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CONTENTS

A Joint IAAE- EAAE Seminar

Agricultural Economics and Transition: "What was expected, observed, and learned."[1]

Csaba Csaki[2]

Over fifteen years have elapsed since the early 1990s when the transition from the centrally planned economic system began. During this time agricultural and rural areas of Central and Eastern Europe have undergone profound structural changes. These changes vary widely regarding the extent of transformation and level of success in creating a competitive market and private ownership based food and agricultural system. By becoming members of the European Union, "transition" in its traditional interpretation has been concluded in ten of the Central East European countries. The transition to market based agriculture, however, is far from complete in Southern and Eastern Europe and especially in the CIS countries.

The International and European Associations /IAAE and EAAE/ working with Budapest's Corvinus University and with a number of other Hungarian institutions organized an inter-conference seminar on the subject of agricultural transition in Central and Eastern Europe and Central Asia. The seminar's major objective was to discuss and draw conclusions on the role of agricultural policy in the transition process regarding the actual progress and current situation in Central and East European countries, and in the former Soviet States. Also discussed was the contribution of agricultural economics - both from the West and from the East - as a discipline and profession in terms of the agricultural transition process. A specific objective was to identify priorities and means to strengthen the agricultural economics profession in the transition countries and to determine research and educational priorities for the future.

The seminar was attended by 118 participants representing 26 countries from Europe, North America and Asia. The Seminar was the largest professional meeting organized by the two associations in 2007. Over 110 abstracts were submitted and evaluated by the International Program Committee. During two days of meetings, 8 presentations were made during the 3 plenary sessions. 66 papers were presented in the 15 contributed paper sessions in 8 subject categories. Moreover, 15 posters were discussed in the poster session and the findings of a World Bank study on regional distortions regarding agricultural incentives were the subject of a pre-conference workshop. Plenary speakers included Ulrich Koester, Johan Swinnen, Jerzy Wilkin, Zvi Lerman, Eugenia Serova and Jozsef Popp-Gabor Udovetcz. At the end of the seminar David Colman, IAAE President, gave a global assessment of the agricultural economics discipline and profession while. Csaba Csaki, a former IAAE President, made summary comments on major issues discussed during the seminar. This paper is based on his closing remarks.

[1] September 6-8, 2007, Corvinus University of Budapest (CUB) Budapest, Hungary

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Agriculture in Central and Eastern Europe after One and Half Decades of Transformation[3]

Over fifteen years have elapsed since the initial early 1990s transition process away from the socialist system. During this time, Central and Eastern Europe and Central Asia have undergone profound structural changes which vary widely in terms of the amount of transformation in rural areas. In retrospect, it can be seen that the countries that chose to transform their socialized agriculture into a private-ownership and market-based system experienced the most positive economic performance. In 2004 these countries became members of the European Union, leaving transition's classical stages behind. In viewing those developments occurring over the past one and a half decades, it is nonetheless clear that, in most of the region, the initial rosy expectations regarding transformation were overly optimistic and the transition process in agriculture is far more complex than originally envisaged. For instance, it is widely recognized that at the outset of the process the importance of functioning institutions was underestimated. Increased social problems, an alarming growth in poverty, and inequality have also added a new, unexpected dimension to the transition process.

Agriculture, and the rural sector in general, play a more important role in the regional economy than they do in more developed market economies. While the majority of the region's population live in urban areas, a significant portion still lives in rural areas. Of the 412 million citizens in the 27 transition countries in Europe and Central Asia, 143 million (35%) are classified as living in rural areas. Six countries have particularly large rural populations, accounting for slightly less than two-thirds of the total rural population within ECA (transition countries of Europe and Central Asia). These are: Russia (the largest contributor, at 24%), Ukraine (11%), Uzbekistan (11%), Poland (9%), Romania (7%) and Kazakhstan (5%).[4] In several countries, and particularly in the least developed Central Asian countries (Albania, Bosnia and Herzegovina, Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, Uzbekistan), the majority of the population live in rural areas, and this reaches as high as 72% in Tajikistan.

In transition countries the share of agriculture in employment and national income is far greater than the average for western developed countries. However, among countries there are substantial variations in the relative size and importance of the agricultural sector. In 2004, which is the latest year for which these statistics are available (Table 1), the agricultural sector contributed about 14% of GDP for the transition region as a whole, ranging from 24% of GDP in Central Asia, 18% in the Caucasus countries to 5% in the EU New Member States (NMS).[5] Similarly, on average the proportion of the labor force employed in agriculture was 22%, but this varied from as little as 3%-5% in some EU NMS (Czech Republic, Estonia, Hungary, Slovak Republic) to about 13% in European CIS countries (Russia and Moldova) to 30%-40% in the Caucasus and Central Asia and as much as 48% in Turkey.[6]

[3] Csáki et al. 2006 was used as a major source of information
[4] Source: WDI (2002)
[5] Source: WDI (2006)
[6] Source: WDI (2002) and Prof. Zvi Lerman, based on official country statistics (http://departments.agri.huji.ac.il/economics/lerman-main.html)

Table 1

Share of Agriculture in GDP, 1990-2004, in percent[7]

	1990	1995	1998	2000	2003	2004
Total CEE+CIS	20.5	21.1	17.9	16.2	14.4	14.0
Total CEE (Central and Eastern Europe)	13.8	13.2	12.5	10.8	9.9	10.1
Total CIS (former SU without the Baltics)	27.2	29.0	23.4	21.5	18.9	18.0
New EU Member States (8)	11.3	7.1	5.9	5.1	5.0	4.9
EU Accession Countries (2)	20.5	17.5	17.5	13.5	12.5	12.5
Other CEE (5)	9.5	15.0	14.0	13.8	12.3	13.0
Euro CIS (4)	25.8	18.0	16.5	16.5	12.3	12.3
Caucasus (3)	24.0	40.3	27.0	21.7	19.3	17.7
Central Asia (5)	31.8	28.8	26.6	26.4	25.2	24.0
OECD	3.0	2.5	2.5	2.4	2.3	2.2

Source: WDI, 2006

Regarding the region's share of the world's agricultural resources, the role of the transition region appears relatively significant. The ECA countries comprise 13% of the world's area suitable for agricultural production and 20% of the world's arable land (Table 2). For most main agricultural products the region makes a substantial, but less than proportional contribution to world output. This contribution averages over 10%. However, their contributions to global wheat, meat and milk production is close to 20%. In the early 1990s the ECA countries importance in world agricultural production decreased as a result of the transition. Recently some aspects of crop and livestock production have regained their pre-transition share of world production (Figure 1).

Table 2

Percentages of Arable Land and World Population (2003)

	% of World Arable Land	% of World Population
Total ECA	19.9	8.0
Total CEE	3.4	2.1
Total CIS	15.0	4.2

Source: WDI, 2004

In the 1990s the regional agrarian economy was characterized by a sharp fall in production resulting from the collapse of the socialist system. The negative impact that stemmed from institutional disruption was compounded by a wide variety of changes, including simultaneous reduction in agricultural producer subsidies and in food consumption subsidies, and price liberalization. Other disruptive changes were declining input use, deteriorating machinery stock, and reduced domestic demand which was due to falling incomes. Lower foreign demand also occurred and this was because of the collapse of traditional export markets and of the internal "Eastern Bloc" trading system (CMEA). These combined events instigated the introduction of agricultural reforms but were

[7] "EU NMS" are Czech Republic, Hungary, Estonia, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. "EU Accession Countries" are Bulgaria and Romania. "Other CEE" are Albania, Bosnia-Herzegovina, Croatia, FYR Macedonia and Serbia and Montenegro. "European CIS" are Belarus, Moldova, Russia and Ukraine. "Caucasus" are Armenia, Azerbaijan and Georgia. "Central Asia" are Kazakhstan, Kyrgyz Republic, Turkmenistan, Tajikistan and Uzbekistan.

also accompanied by a dramatic drop in the terms of agriculture trade[8] leading to a significant drop in agricultural output. In 2000s agricultural production started to recover, but output recovery paths have diverged strongly, as with the former decline.

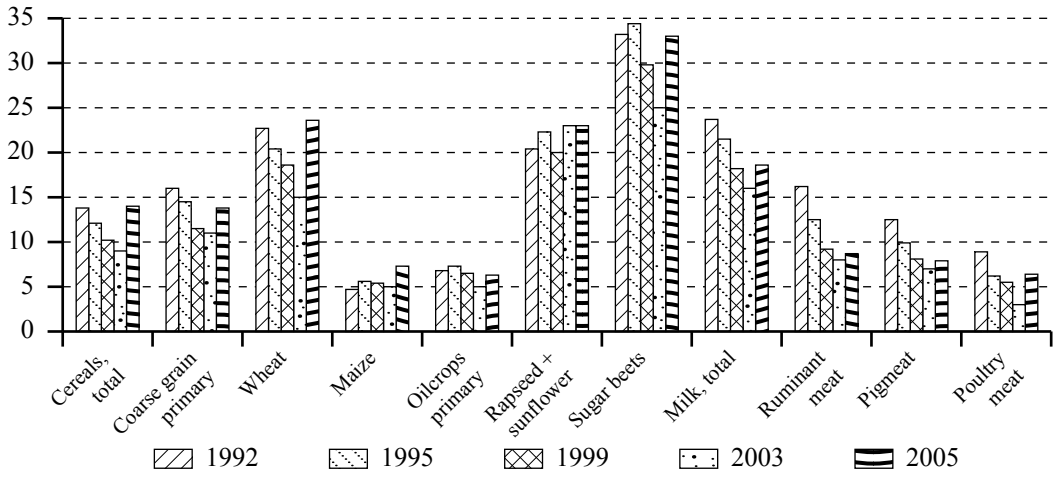

Figure 1: Production of ECA Transition Countries in Comparison to World Production
Source: FAOSTAT, 2006

As a whole agricultural production in transition countries continued to decline from the early 1990s until 2000 (Table 3). Latter years were mainly characterized by the resumption of growth, but with significant annual and inter-regional variations. Since 2001 only the Caucasus and Central Asia region showed consistent growth in agricultural production. In 2004 within the CEEC and CIS there was significant output growth, while in the rest of the 2000 decade there was either modest growth or decline.

Table 3

Agricultural Production Growth Rates for transition countries (%)

	EU NMS	EU Accession Countries	Other CEE	European CIS	Caucasus	Central Asia	Total
1992-1996	-2.8	-1.2	0.4	-4.7	-1.7	-4.6	-3.1
1997-1999	-1.4	1.7	1.3	-3.6	0.4	3.7	0.3
2000-2003	0.1	-2.5	-3.5	2.9	-0.5	3.2	0.7
2004	0.6	-3.9	8.9	-2.8	-5.0	-8.5	-4.5
2005	-0.6	3.9	-8.2	2.9	5.3	9.3	4.7

Source: FAOSTAT, 2006

Overall growth patterns have been different in the major sub-sectors (Table 4). Since 2000 recovery in the crop sector has been very strong, and the cereal sector was a major factor in this growth. On the other hand, the decline in the livestock sector continued, though at a much slower pace than in the 1990s.

[8] Macours and Swinnen (2000) estimate reductions of 40% to 80% in the terms of trade of agriculture for the countries they analyze.

