilen; was für Veränderungen sind kurz- und mittelfristig wahrscheinlich? Für das Grundproblem betrachtet der Autor die Abweichung des internen verwaltungswirtschaftlichen Koordina-

tionssystems des RGW von dem auf Weltmarktpreise gestützten Koordinationssystem. Daraus zieht er den Schluß, daß dieser Dualismus nur durch die Umwandlung des RGW in eine „überstaatliche Planungsbehörde“ aufhebbar sei. Gleich danach distanziert er sich aber von dieser kategorischen Behauptung und stellt mit Recht fest, daß eine marktwirtschaftliche Koordination auch innerhalb des RGW vorhanden ist, wie verwaltungswirtschaftliche Koordinierungselemente auch für die westlichen Wirtschaften charakteristisch sind. Die Untersuchung der gegenwärtigen Lage der einzelnen RGW-Länder ergibt ein ziemlich unterschiedliches Bild. Aus den bisherigen Erfahrungen und den gegebenen Ausgangspositionen leitet der Verfasser die Feststellung ab, daß man kurz- und mittelfristig mit dem Fortbestand der bekannten Probleme und dem Festhalten an vertrauten Lösungen rechnen sollte, was weitere Reformen (Ungarn), oder neue Ansätze (DDR—BRD) nicht ausschließt. Neue Einsichten und dementsprechend neue Impulse seien — wenigstens in dieser Projektion — erst in den 90er Jahren zu erwarten. Werden diese die bereits in Gang gesetzten Anpassungsprozesse — mit allen ihrer positiven und negativen Nebenwirkungen — berücksichtigen? Und wenn schon, in was für einem weltwirtschaftlichen Rahmen können die Entwicklungen des nächsten Jahrzehnts eingebettet werden?

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FOOD ECONOMICS

By
A. BURGER

In English. 1985. 236 pages, 17 × 25 cm
Hardcover \$24.00/DM 59,—/£ 16.75
ISBN 963 05 3880 6

"Food Economics" is a macroeconomic textbook for undergraduate and graduate students specializing in agricultural economics, for agricultural economists working in agrobusiness, for students of the economic principles and practices of the European socialist countries, and for all those who are interested in socialist agriculture.

The book is an up-to-date synthesis of Marxist and neoclassical views and is based on the author's own research and on Hungarian and foreign achievements in this field. Owing to conclusions drawn from actual research, the views expressed by the author often differ from those which are generally accepted in agricultural economics taught in socialist countries.

The book deals with the production, planning and financing of production and with marketing. It characterizes the mainstream of Hungarian agricultural development comparing it with world agriculture. It stresses the importance of a better incentive system in agriculture and of a more decentralized management system, connected with greater responsibility for farms' capital—including land—and for its productivity.

The title of the book: "Food Economics" indicates that while it covers largely agricultural economics, it also deals with food supply and demand, with processing and marketing, hence includes most of the economic problems of food production.

The book contains a large reference list covering Hungarian and world literature.



AKADÉMIAI KIADÓ • BUDAPEST

Food Economy in Hungary

By

E. CSIZMADIA and M. SZÉKELY

In English. 1985. 208 pages, 30 figures, 17 × 25 cm

Paperback \$18.00/DM 42,—/£ 12.50

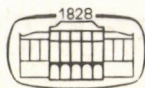
ISBN 963 05 3804 4

The authors give an overall picture of the development of the Hungarian food economy and production during the past decades. The Hungarian economy is presented in a complex way, fitted into the entire system of the national economy. Surveying several decades, it reveals and analyses the main trends of agrarian development and outlines perspective for the eighties.

The readers will get acquainted with the agrarian development and the most important changes in Hungarian society and economy. They can study landownership and leasehold relations, fixed and current asset management, the labour situation and development of efficiency. The book presents an abundant illustration of the interbranch structure in the food economy and the development of the main branches. It deals with joint ventures and it treats enterprise partnerships established in the past decade, evaluating the characteristics of the operation.

The readers will also have a true picture of the economic management system — credit policy, enterprise financing, profit regulation, wage system and wage policy — of the food economy.

The book will be of interest not only for European readers but also for those in the Third World.



AKADÉMIAI KIADÓ · BUDAPEST

Economic Geography of Hungary

Edited by
T. BERNÁT

In English. 1985. 450 pages, 69 figures, 30 tables, 17 × 25 cm
Hardcover \$35.00/DM 99,—/£ 24,50
ISBN 963 05 3543 2

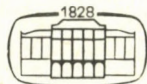
The book provides basic knowledge about the development, spatial location and territorial relations of the Hungarian national economy, as well as about the questions of regional development. The subject is set out partly in general chapters (population, industry, agriculture, etc.), partly in chapters of a regional character (economic-planning regions) illustrated with a number of cartograms. In addition, the volume contains a selected bibliography of the most important literature of Hungary's economic geography.

The authors do not follow the usual method of traditional descriptive geography, and in presenting the spatial relation system they give priority to the question of "how" and "why exactly there" over the "where" question of descriptive geography. To make it easier to read, the work contains relatively few place names and statistical data. Instead, it includes about seventy diagrams and cartograms to illustrate its statements.

The aim of the book is to disclose the spatial distribution and interactions of the productive forces of the economy by making use of the latest research findings in economic geography and the related sciences. On the basis of research it presents an up-to-date picture of the spatial location of the individual sectors of the Hungarian economy, of changes in the territorial division of labour, the functioning of regional policy, as well as of the participation of the Hungarian economy in the international division of labour.

Besides surveying the spatial structure of the economy, the work also outlines the experiences of regional planning already gained in practice. It also covers themes such as the urbanization process, the industrialization of the industrially underdeveloped territories, the question of developing marginal agrarian areas, the territorial division, and economic regionalization of Hungary.

The main chapters are concluded with a selected bibliography of the most important literature.



AKADÉMIAI KIADÓ · BUDAPEST

Studien zur Deutschen und Ungarischen Wirtschaftsentwicklung

(16.—20. Jahrhundert)

Beiträge der fünften DDR-ungarischen
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Debrecen, 23—26. September 1980

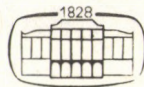
Herausgegeben von
V. ZIMÁNYI

In deutscher Sprache. 1985. 185 Seiten, 17 × 25 cm
Gebunden \$14.00/DM 39,—/£ 10.00
ISBN 963 05 3617 X

Die Konferenz in Debrecen hat zwei Themenkreise zum Gegenstand:

- 1) Großgrundbesitz und Bauernwirtschaft
- 2) Entwicklung der Produktivkräfte im 19.—20. Jahrhundert.

Die Studien befassen sich mit einer Gründlichkeit mit den Problemen der beiden Länder, die mit diesen Themenkreisen verbunden sind. Der Band gibt daher den Forschern der Wirtschafts- und Gesellschaftsgeschichte und im neuzeitlichen Teil jenen der Wirtschaftswissenschaft sowie anderen, an diesen Themen interessierten Fachleuten eine gute Richtschnur. Eine besondere Wichtigkeit verleiht dem Band die Tatsache, daß die Studien die beiden Wege der Verwirklichung der Entwicklung in Ostdeutschland und in Ungarn in internationalen Zusammenhängen und weitläufig gestellte Fragen beantwortend, beziehungsweise die Antworten suchend zu beleuchten trachten.



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