Table 4

Growth Rates of Agricultural Sub-Sectors in ECA Countries (%)

Year	Agriculture	Crops	Cereals	Livestock
1992-1996	-3.1	-1.5	0.0	-4.5
1997-1999	0.3	-0.3	-0.7	-0.4
2000-2003	0.7	1.8	-1.2	0.9
2004	-4.5	15.5	33.5	1.2
2005	4.7	-2.4	-5.0	-0.5

Source: FAOSTAT, 2006

In these countries serious improvements in performance and efficiency still have to occur. The gap between global agricultural development and regional performance remains very large, particularly with respect to efficiency levels in OECD countries, which is indicated by an international comparison of cereal yields (Figure 2). This gap is particularly large when one considers CIS countries, but is also relevant to some CEE countries, shown by yield levels well below world and especially EU averages. In the mid 1990s agricultural productivity in CEE countries started to grow and is expected to increase further thanks to EU accession, due to both the required economic conditions and because of improved access to capital, technology, and know-how resulting from enlargement. Nevertheless there is no consensus about when and to what extent which these increases in productivity will materialize.

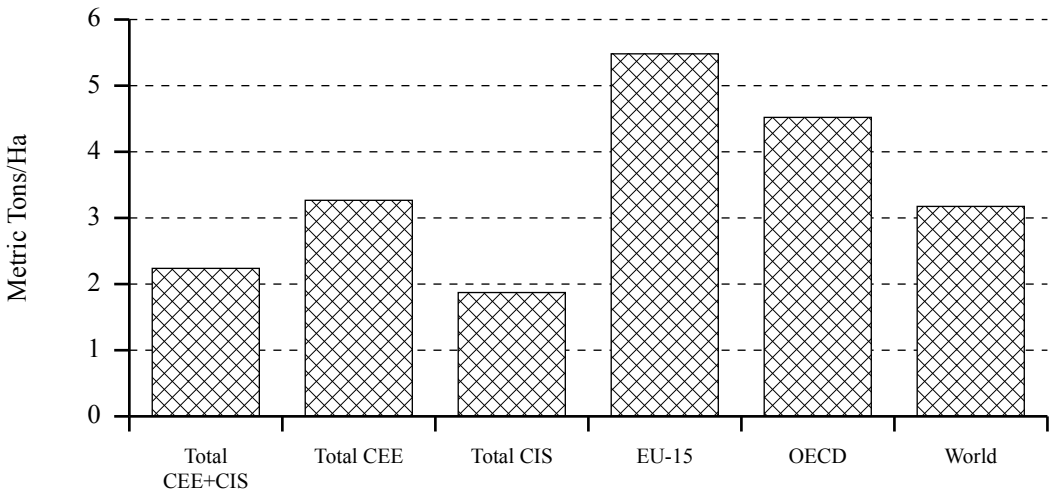

Figure 2: Comparison of Cereal Yields, in tons per ha, average for 2000-2005

Source: FAOSTAT, 2006

In recent years agricultural technology levels haven't improved much and cannot yet be considered adequate. In general, the decline in the terms of trade and the reduction in agricultural output prices have led to a radical decline in input use in agriculture. As for the region as a whole, the use of fertilizer inputs has remained more or less unchanged at only about 20% of pre-reform levels. An upward trend is apparent in the EU NMS and some large farms in Ukraine and Russia. A wide and growing divergence between CIS and CEE countries is also evident in terms of agricultural machinery availability.

By and large, the region's agrarian trade is steadily becoming integrated with international and European agrarian trade. This process is, however, not problem free as outside the EU internal trade is often distorted by protectionism and policy induced non-tariff barriers. In the great majority of the countries concerned, a liberal agrarian trade policy is also helping integrate the region's countries into world agrarian markets. Many of the CIS countries are either WTO members or have their admission pending. In recent years the inherent obligations of impending EU membership and partnerships have impacted heavily on many CEE and European CIS countries' trade policies.

Overall Lessons of the Reform Process

The relative inefficiency of agriculture is one of the major challenges facing the countries of the former Soviet Union and Central and Eastern Europe. During the socialist era, agriculture and food production were determined by government planning, regardless of efficiencies or comparative advantage. Input provision was often dominated by a few state-owned firms enjoying a monopoly. Likewise, a few inefficient state buyers with strong monopolistic power dominated marketing channels. The large-scale livestock and crop cooperatives were unsuited to market-based private agriculture. Creating viable private farming based on private ownership of land, and allowing market trends to determine levels and types of production have been some of the most difficult hurdles of the transition period.

In 1990-91 the region began creating market economies based on private property. The members of the agricultural economics profession both from the West and from the East were very active in providing advice and assistance to the countries in designing and implementing measures required for transition. In every country the most important basic elements of the reform process have been:

- the liberalization of prices and markets, the creation of a market-compatible system with conditions consistent with a macro agrarian economy;
- the privatization of land and transformation of the inherited economic structure;
- ending monopolization and privatizing food processing and trade in agricultural products and capital goods;
- the creation of a functioning rural bank system; and
- the establishment of an institutional structure and system of state administration vital to market economies.

There has been little difference between countries in terms of what needs to be done. The initial advice regarding required transition measures was definitely appropriate. However, there are major differences among countries when it comes to the pace of achievement and the manner of implementation. The progress achieved by individual countries on the path to creating market based agriculture has been quite diverse. A World Bank analysis identifies four groups of countries in the region based on a 1 to 10 scoring system reflecting progress from a centrally planned system to a full-scale market economy.[9]

Obviously the highest scores were achieved by the 8 **new EU member countries** prior to their 2004 accession to the European Union. These countries successfully completed all the major transition tasks by the time of accession. According to the year 2006 analysis, countries belonging to the **advanced reformer group** (total reform score above 7.0) continued their progress in reform-

[9] Source: Csáki et al. 2006

ing their agricultural policies. It is not surprising that this group is led by the two recent EU member countries, Bulgaria and Romania. However, it should be be mentioned that – according to World Bank indicators – their preparedness level is less than that reached by the EU-8 countries prior to accession. In this group we also find Albania, Armenia and the Kyrgyz Republic, which implemented significant reforms in the late 90s but since then have not progressed any further. Progress in Serbia and Montenegro is quite remarkable, but still not surprising when one considers the history of this country.

The performance of the **moderate reformer group** (total reform score below 7.0 and above 5.0) is less homogeneous regarding the direction of change. In 2005 Bosnia-Herzegovina, the Russian Federation, Ukraine and Moldova made measurable progress in their agricultural reforms. Azerbaijan and Georgia lost significant ground, underlining the slowdown in the reform progress during the last year. The **slow reformer group** (total reform score below 5.0) also includes Tajikistan which, during recent years, has backtracked on many significant reforms. Belarus and Turkmenistan have initiated little change in their agricultural policy framework and basically have a rather low degree of market-oriented reforms. However, Uzbekistan has made measurable progress in rural finance and institutions.

Regarding the individual country groups, some further observations can be made:

- Potential EU membership has accelerated reforms in EU accession and candidate countries, notably in Romania, Bulgaria, and Croatia which were lagging somewhat behind the new EU member counties. The CEE agriculture policy agenda is characterized by efforts to complete the transition, to cope with increased social problems in rural areas, and to adjust to an evolving CAP. Unfortunately, facilitating increased competitiveness has often been stymied by farm lobby demands to provide immediate protection in the agricultural sector and to provide income transfers to farming populations.

- Although there are some positive exceptions, in the CIS countries the reform process has generally proceeded at a much slower pace. In most countries distortions remain in the production, pricing, and marketing of "strategic" products, and the planned economy's system of institutions and instruments has not yet been fully dismantled. Only moderate progress in agricultural reforms has been achieved in the core CIS countries (Russia, Ukraine, Kazakhstan), although recently measurable progress has been achieved. Some of the smaller CIS countries such as Armenia, Azerbaijan, and Georgia had accelerated the reforms in the few years prior to 2005, but since then had not taken further steps. At the lower end of the reform scale, Uzbekistan also made some progress. On the other hand, nearly a decade after the beginning of the transition, Turkmenistan, Tajikistan and Belarus have basically remained planned economies.

Beyond these broad patterns, a few major statements can be made regarding the general experience of the transition process so far, which were also confirmed by the seminar deliberations. Overall, the reform results have not yet met initial expectations. The relatively rapid growth of production that characterized the Chinese reforms has not occurred. This has been because the transformation of the economic structure has proved far more complex than originally envisaged and because in most countries the pace of reforms has been, at best, uncertain. Specifically the following can be stated:

- Transforming the economic structure has been difficult. This is largely because the basic building block of farming, the private farm, has not been fully developed. In the CIS to a large extent the inherited large-unit structure has survived the changes.

- The introduction of the legal and institutional framework needed for the smooth operation of markets has also proved to be a highly complex and politically difficult task, and arguably still constitutes one of the largest obstacles to the sector's growth. It is widely recognized that, at the outset of transition, the importance of functioning institutions was underestimated. In the years to come, the reform of institutions will determine the sustainability of agricultural development in the ECA region. However, this problem has had implications well beyond the transformation of the agricultural sector.
- Many issues related to land markets remain unresolved, particularly in CIS countries, and this compounds the sluggishness of the change process in agricultural structures.
- Surprisingly, the most progress has been achieved in price and market liberalization, but there remains a substantial lag in solving agriculture's financing problems, and in the liberalization of agroprocessing and input supply, and in the area of institutional reforms.
- In all countries the process of agricultural reforms has been strongly influenced by day-to-day politics. Very often politics have been and still are determining the pace and extent of reforms, and this at the expense of economic rationality. In general, there is a lack of a carefully considered, long-term strategy, and an objective and realistic evaluation of the economic consequences of the different possible solutions. This means that the short-term economic costs associated with the transition process have been greater than necessary, even in the most advanced countries. Generally, the best progress has been achieved in countries that have undertaken radical and rapid reforms, and this despite short-term adjustment difficulties. In most cases, the desire for a gradual approach indicates a lack of will; and this is especially true in the CIS countries.
- More generally, the pace of transformation of the agrarian sector and the rural economy is lagging behind the rate of changes in the economy as a whole. As in western countries, the farm lobby has often stymied increased competitiveness in the agricultural sector by seeking immediate protection for the agricultural sector and income transfers to farming populations.

Moreover, the following lessons can be drawn from those countries at the forefront of transformation:

- The general economic upswing will likely assist governments to undertake agricultural reforms. The greatest progress has been made in transforming the sector in those countries where the general economic recovery has also begun.
- Progress in the non-agricultural segment of the rural economy is of key importance toward agriculture's recovery. In the great majority of those countries at the forefront of the reform process, it has been the rural economy's upswing related to agriculture that has allowed a substantial reduction in the numbers of people employed in agriculture, and also an improvement in the efficiency and competitiveness of agriculture itself.
- An important factor toward the success of the reform process is consistency when introducing reforms and the combined implementation of parallel steps in areas related to reforms.
- Progress in reforming the overall economy has strongly affected agricultural transition thanks to improvements in the stability of the reform process, an increase in access to capital, technology and know-how, and stimulation of private initiatives and the entrepreneurial climate.

Critical issues regarding transition and the current situation

Although there are continuing differences in the progress of reforms and in the situation in the agriculture sector, the presentations made during the course of the seminar confirmed that there are a number of common issues which relate to the whole region

a) Liberalization of market and trade policies has been implemented to a much greater degree in CEE countries as compared to CIS countries.

In most CEE countries, the macro-economic environment for agriculture ts characteristic of market economies has been developed. The prices and the regulatory system are basically open to world market influences. Agricultural policy developments are fully determined through EU membership or by the process of EU accession. However, state intervention in both price formation and trade policy remains much more direct in the majority of CIS countries. It is noteworthy that in most of these countries, agriculture is still net-taxed and suffers serious losses due to current price policy and trade restrictions (especially export controls and taxes), which prevent it from competing in world markets. This occurs despite frequent statements in support for agriculture. It would appear that governments are still trying to make agriculture provide cheap food for the urban population. In Russia there has been significant progress toward a more liberal agricultural policy. Unfortunately, in Ukraine, interference by the national and regional authorities in the agricultural sector has increased.

b) EU accession has had a tremendous impact on new member countries' agriculture sector. Predictions regarding this impact were not fully accurate.

EU agricultural policies and the geographical proximity of one the largest single market for agricultural products in the world have a continual impact upon agricultural and trade policies in all the countries of the region. Obviously the greatest degree of EU influence can be observed in those countries which recently become EU members or which are in the process of accession. Prior to their joining the EU, several forecasts were made regarding enlargement's impact on the first large group of CEC countries' agriculture sector. This topic involved many seminars and discussions, and predictions were not fully accurate. A number of papers discussed the initial EU membership experiences in the NMS. On the whole consumers and agricultural producers both in the EU-15 and NMC benefited from enlargement. The tremendous impact which bigger markets and increased competition would have on prices and supply were not adequately foreseen. In every NMC introducing the CAP has increased farmers income and farm profitability. However, the impact experienced in the individual countries depended on how well-prepared the country was for EU membership and on pre-accession agricultural policies. Post-accession progress has been less satisfactory in those countries which in the pre-accession period focused on price and income support rather than targeting structural efficiency improvement and competitiveness in the agricultural sector allowing it to fully profit from the EU market.

c) In most Central European countries privatization of land and the related reorganization of large farm units have almost been completed. However, privatization still remains a relevant subject in most CIS countries. But currently issues that go beyond privatization are in the forefront.

At the seminar several papers discussed the outcomes and lessons of land reform and land privatization. In the CEE countries, land privatization based on some form of restitution is largely approaching completion. A mixture of small and large units characterizes the new farm structure.

Almost all the agricultural land has been privatized and a significant portion is used by individually managed smaller farms. Existing large- scale farming has undergone significant changes as it now privately owned and adapted to market economy conditions. In some countries, the legal status of land ownership is not yet completed. Establishing land registries and a viable land market remain priority issues. In a few countries there is a heated ongoing debate regarding land ownership by companies and foreign nationals.

Although land ownership in key CIS countries (Russia, Ukraine) has formally been transferred into private hands, larger farms still remain intact. Land leasing has meant that particularly in Ukraine and Russia an increasing number of large corporate farms have emerged. In these countries the role of independent private farming remains relatively small, not least because of undeveloped market relations. Often, the policy climate in these countries openly discriminates against individual private farms. Due to the high political and economic sensitivity toward the land reform issue, radical changes have been carried out in only very few countries of the former Soviet Union. This is the case in Armenia, Georgia, and Kyrgyz Republic where independent private farming now dominates. In Uzbekistan and Tajikistan private ownership of land is still constitutionally prohibited and the current leasehold arrangements contribute to uncertainty.

d) Though regional agriculture offers a huge potential comparative advantage in many areas, the utilization of this potential is constrained by limited competitiveness in the farming sector.

The region has good potential for agricultural production .This potential is still underutilized. Definite progress can be observed in some of the NMCs which were able to increase both production and exports, while in the CIS agricultural production still has yet to recover. There are a number of impediments limiting regional farm competitiveness and these were also discussed in the seminar. In CEE countries fragmented land ownership and a lack of effective farm consolidation together with restrictions on land ownership and land markets remain serious hurdles. Many of these countries suffer from the "small farm/large farm" dilemma. The future of family farms and corporate farms is not clear. In the CIS countries a dearth of essential public goods and a shortage of financing and capital coupled with an absence of a transparent support policy framework represent major obstacles.

e) Privatization and modernization of agroprocessing and input supply have made progress in most countries but not in some CIS countries.

In the new EU member countries privatization of the agricultural environment was done following the general principles of privatization, which were already in place in the 90s. Some lag can be observed in Romania, Bulgaria and the countries of the former Yugoslavia. In several of the new EU member countries, significant foreign direct investment (FDI) has gone into modernizing the agroprocessing sector. On average the share of total FDI directed to the agro-food sector is around 15%, with the vast majority of the agro-food FDI going to the agro-industry rather than primary agriculture. Investments have been attracted by relatively cheap labor costs and integration in the EU market, but also by the extent of liberalization and transition to a market economy. Combined with agroprocessing industry privatization, there has been a significant increase in vertical sectoral integration. This process, which has often been motivated by foreign investment, has been varied in form and has sparked improved access to capital, inputs, and technology for farms. To ensure a regular flow of high quality raw materials, agribusiness firms have introduced arrangements to encourage farmers toward greater production and better marketing. These firms have also tried to eliminate constraints which have hurt economic activity since the onset of the transition. Foreign companies have played a leading role in developing these arrangements.

In most of the CIS countries a less effective solution was adopted for privatizing the food industry and agricultural input suppliers. Unlike other areas of the economy, during food industry privatization priority was given to agricultural producers. They were awarded majority ownership of specific branches either on favorable terms or entirely free of charge. Contrary to expectations, this solution did not result in new, well-capitalized owners and better conditions for agricultural producers. In fact, the food industry's technological decline accelerated and a complicated ownership structure made it extremely difficult to involve foreign capital. However, over the last few years progress in privatizing and removing monopolies in the agroprocessing industry has brought about restructuring and increased efficiency in the food processing sector. In Russia and Ukraine thanks to restructuring the ownership system there has been a nascent recovery in the food industry.

f) Rapid restructuring of food and agriculture markets and major restructuring of food retail system is occurring.

The last decade has seen major changes in markets in terms of regional agricultural producers. In most of the countries a *retail revolution* is taking place. Getting products from the farm field to the consumer is becoming vertically integrated. Product chains now control every element of these systems .Some of the farms, especially small ones, are finding it hard to join newly emerging chains and to participate in the restructured markets. EU enlargement has caused increased regional specialization in the processing industry and the creation of regional procurement systems within the retail sector. To adjust to these new circumstances farmers need to engage in cooperative and collective action in terms of marketing while the public needs to support and facilitate the process. Presentations at the seminar provided several examples of emerging value chains in the region and cases of successful marketing cooperation among farmers in restructured markets.

g) Lack of agricultural financing continues to be one of the most serious constraints to agricultural growth

In many CEE and CIS countries there is still a major problem. Since 1994 in the CEE countries the financing of agriculture has improved considerably, but still remains relatively weak. The new private financing institutions require enhanced managerial building and are financially vulnerable. During recent years, however, a significant share of the banking sector has become foreign owned, which has improved efficiency and profitability. The creation of an agriculture-oriented rural banking network has been in progress, which has brought about budding agricultural credit co-operatives and financial institutions specializing in rural areas.

However, in the great majority of CIS countries the rural financial system is not yet fully adjusted to the market based privatized agriculture which exists in developed countries. The emerging private banks, however, are providing increased financing to the agricultural sector. In the countries where agricultural transformation is the most advanced (Armenia, Georgia, and Moldova) there is a nascent system of agricultural credit co-operatives and a growing number of loans extended by the processing industry

h) Institutional reforms proceed slower than all other reform areas throughout the region.

Since 1995 in CEE countries institutional reforms have accelerated, stimulated by the EU accession challenges. However, despite these tangible developments, the agriculture institutional system requires further transformation. Priority still must be placed on effective integration into the common market and to operation of the EU Common Market Organization. In addition to technical

and human capacity building in public administration, further qualitative development is required in practically all areas of the institutional systems for market-oriented agriculture, including consulting, training, and research.

In several CIS countries a mildly restructured institutional system of the former centrally planned economy still exists and hinders sectoral transformation. In other CIS countries, the state has not assumed an alternative role, but merely withered away. A general economic recession and disruption have meant the state has been unable to fulfill some of the key roles in developing a market economy. Thus, the operation of the institutional system has been fundamentally disorganized, and this problem extends to enforcing the rule of law, collecting taxes, and establishing the basic conditions for macro-economic stability. Underpaid and unmotivated civil servants often indulge in corruption. Training and research centers suffer from severe financial problems. In some countries they receive little or no financial support from the government budget. However, overall regional institutional stability, accountability, and efficacy appear to be improving, and in some individual countries there has been major headway.

Agricultural economics in the region

The seminar provided an opportunity to assess the status of the agricultural economics profession as well as progress in research and education regarding regional agricultural economics. Presentations made by regional authors demonstrated how recent changes' impacted on the profession. Research in agricultural economics is becoming more empirical but largely remains descriptive and provincial Quantitative methods of analysis are used more frequently and effectively. Researchers from the region now more often use surveys and sophisticated statistical analysis methods. Initial signs of integration between general and resource economics are evident as well as an increased level of multidisciplinary activity. Rural development problems are traditional research subjects in Central Europe but represent a new area of research in the CIS countries In most of the countries agricultural economists continually support policy making through analysis and projections.

Agricultural economics within the region remains in an early phase when it comes to integration with its mainstream OECD counterpart. The new generation of CEE agricultural economists is in the forefront of change and is becoming visible at international conferences and projects. Unfortunately, the names of authors from the region are rarely found in major international journals and at high profile international meetings. There are, however, more participants from the region in Western European agricultural economics PhD programs, but few at US universities. In EU-15 countries EU enlargement presented new opportunities for joint projects and for various forms of training. The IAMO in Halle is instrumental in changing the profession at the regional level by conducting research on regional problems. This is done with the participation of CEE scholars and by training numerous PhD students from transition countries.

Future priorities for the regional agricultural economics are:

- Greater integration into mainstream developed agricultural economics,
- Increased emphasis on empirical analysis, use of analytical approaches and advanced methods of policy analysis and projections,
- Opening towards rural development problems and multidisciplinary activity,
- Quality improvements when teaching subjects of agricultural economics, including changing the curricula,

- Upgrading local PhD programs and facilitating graduate study focusing on the cream best young generation scholars,
- Strengthening quality requirements and controls in agricultural economics research,
- Maintaining traditional relations including information among regional agricultural economists.

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The seminar revealed the strength of the European agricultural economics profession, specifically in Central and Eastern Europe. The presented papers and subsequent debate spurred numerous useful conclusions and lessons for policy makers, academics, and researchers.

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New challenges for Hungarian agriculture

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Abstract

This paper discusses Hungarian agriculture's future perspectives up to the year 2013, which marks the end of the EU financial period 2007-2013. It presents results of the authors' modelling work, and provides a brief analysis of quantitative changes in principal macro-indicators and qualitative changes in key agricultural policy areas. The authors' goal is to energize the lacklustre agricultural sector by offering guidelines to policy decision makers.

Key words

Hungarian agriculture, EU integration, development perspectives, impact analysis

Introduction

Agricultural production and land use are facing growing global dilemmas. These dilemmas are essentially how to satisfy the rapidly rising and often contradictory demands of society and politics with limited natural resource availability.

Like in many other European countries, Hungarian agriculture is facing new pressures to adapt. The global need for food, feed, and bio-energy is rocketing while the EU's security of production is likely to lessen due to climate change, liberalized international trade in agricultural and food products, and unnecessarily high and strict standards. Other factors are the upcoming Health Check on the Common Agricultural Policy and the implementation of a Single Payment Scheme (SPS) in Hungary.

Will Hungarian agriculture be able to cope with the new challenges? Can it adapt? What measures are needed to help the adaptation process? These are the principal questions we will try to answer.

1. Failure to adapt during recent years

The Hungarian agriculture and food industry had no marketing problems prior to the political and economic transition. Hungarian products could easily be sold to COMECON countries; moreover, half of Hungarian exports were even competitive in Western Europe (Juhász *et al*., 2002). In an essentially demand driven market, small and large farms, traditional and 'industrial' agriculture, processors and retailers, plus local and international organisations operated smoothly together.

When EU accession arrived, half of agricultural land was being used by about 40 thousand farms (including 321 joint stock companies and approximately 1.5 thousand cooperatives having an average of 500 to 600 hectares of land) while the other half was cultivated by over 700 thousand individual farms and households. Of the latter, 100 to 110 thousand were commercial farms, whereas the rest were mainly producing for personal consumption, occasionally selling their surplus at local

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markets. Tiny farms and households produced abundant livestock and orchard products without any market coordination. However, privatisation meant an increasingly dispersed production structure, and the subsequent rapid decline in domestic food processing and retailing, coupled with the advent and influence of multinational companies, created almost unsurmountable adjustment challenges. Between 2004 and 2006, over 200 thousand livestock farmers abandoned production.

In addition to losing its East European markets, Hungarian agriculture also encountered serious losses in the domestic market. The country became a net importer of dairy products, fruit, and pork. The agricultural and food trade balance has fallen from almost €1.6 billion in 2001 to below €1 billion in 2006[2].

The selection process was harsh and mostly unexpected, but loss in market share was also partially due to lack of cooperation between agriculture stakeholders and farmers' inability to adapt. But there were other reasons too. For example, Common Agricultural Policy (CAP) support schemes and market regulations also had an impact as they differed sharply from the national system which was in place until 1 May, 2004. Thus, accession's impact strongly varied among agricultural sectors and farm businesses (Udovecz and Potori, 2005).

Undoubtedly livestock production suffered the most, but the performance of the fruit and vegetable sector was also disappointing. However, offsetting this are major achievements such as better environmental management, increased EU funding, higher incomes for crop producers, and greater cooperation between farmers. But in the medium term this is still insufficient to stop the erosion of the agricultural and food trade balance (not counting potential bio-fuel exports) and a allow stakeholders to better exploit ecological conditions and natural resources in a economical and environmentally sustainable way.

2. Emerging challenges

In the EU single market already visible trends will undoubtedly prevail and become stronger. The globalisation process will accelerate and inevitably concentrate both supply and demand. Across Europe distribution networks will further concentrate food processing. Commercial agriculture will need to respond by increasing the economies of scale or by intensifying cooperation and integration along the food chain. The WTO negotiations will eventually conclude with an agreement that will strengthen international competition. The EU will most certainly have to reduce import duties and cut subsidies.

While new CAP reform is unlikely before 2013, the *Health Check* will eliminate some of the internal market constraints such as the dairy quota, compulsory set-aside, cereal intervention, etc.[3] In 2009, Hungary will introduce the Single Payment Scheme. New payment entitlements will be created and allotted and this will test landowners and land users' ability to cooperate.

Profound changes will occur and new phenomena may bring about unexpected events. In various densely populated regions of the world (e.g. China or India), economies are expanding at a faster pace than food production, which is due to a lack of land and water. In these countries, the number of people who can afford a higher standard of living and higher quality food products is rapidly growing. The global demand for cereals, feedstuffs, and meat is accelerating. Most of the excess demand can only be satisfied by imports.

[2] However, in 2007, it increased to €1.6 billion due to the huge export volume of maize from intervention stocks.
[3] See Agra Facts 44-08 (20/05/08).

Developed countries and regions consider the security of food and energy supply as equally important strategic objectives. Therefore the demand for agricultural raw materials for producing food and energy will continue unabated. The partial (5 to 10 %) replacement of fossil fuels with bio-fuels requires significant land area, and absorbs considerable quantities of cereals, oilseeds and sugar from food markets.

Despite some scepticism, it is now widely accepted that, other than the long-term negative impact, climate change will soon create increasingly extreme weather conditions. This will undermine food security and increase the chances of unpredictable natural disasters. In the Carpathian Basin, it is necessary to prepare for hotter and drier vegetation seasons. According to the Meteorological Service, in Hungary between 1901 and 2004, the annual mean temperature increased by 0.76 degrees Celsius while precipitation declined by 11%. These worrisome trends need to be considered. Luckily, the country has the capacity to act as huge amounts of water flow through it.

3. The road until 2013: catching up or lagging behind?

To illustrate Hungary's future prior to 2013, we relied on a broad range of information and expertise. The framework for this prediction was based on the mathematical economic models developed by the Research Institute for Agricultural Economics (AKI):

- the HUSIM, which is a national and regional partial equilibrium econometric simulation model (Mészáros et al., 1999; Potori and Udovecz, 2004);
- the FARM-T, which is an agent-based partial equilibrium simulation model used for the more in-depth investigation of output changes for certain agricultural sectors and the underlying structural progress (Himics and Potori, 2007; Potori et al., 2007; Himics, 2008);
- the MICROSIM, which is a deterministic simulation model for examining the reactions of the different farm categories as well as individual enterprises included in the Farm Accountancy Data Network (Törzsök et al., 2006).

Data have been utilised from a number of sources. These include the Hungarian FADN and projections by the European Commission (2007), the OECD and FAO (2007), the USDA (2007) and FAPRI (2007). Also included in the modelling process are a number of events either previously known or likely to occur and influence international and domestic market developments. The results reflect the joint effects of numerous factors. Among these are the implementation of the Convergence Program, and the competitiveness of Hungarian agricultural, and factors related to food products with particular attention paid to prices. Other related factors are logistic opportunities, and transport distances and costs. Combined with the previously listed are biological limits, price and income flexibilities, changes in regulations, SPS introduction, etc. Based on these and various expert opinions, two medium-term development scenarios are outlined.

The baseline scenario (A) is viewed as the probable outcome of current trends in which Hungarian agriculture lags behind countries and regions with more dynamic and commercially successful agriculture. This scenario is characterised by little innovation and cooperation, and a slow adjustment process. In the medium term the growth potential of agricultural output would remain limited with real wages almost stagnant or even in decline despite increasing financial support. Rural areas will continue to lose jobs at a fast pace.

Obviously, this future can and should be avoided. A more favourable constellation composed of external factors toward faster economic growth and above all a more innovative and cooperative attitude among agriculture's stakeholders offer the foundation for a more optimistic adjustment: **scenario (B)**, offering expansion and higher income potential, and getting Hungarian agriculture closer to where it wants to be. The following performance indicators better quantify the stakes and the potential outcome stemming from the agri-economic adjustment process.

During 2006-2013 the value of agricultural production (including direct support) is projected to increase by 17% following the baseline scenario, with crop production and livestock farming accounting for 25% and 4% growth respectively. If the adjustment process proves more successful and external conditions more favourable, the value of production could increase by 35%, with crop production and livestock farming accounting for 50% and 9% growth respectively. Quantities, prices, and subsidies would all contribute to this increment.

Agricultural output is projected to increase by at least 6% following the baseline scenario and up to 25% under scenario B. Even then, the conditions for restoring the balance between the two principal branches will continue to be far from 'congenial'. Under the baseline scenario, crop and livestock production may increase by only 8% and 1% respectively. Whereas if Hungarian agriculture actually manages to make up ground, their output is expected to grow by 32% and 12% respectively (see Figure 1).

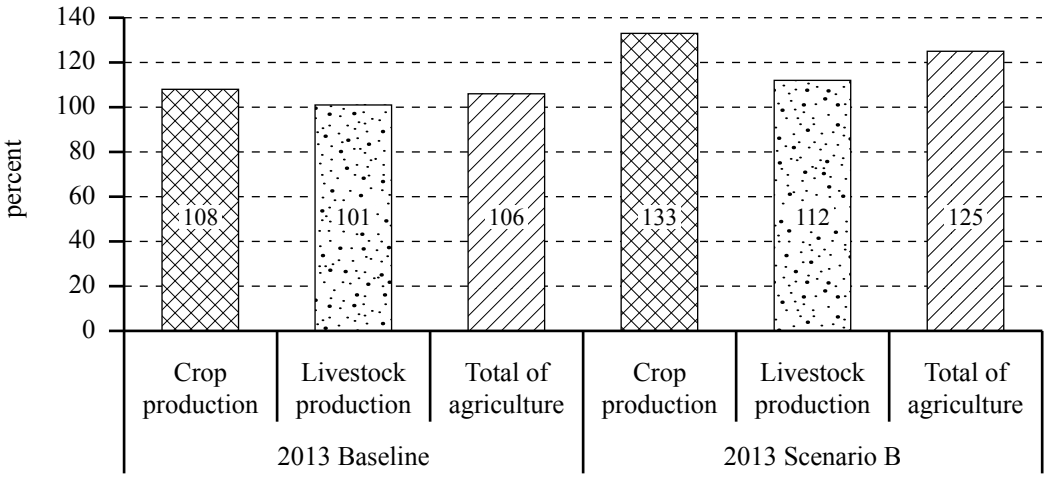

Figure 1: Projected changes in agricultural output in Hungary (2006 versus 2013, 2006 = 100%)

Source: KSH and results of modeling work at the Agricultural Policy Research Department, AKI

In the next few years the position of crop producers' (and perhaps some ruminant farmers) will usually oppose those in grain fed livestock such as pig and poultry farmers (see Table 1). Livestock farmers with little land are going to face cumulative risks.

Table 1

Projected bankruptcy rate of Hungarian farms in percentage by 2010

Profile	A scenario			B scenario		
	Individual	Enterprise	Total	Individual	Enterprise	Total
Arable	0.48	5.72	0.88	0.44	5.41	0.81
Ruminants	2.20	10.43	2.91	2.20	1.34	2.13
Grain fed livestock	3.58	32.79	8.57	2.88	20.02	5.81
Permanent crops	0.72	9.61	1.39	0.71	8.00	1.25
Horticulture	0.93	0.00	0.90	0.93	0.00	0.90
Miscellaneous	0.10	4.52	0.21	0.08	3.79	0.17
Total	*0.65*	*9.55*	*1.20*	*0.60*	*6.87*	*0.99*

Source: results of modeling work at the Farm Business Analysis Department, AKI

Under scenario B, positive changes are predicted for farming incomes. The nominal profit before tax may almost double, whereas its real value may increase by 50%. The bad news is that if current trends continue, the real value of entrepreneurial income will at best remain at its present level. The bulk of the potential income surplus will mostly come from crop production (see Figures 2 and 3).

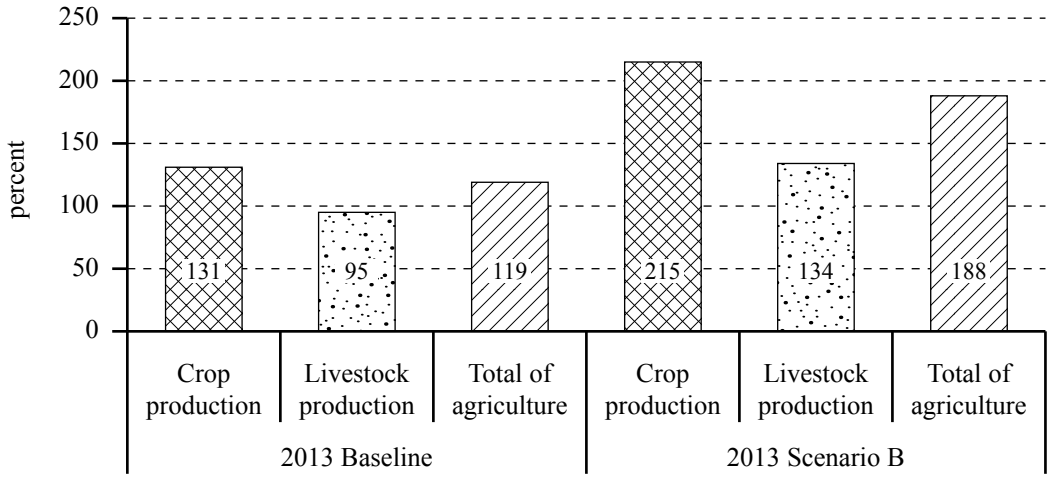

Figure 2: Projected changes in Hungarian agricultural income at current prices (2006 versus 2013, 2006 = 100%)

Source: KSH and results of modeling work at the Agricultural Policy Research Department, AKI

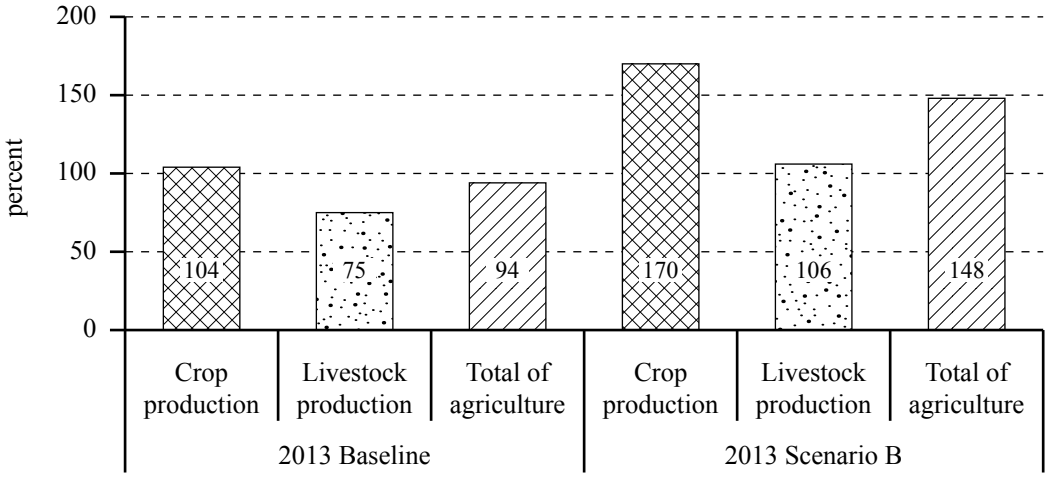

Figure 3: Projected changes of real agricultural income in Hungary (2006 versus 2013, 2006 = 100%)

Source: KSH and results of modeling work at the Agricultural Policy Research Department, AKI

These differences in the agricultural economy's potential performance will be slightly smaller for foreign trade turnover. That is because of a boost in domestic consumption which will occur if Hungarian agriculture manages to make up ground, which will reduce excess stocks. Nonetheless, the difference should not be underestimated. Following the baseline scenario, by 2013 the realistically attainable value of exports could be €4.5 billion, while under scenario B it may exceed €5 billion, which in both cases includes bio-fuels. By a large margin the trade balance will remain positive. Following scenario A, its value may indeed rise to between €1.6 and 1.7 billion or between €2.2 and 2.3 billion under scenario B (see Figure 4). If one excludes bio-fuel trade, by the end of the projection period the balance would fall between €1 and 1.1 or 1.7 and 1.8 million respectively.

If one considers the major sectors following the baseline scenario, in the medium term the area and production of wheat is expected to stabilize between 1 and 1.1 million hectares and 4.3 and 4.6 million tonnes respectively. Domestic consumption is unlikely to exceed 3 million tonnes a year. The expansion of feed use will be constrained by stagnation in the livestock sector and by excess quantities of by-products from the emerging domestic ethanol fuel industry. For the same reason, in the medium term the demand for feed maize is projected to remain around 3.5 million tonnes a year. However, by 2013 ethanol production may boost total maize consumption over 7 million tonnes a year. In the short run, high feed grain prices have already cut excess stocks significantly. While the area devoted to maize is projected to stay between 1.2 and 1.3 million hectares, production may increase gradually beyond 9 million tonnes by 2013. The combined export volume of wheat and maize could reach around 4 million tonnes. Under scenario B, wheat production may exceed 6 million tonnes while maize production may approach 11 million tonnes by 2013 (see Figure 5). From this, exports could reach 2.3 million tonnes of wheat and 3.2 million tonnes of maize.

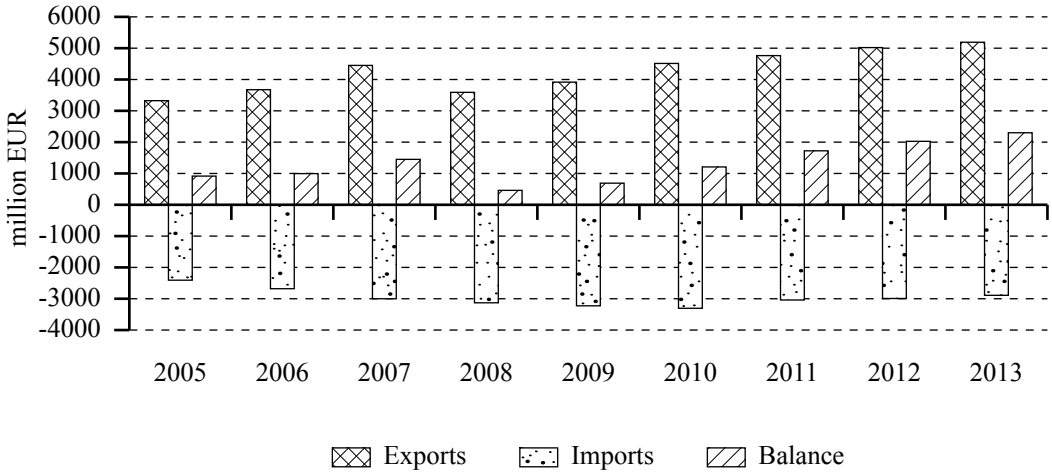

Figure 4: Agricultural and food trade* under scenario B (2005-2007 with projections to 2013)

* Including biofuels.
Source: Agricultural Markets Research Department and results of modeling work at the Agricultural Policy Research Department, AKI

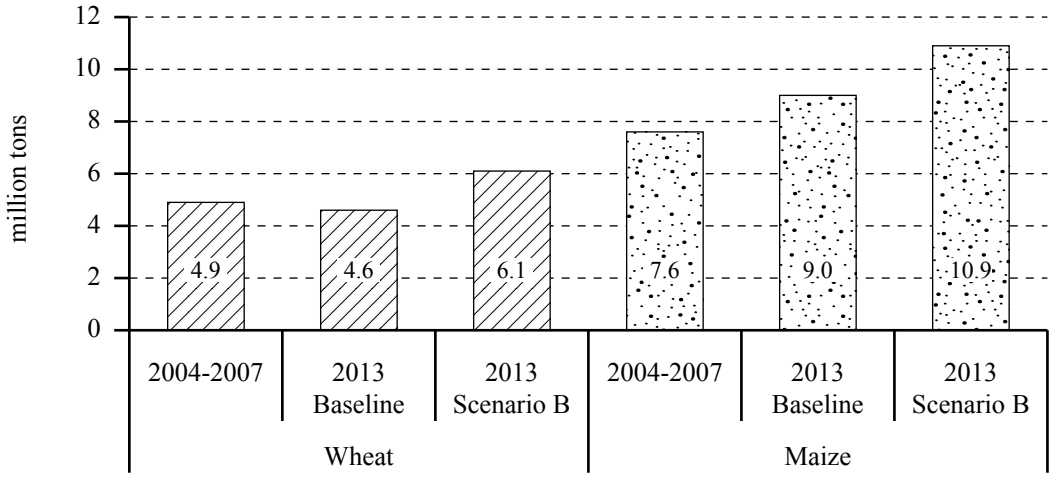

Figure 5: Hungarian production of wheat and maize (2004-2007, with projections to 2013)

Source: KSH and results of modeling work at the Agricultural Policy Research Department, AKI

In terms of area and production volume, sunflower is by far the most important oil crop in Hungary. In 2007, the area devoted to sunflower was slightly over 0.5 million hectares, showing virtually no change from 2006 or 2005. During 2004-2007 the area devoted to rape oilseed increased by over 220%. In 2007, around 0.5 million tonnes of rape oilseed was harvested from an area of over 0.23 million hectares, both these figures record-breaking. In the near and medium future, the phasing in of direct EU support coupled with the demand for edible sunflower seed oil and bio-diesel produced from oilseed rape production will likely remain profitable. Therefore, according to the baseline scenario, only small changes are expected in the output of these crops. However, under

scenario B, oilseed rape production is projected to more than double while by 2013 sunflower seed production may reach 1.3 million tonnes (see Figure 6).

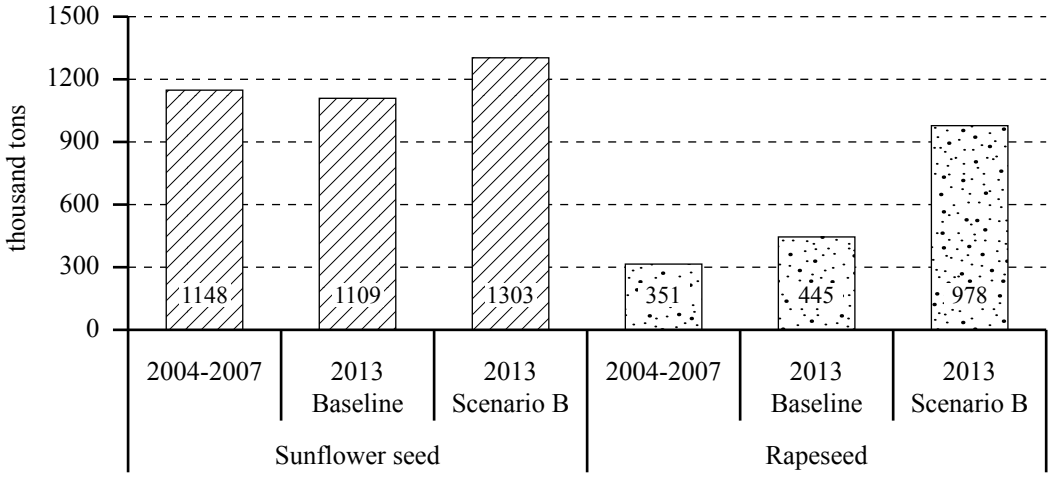

Figure 6: Production of sunflower seed and rapeseed in Hungary (2004-2007, with projections to 2013)

Source: KSH and results of modeling work at the Agricultural Policy Research Department, AKI

In Hungary annual diesel fuel consumption is currently about 2.2-2.3 million tonnes. Assuming this figure remains stable, to comply with the 5.75% 2010 replacement rate set by the EU Biofuels Directive for renewable energy resources, the country would need around 180 thousand tonnes of bio-diesel for domestic use which would require processing more rapeseed than the total 2007 output. Naturally, it is also possible to use the average yearly excess sunflower seed stock of 0.5 million tonnes to produce bio-diesel.

In the coming years a slight drop in the total number of cattle is expected; but under scenario B it may in the medium term increase by 3% (see Figure 7). This represents a positive trend given the continual decline which occurred between the start of economic transition and EU accession.

In the future a decline in the number of dairy cows is likely under both scenarios. But because of improving efficiency and increasing yields, by 2013 at the latest milk production may almost fill the national quota. In the medium term, the proportion of milk sales to processor will nudge up, and direct marketing of milk and dairy products will thus remain substantial (about 10%). Milk production's low profitability indicates that the sector may not be able to generate the necessary financial resources for the urgent modernization, *inter alia*, demanded by EU environmental requirements. In the near future anticipated higher producer prices may help improve surviving dairy farms' net incomes.

Following accession direct support for production, plus guarantees provided by the beef intervention system, and the growing demand for fattened bulls bolstered beef production. Partial or full decoupling of support may temporarily discourage producers, but by 2013 a slight increase in the number of suckler cows is projected, while beef production itself is projected to remain stable. However, under scenario B, in the medium term beef production may increase by nearly 12%.

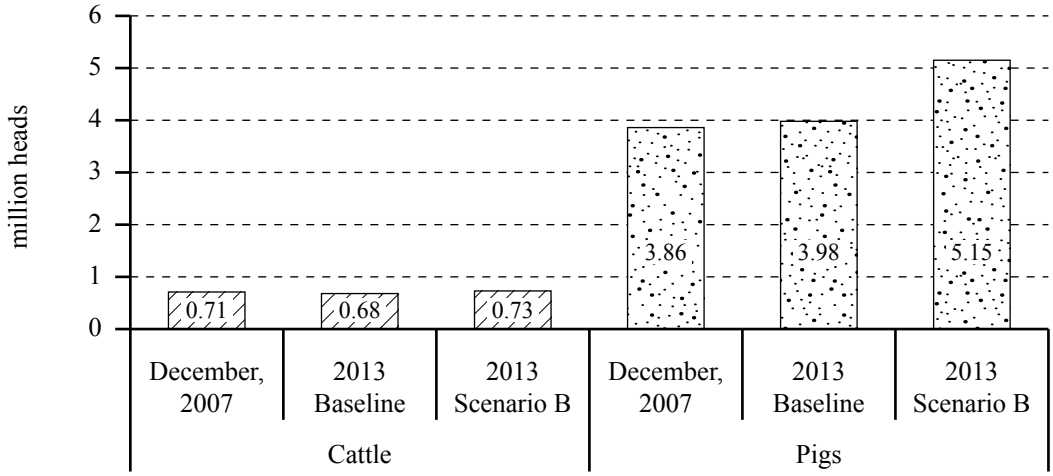

Figure 7: Number of cattle and pigs in Hungary (2004-2007, with projections to 2013)

Source: KSH and results of modeling work at the Agricultural Policy Research Department, AKI

A steady decline in live cattle imports is expected because the complementary national direct payment for fattened bulls will be removed from production. Only a modest increase in beef imports is projected. By 2013 live cattle and beef exports are foreseen to decrease by 20%. However, scenario B portends that beef imports will more than double and exports will increase by 25%. This and an expected increase in beef production by 2013 will be offset by an approximately 10% growth in domestic beef consumption which would nonetheless remain well below both the EU-15 and EU-25 averages. Given that beef prices remain high compared to consumer prices for pork and poultry and that consumption patterns change slowly, Hungary is not going to have a stable beef market to absorb larger quantities. Nonetheless, in the coming years fattening will continue to be profitable and domestic consumption, in the mid and longer term, will continue to represent a stumbling block for the sector.

In December 2007, the number of pigs in Hungary slightly exceeded 3.86 million. The number of breeding sows was 260 thousand, 30 thousand less than in December 2006. Following the baseline scenario, by 2013 the number of pigs would not exceed 4.2 million, even though the number of breeding sows is projected to increase to 315 thousand, meaning moderate expansion. The number of pigs would approach 5.2 million by the end of the projection period (see Figure 7) if a number of conditions could be met. These conditions entail modernisation in order to improve productivity and efficiency and compliance with environmental and animal-health and welfare requirements. Another condition is strengthened vertical coordination in the pork production chain.

It is noteworthy that these changes in livestock numbers actually conceal changes in the underlying production structure; enterprises specialized both in breeding and fattening could lose ground while those specialized solely in fattening could expand. An essential condition for growth is ownership or access to arable land which allows the sector to receive indirect support.

In the medium term exports of live pigs may decline while imports could rise. Due to steady demand in EU member states for Hungarian pork, pork exports may remain stable. On the other hand, domestic processors need to import pork to maintain their production level[4].

In 2004 broiler sector output exceeded 230 thousand tonnes (live weight), the highest level in the five years preceding accession. After August 2004 there was a decline in producer prices, but despite this the trend toward greater production continued into 2005. In 2006, higher production costs, lower producer prices, and Avian Influenza meant losses for the broiler industry and production began to drop. According to the baseline projections, in 2008 this downward trend may reverse itself, and broiler meat production could, in the medium term, stabilize at around 240 thousand tonnes (live weight). Nevertheless, under scenario B, chicken meat production may exceed 270 thousand tonnes. But this could only be achieved if producers invested more in technology and human resources. But currently, as in most of the livestock sector, production is hindered by a lack of capital and an urgent need for modernization . Another problem is compliance with strict environmental, animal-health and welfare requirements.

Since EU accession Hungary has steadily imported more poultry products and, in the future, the country may become a net importer of chicken meat. Hungarian poultry meat processors cannot compete with Brazilian and Thai products.

4. Future tasks

It is in the Hungarian national interest to get Hungarian agriculture on the scenario B development track by 2013, but a lot remains to be done to achieve this goal. More innovation and more efficient cooperation are definitely needed. Also needed are an agreement on basic agricultural policy objectives, and the alignment of government policies with initiatives taken by farmers. Success requires a minimal level of strategic cooperation among food chain stakeholders. Specific policy measures can be grouped in the following manner:

- Substantial progress is imperative in almost every agricultural sector as well as in the processing industry and agricultural logistics. Other than modernisation of machinery and technology, genetic resources require renewal. Rural development funds are insufficient for that enormous task. To attract Hungarian and foreign capital, conditions must be investor friendly; for example, land market liberalisation is a particularly pressing matter.
- More than lip service needs to be paid to the augmentation of human capital, the review of the secondary and tertiary education system, and the pragmatic development of research and rural extension services. An innovative approach is necessary to tackle issues of climate change adaptation, technological development, irrigation, and water management. It is also necessary regarding the renewal of genetics as well as the authorisation of GMOs. It is increasingly important to replace the ageing professional workforce and farm managers.
- Competitiveness can only be achieved across several product chains, and thus the strengthening of vertical links and organisation is inevitable (here Hungary is clearly at a disadvantage compared to its competitors). Strategic cooperation along the product chains, promoting integration, joint purchasing, and marketing are not only essential conditions for market expansion but also for securing Hungary's current market positions.

[4] The main export products are pricey meat parts while imports tend to be cheap raw materials replacing higher quality domestic produce.

- In order to ensure fair competition, the terms 'household' and 'holding' as well as 'market actors' and 'beneficiaries of support' should be defined, and this also holds true in the area of taxation.

Obviously, Hungary also has dealings in Brussels. The country should go all out to gain time and funding for Hungarian agriculture. During WTO negotiations Hungary needs to back those rejecting complete liberalisation and seek to soften competition for its *sensitive* products. We should join those EU member states who believe that challenges can only be met by renewing the Common Agricultural Policy in a way which rewards the provision of public goods in agriculture, and reduces 'historical' differences distorting competition. Solidarity is essential in bearing the costs of natural disasters associated with climate change, and room must be given to lagging individual countries to enact necessary structural changes that will allow them to close the gap, and keep and create rural jobs.

Not much time is left until 2013. Indeed, from 2014 on there will likely be new pressure to adapt, and CAP reform foreshadows just that.

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EU-communication challenges 3 years prior to Hungary's presidency

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Abstract

What challenges will Hungary face when it assumes the presidency in early 2011?

Close cooperation will be required of the Presidential Trio when identifying presidential priorities. To garner both social and political support it is vital that, during Hungary's EU presidency, one be cognizant of Hungary's current situation. It is important to recognize successes and failures and produce a new solution It will be the first time Hungary has assumed the presidency and it will entail a great challenge as the nation will be responsible for managing EU policies.

Key words

tasks, roles, concerns of citizens, national responsibilities, future prospects

Introduction

It is now four years since Hungarian EU accession, and the time has come time to review the public's attitude, knowledge and expectations toward the EU. Given that Hungary will assume the presidency in early 2011, it is pertinent to assess the last four years' achievements and suggest future directions in EU communication. Understanding Hungary's present situation means recognizing the country's former successes and failures in the field of communication, and providing an appropriate change in orientation may prove crucial in rallying popular as well as political support behind the Hungarian EU presidency.

In 2011, Hungary assumes the EU presidency from January 1st until June 30th. But how significant is the inherent challenge in Hungary's assuming the presidency within the European Council? It is noteworthy that the Lisbon Strategy supervises the EU's uniform, coherent and transparent policies which define the tasks and the role of those countries assuming presidency within then European Council. Spain, Belgium, and Hungary are the three member states forming the candidate countries and will thus have to cooperate closely when identifying their presidential priorities. The EU presidency is a great challenge for Hungary, since the year 2011 will be the first time Hungary holds this position and it has to take the responsibility for managing EU policies throughout its presidential term.

Many questions arise as to why is it important to know the public's attitude toward the EU, and why is it necessary to review communication tasks when popular opinion looks on 2011 as simply an administrative matter. It is necessary to point out that Hungary can choose from two approaches regarding communication and its presidency. The first is a conventional approach which was, for example, followed by the United Kingdom in 2005, and which sees the presidency as a 'logistical' challenge exclusively for the administration, eurocrats, and diplomats. Following this approach, the presidency and its subsequent communication policy include just a narrow range of informational duties; the UK presidency simply shared its presidential priorities, topics, and the outcomes of meetings with the public through the media and the internet. However, another approach was tried by Germany in 2007, and offers a wider perspective within the framework of the Aktion

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Europa program. This approach uses the *hype* caused by the presidency to stimulate public attention toward European questions and to deepen citizens' knowledge of the EU. Thus, the Germans realized that the presidential term provides a unique opportunity to put forward the EU's policy and media agenda. They realized that it is a governmental obligation to utilize such an opportunity to attract and motivate the citizenry.

Not only do we believe that the Hungarian presidency and its subsequent communication policy should follow the German model, but Hungary should be even more active during the years before its presidency.

Two factors support this energetic approach toward the forthcoming Hungarian presidency. First, in the summer of 2010, there will be parliamentary elections, occurring seven months prior to Hungary's assuming the presidency, and it is unlikely that the strong political divisions that currently affect the country will disappear by that time. Regardless of which party takes power in 2010, it is in the next government's interest to ensure that electors who supported other political parties still support the presidency. The government can achieve this goal by involving the opposition and the public in all phases of this process: in the preparations, in the selection of Hungarian presidential priorities, and in the actual management of the presidency, and through transparency and total freedom regarding the acquisition of information. It is highly important for the Hungarian presidency's success that the public should look at the presidency as a broad national endeavour, not merely as a government task.

To understand the second factor advocating for more active communication, we have to scrutinize people's current attitude towards the EU. In the four years since accession, Hungary has gone from being one of the most pro-EU countries to one of the most EU-skeptic.

Methods

In terms of methodology, the study illustrates part of the national and international literature on EU communication, synthesizing survey results conducted by Hungarian institutions and the European Commission. Upon examining these results, it is obvious that in 2008 those who see accession as having a negative effect on Hungary significantly outnumber those who see accession as beneficial. In the remainder of the study, we will reveal pertinent details related to this phenomenon.

The study reveals that the number people believing that Hungary's joining the EU hurt the country now exceeds those who find it beneficial. Among EU citizens, Hungarians are among the most subjective when it comes to the EU, their opinions based on perception rather than fact. Obviously such strong disappointment and indifference by the public do not mesh well with organizing an event whose goal is likely not apparent to the average citizen. Only the costs are apparent (Boros, 2006).

It is thus clear that political divisions, ignorance about the EU, and EU-skepticism are factors that could undermine the chances of the Hungarian presidency's success. But we are convinced that by actively engaging the public many of the problems can be solved, and also that Hungarians might, despite their political division, embrace the presidency's success as a national responsibility. Therefore, in this study we will attempt to find an answer to the following questions as to which (communication) problems demand more attention in the preparatory phase of the Hungarian presidency and how to capitalize on previous successes in order to achieve the above mentioned goals.

In doing so, we will examine three topics: the citizens' level of knowledge, the citizens' attitudes, and the citizens' active involvement. For all three topics, we relied on surveys prepared by European organs, supplemented with communication institutions analysis.

We hope that this review will fully expose the challenges regarding citizens' attitudes towards the EU, and will contribute to the planning of pre-presidency EU-communication.

1. The citizens' level of knowledge

Only if one has the necessary information about the European Union is one able to utilize the inherent rights and opportunities stemming from the EU. Only if one is well-informed can one influence the EU's operation, and confidently formulate opinions.. Facts are the best weapon against mindless pro-EU propaganda and against baseless populist accusations that blame every inconvenience on accession. Only if the public is basically informed about the EU can people come to appreciate the importance of the Hungarian presidency, and only then can one expect citizens to support or constructively criticize the goals of the Hungarian presidency. In our view, if the majority of Hungarians are not familiar with the notion of the EU presidency and how the different European policies apply to everyday life, then one cannot expect them to actively support the events of 2011.

Although EU awareness campaigns began more than ten years ago, surveys reveal only partial success. In the following, we will examine the levels of effective and subjective knowledge, and then we will examine those problems that hinder information transfer. The cause of communication failure might be the 'sender' (European institutions, the government, NGOs), the channel of communication (media, books, brochures), the message (the dispatched message is of no interest) or the 'receiver' itself (public ignorance). It is thus important to examine which of these most impede greater public awareness (Boros, 2006).

1.1. Current problems with citizens' level of knowledge

Two factors need to be distinguished regarding knowledge levels. The real (effective) knowledge level and the knowledge level based on self-perception (subjective). Regarding citizens'[3], several problems arise. One of them is determining what is relevant knowledge. Do citizens really need to know who the members of the Committee of Regions are, or be familiar with the history of integration? What kind of lexical knowledge does one require to capitalize on everyday EU opportunities? Generally, within the field of EU-communication, these questions have not yet been adequately answered. Concerning the 2011 Hungarian presidency, emphasizing a few topics might help involve the public. Such basic topics may be the notion of the European Council and the EU presidency, the priorities set by the Hungarian government, and EU measures taken to achieve these. Probably if citizens basically know the ins and outs regarding events occurring in the first semester of 2011, then they will be more likely to support it.

What notions do citizens currently have toward an 'imaginary scenario' about the Hungarian presidency? So far no survey has been conducted on the concept of the EU presidency, but Eurobarometer annually screens public knowledge about the functioning of the EU. To this question, 43% replied that they have some ideas about how the EU works, while 52% admitted to have no such knowledge (European Commission, 2007a). Familiarity with the different European institutions such as the European Council is also relatively high, 62% (European Commission, 2006a: 20). These results exceed the EU-27 average as Hungarians are usually more informed about the institutions than about other topics.

[3] The level of effective knowledge stands for the set of information gathered for the decision making that was at the moment available for the consumer.

When examining the possible topics related to the Hungarian presidency, let us assume that the Hungarian government will probably select three priority topics. First, neighborhood policy and further EU enlargement including the West-Balkans question. Second, the "Health Check" eform regarding the Common Agricultural Policy, which was conducted in 2003 and known as Mid Term Review. Third, solving problems caused by the rejected Constitution. Presently these are the likely topics to be addressed in 2011. But how do the public relate to these topics which politicians and diplomats hold so dear?

- Only 23% of the Hungarian population have heard of the Common Agriculture Policy (CAP) which constitutes one of the worst scores in all of Europe. Moreover, even the 23% are ignorant when it comes to the CAP content. (European Commission, 2007c). Chapter 4 will detail the result of a questionnaire made in the agricultural sector.

- 47% of Hungarians know something about neighborhood policy. Nationally, 59% support enlargement, but regional differences are pronounced: people living close to the southern border tend to support enlargement towards the Balkans 27% less than those living in the North-Transdanubia region (European Commission, 2006a).

- 78% of the people support the idea of the Lisbon Strategy, which could be considered a sweeping triumph (European Commission, 2007a). It is, however, noteworthy that among all potential European issues this is the one which interests Hungarians the least only 12% are seriously interested, and 36% somewhat interested (Szonda Ipsos, 2006).

We highlighted these data to show that upon selecting the presidential priorities and subsequently communicating them, citizens' knowledge of the topics and their attitude towards them are worth considering. Evidently, selecting priorities solely on public readiness would be ill-advised, but one should consider the public's previous total indifference toward the Constitution, their ignorance regarding the CAP, and their strong support for enlargement.

Besides measuring real knowledge, self-perceived knowledge is also important. When using aubjective surveys[4] people are asked to evaluate their knowledge on a scale of 1 to 10. The subjective tests reveal very low levels of subjective knowledge or self-perceived knowledge. 48% of those interviewed said they hardly knew anything about the EU and only 20% claimed to be somewhat familiar with the Union. 15% awarded themselves a score of 1 and 0% a 10 (European Commission, 2006a). This represents the third worst European score (European Commission, 2007a).

Measuring self-perceived knowledge is important because people's perception as to how informed they are may influence their attitude towards the EU, their behaviour and their feelings concerning the common European identity. It is likely that a person who feels ignorant on European questions will be reluctant to boldly and continually support European integration, and actively participate in the process as well as seize available opportunities.

In Hungary the problem of low level subjective knowledge is even worse when one looks at its social distribution. The more socially disadvantaged a group, the worse they consider their level of knowledge, and their interest in European issues is also less. Those who see themselves as badly informed tend to have only completed 8 years of elementary school, live in villages, and do unskilled physical work; poor people and women also view themselves as the least informed. It is therefore predictable that recent EU surveys indicate that the EU is perceived as an organization serving elite interests, which contradicts major EU objectives such as helping disadvantaged regions and social groups, and creating equal opportunities.

[4] Subjective knowledge: An aggregation of information based on unique, personal evaluation.

1.2. Problems on the 'sender' side

Unfortunately, the least is known about those governmental and non-governmental organizations that deal with EU-communication, the so-called *sender* side of the equation. Most of these organizations (the Ministry for Agriculture and Rural Development is an exception) do not measure their effectiveness, do not specify outcome indicators, and do not evaluate feedback. Even if they do such things, they do not make their findings public. This means that neither the organizations themselves, nor the public know anything about their accomplishments or about areas needing improvement. Supposedly, the different information channels like the EUvonal (EU line), the Europe Direct Information Points, the EU Library Network, Team Europe and NGOs impact significantly on the public's EU awareness. But exactly how much? Nobody knows, and nobody measures it. This lack of information means we cannot examine Hungarian EU-communication organizations' effectiveness. However, their strategy, operation, and coordination are documented, and thus can be screened. In this regard, an absence of objectives and coordination are apparent.

Governmental EU-communication is currently based on short-term action plans, making preparation for 2011 difficult. Fortunately, after recognizing this problem, the Ministry of Foreign Affairs has initiated a program that encourages EU-communication 'key figures' to rethink their imminent tasks.

Besides a lack of strategy, another problem is that in recent years EU-communication has been characterized by multi-polarity. After 2002, the EU Communication Public Foundation and the Ministry of Foreign Affairs sometimes ran parallel programs without any coordination. When the Public Foundation ended its activity, EU-communication was passed to the Prime Minister's Office, and the communication activity was successfully restarted. In 2006, however, another change transpired and EU-communication was returned to the Ministry of Foreign Affairs but coordination was not assumed by any of the ministries. Given current financial and power relations, the National Development Agency would logically be suitable for assuming coordination tasks. However, strict control over the use of structural and cohesion funds means the Agency's flexibility is relatively limited and it might be difficult for it to deal with EU issues beyond tenders.

1.3. Problems with the message

This is the most significant problem and it deserves special attention regarding the 2011 presidency. If presidential priorities do not reflect the will of the citizenry, then governmental communication attempts will never be highly successful. Thus, whether one views EU-communication in general or related to presidential preparations, the primary question must be: what issues drive popular interest and what the public expects from the European Union?

Regarding this matter, a number of detailed surveys exist which should be divided into two categories. In examining what policy issues attract general public interest, one can say that Hungarians overwhelmingly consider employment the most important (60%), followed by the the economy (43%) (European Commission, 2006a). But in recent years none of these issues has been at the forefront of EU-communication. Other shortcomings are apparent when specifying European issues which interest Hungarians. According to surveys, the introduction of the Euro, European subsidies, and agricultural policies interest people the most. Regarding the last two topics, citizens want much more information than currently available (Szonda Ipsos, 2006). It is essential to mention that in Hungary post-material values which transcend self-preservation are extremely weak (Internet 1). Those topics closely linked to the individual's everyday well-being predominated on the surveys' lists. However, in the general public value-centered thinking has recently been more prevalent, meshing with EU-measures striving to further a more just society and the creation of equal opportunities.

1.4. Problems with communication channels

When examining the use of communication channels, comparing supply and demand is a viable tool. In Hungary, as in other EU countries, television is the general public's primary information source, followed by radio and newspapers (European Commission, 2006a). But we must not forget that, although often wary of their political elite, more than half of Hungarians expect EU information from national politicians. However, rather than TV, EU representatives prefer the internet, organized events, and brochures.

Commercial TV channels and the tabloids offer scant coverage of European matters but quality dailies (e.g. Magyar Nemzet and Népszabadság) regularly cover these topics (Boros, 2006). The real problem is that EU-related information does not reach tabloid and daytime television, which comprise the most accessible media outlets, so European issues are restricted to the highbrow media. Often public service channels only give information about European issues in EU-financed programs, suggesting that they mainly broadcast them to get the grants, and not for ratings. This problem is aggravated by the fact that EU representatives rarely consider tabloid readers a viable target group (Internet 2).

1.5. Problems on the 'receiver' side

Europeans are apathetic when it comes to their own continent, and this certainly applies to Hungarians. The most apathetic toward European issues are those in the 15-17 age group, which presents a serious problem. Given that there is a clear correlation between indifference towards European issues and levels of self-perceived knowledge, it is evident that our goal should not be simply to increase public information. In order to counter apathy, the information has to be well-prepared.

1.6. Goals until 2011 concerning the citizens' level of knowledge

To improve citizens' knowledge levels, there are several factors on which we can rely. In fact initiatives undertaken during the past couple of years are already starting to bear fruit. On certain topics Hungarians' knowledge level definitely exceeds that in other countries. It is necessary to pinpoint these areas and then build on this knowledge in the future.

The *sender side* is already an established nationwide information network, and for this reason it should be at the forefront in preparing the population for the 2011 Hungarian presidency. EUvonal[5]'s online and telephone information service is especially significant (Internet 3). EUvonal also has efficient call centre functions, a database with tens of thousands of questions and answers and is staffed by well-prepared young professionals, meaning it should play a central role in preparing for 2011. For effective communication, regular coordination among participants is indispensable, which is why it is necessary for EU communication to return under the jurisdiction of the Prime Minister's Office.

Major steps have to be taken concerning 'the message' so that EU topics transcend intellectual debate and reach the tabloid press, TV, and radio. Not only should the media be involved in this *tabloidization*, but also the current EU communicators. It is obvious that if European information services gear their communication campaigns more to concrete public demands and to various surveys, then over the coming years significant results will be achieved.

[5] EUvonal (EUline) – Information Service: founded in 2004, currently operated by the Department of EU Communication and Public Relations of the Ministry of Foreign Affairs.

Moreover, current trends indicate that by 2011 TV's role (TV is an expensive form of advertising) will diminish and the internet will become increasingly popular. Presently the largest amount of user-friendly, thematically arranged information is found on the internet, but only 37% of the Hungarian population uses this communication channel (Internet 4). But in the coming years internet penetration will shoot up and online information will play a greater role. We should also note that the European Parliament elections in 2009 and the 2010 European Capital of Culture program series will provide an exceptional opportunity to focus the media's – and thus the public's – attention on European questions.

2. Citizens' attitude toward the EU

2.1. Current problems with citizens' attitude toward the EU

As mentioned in the introduction, the Hungarian presidency will only garner public support if serious steps are taken before 2011 to regain public confidence in Hungary's EU membership.

The first phase in this process is increasing citizens' knowledge of EU matters and permits the second step, which is to bolster acceptance of the Union.

In this regard a major challenge is that citizens are not keen on understanding the European image and identity. In most cases this apathy is caused by inadequate communication.

A telling indicator regarding the Hungarian public's attitude toward EU integration is a poll on whether Hungarians would still support Hungarian EU membership in a referendum; 62% would still support membership, and only 29% opposite it (European Commission, 2007).

Opinion polls also reveal support for European institutions, and an attachment to the European Union. But trust and attachment are often not based on well-grounded knowledge but rather on the perception that the European elite is preferable to the highly disliked Hungarian elite, and embodies unity and professionalism. However, little has been done to teach people to differentiate between the EU's political jurisdiction and the Hungarian government's. That is why currently those finding European membership not beneficial (45%) exceed those who think it is (41%) (European Commission, 2007b).

When compared to citizens of countries who joined the EU with Hungary, Hungarians are still highly pessimistic. Job security is their chief concern, 66% of Hungarians interviewed believing that the situation has worsened since 2004. In this regard Hungarians rank last (54%) when it comes to a positive assessment of EU accession. Among Poles, Estonians and Lithuanians the ratio is 80% (Internet 5).

2.2. Pre-2011 concerning citizens' attitude towards the EU

If citizens remain unaware of how the Union helps solve their problems, then fewer and fewer might view Hungarian membership as beneficial. It is also clear that communication solely focused on financial benefits creates expectations that cannot be met. For the EU to viably communicate with Hungarians, it is necessary to differentiate between the Hungarian government's jurisdiction and that of the EU so citizens realize just what rights and investment opportunities the EU has created. By 2011 such an endeavour could bolster Hungarians' attachment toward the EU. *Pragmatic* attachment could be further enhanced by advertising the EU's contribution to the HUF 8,000 billion investment in the New Hungary Development Plan. Moreover, a priority should be value-based communication and strengthening emotional bonds.

3. The level of citizens' active involvement

3.1. Current problems with citizens' level of involvement

Between 2001 and 2004 the Commission adopted three statements on orientation and communication. These statements improved partnership and cooperation between the institutions and member states. In the statements the Commission revised the financing of communication work and stressed the following goals: multi-year programming; placing citizens' interest first when creating messages; sharing synergies and exemplary experiences. Despite all this, 2005 public opinion polls and analysis of voter's behavior show that there is distinct reticence toward institutions and the creation of a common Europe. This impedes civilians from enthusiastically participating in the European project.

In the last two years the European Commission's communication measures, namely the D-plan[6] and the White Paper[7] strongly emphasized motivating citizens regarding European questions (Internet 6). Involving them means citizens come to understand their potentially active role in forming European policies. Accordingly, in the past couple of years the Hungarian communication actors have also been focusing on projects that promote active participation. While completing these projects, the communicators faced serious difficulties. These difficulties stemmed from the fact that when one seeks to motivate citizens, one should firstly inform them and instill emotional attachment. As with the creation of a commercial brand, there are three logical steps: brand familiarization, the creation of emotional bonds and the creation of a need to buy the product. With European topics too, one can only expect citizens to vote in parliamentary elections, to exercise their EU rights, or form an opinion about the EU's future if they already know and like (or dislike) the 'product', namely the European Union. Given these criteria, it is not surprising that Hungarians' participation rate lags behind that of citizens from older member states.

As there is no consensus as to what kinds of indices show citizens' level of particpation, we examined indicators suggested by the Dutch POLITEA. The Dutch organization suggests seven components when measuring active citizenship rate (Internet 7). One of these is the ratio of NGOs participating in international or European activities.

According to a 2005 survey, 0.1% of the population previously took part in NGO work dealing with European or international affairs as a volunteer (Czike et Kuti, 2005).

If one assumes that organizations that focus on European issues often apply for grants, then an approximate index is the number of communities or NGOs in 2006 applying for a program grant through the EU either at the ministerial level or European agency. Although we do not posses exact numbers, it can be generally stated that the number of those who submit applications is about a 100 every year. Thus, all together there are only a few hundred people willing to organize events dealing with European issues for a local community.

No measurements are available as to how many people show interest in virtual and real forums concerning Europe. Therefore, only a general tendency can be indicated. Since 2004, the number of those participating in discussions about the EU has been continually decreasing. An 'elite group' was formed, who regularly attend and take active part in the debates on Union matters; these

[6] "D-plan": it aims to generate a widespread discussion on the relationship between the citizens and the democratic EUorgans. "The Commission's contribution to the work of theoretic path-finding and beyond: D-plan for the sake of democracy, dialogue and discussion."

[7] White Paper: It was adopted by the European Commission in 2006 over the European Communicational Policy.

debates, however, do not reach the greater public. Still, it can be assumed that those who engage in discussions about European issues with their relatives and friends are genuinely interested and active. Therefore, research usually examines how often the EU emerges as a topic during these conversations. 12% of those asked state that they often or very often discuss EU matters, 36% very rarely, and 23% never (Szonda Ipsos, 2006).

Comparing these results with similar data from other countries clearly indicates that, compared to Western Europeans, Hungarians are much more passive. But in regional terms, Hungarians' involvement rates as average. The analysis of involvement trends (what topics interest and inspire citizens) also yields interesting results. In recent years it has become apparent that it doesn't matter which topics the media and EU communicators wish to put forward, citizens only express opinions about contentious European matters that divide opposing political parties. Analyzing internet chat rooms, letters to the editor, various online and offline forums, reveals that politicians determine the Hungarian public's EU political agenda (Boros, 2006).

3.2. Pre-2011 goals regarding citizens' involvement

It is essential that a broader social spectrum- NGOs, teachers, young people-lead discussions as to what issues the Hungarian presidency should stress. Citizens need to feel that they can have an impact by working through the administration, Hungarian MPs and MEPs, and through their election. They also need to feel than can actively influence European institutions, the NGOs, the companies, and lobby organizations. If more social groups are involved in debates and discussions about the future, more weight can be given to Hungary when establishing presidential priorities.

At the same time, experience shows that trying to motivate the general public won't be easy as people are apathetic. Involving quarrelsome politicians from the right and the left is a way of sparking public interest and motivating the public to get involved, but this is a risky strategy as national politics is divisive and the goal is to unite Hungarians around the presidency. Therefore, a less divisive method could be involving NGO's as well as teachers and schools in discussions, thus inspiring younger people to participate.

4. Communication problems in the agricultural sector and proposals for the future

4.1. A pre-accession agricultural survey

A 2002 survey conducted by the Ministry of Agriculture and Rural Development (MARD) on the agricultural sector revealed that less than 40% of farmers felt they had enough general information about the European Union. It is noteworthy that at the same time less than 20% of the respondents felt the same regarding Accession's agricultural aspects (Baksa, 2004).

Geographical location influences farmers' views on the EU. In the observed eastern counties, the dominant view was that EU accession is not going to alter production, but in western counties, near the Austrian border, farmers were much more EU informed and thus much more aware of the expected consequences.

Ninety-two percent of those surveyed already knew that Hungarian EU accession would impact on agriculture. Nearly all large-scale farmers, about three quarters of medium-scale farmers, and more than half of small-scale farmers felt they would personally be significantly affected by Hungarian EU accession.

On the basis of the questionnaires we can draw the following conclusions regarding how farmers informed themselves regarding the EU.

According to the survey data, the majority of the farmers said that they learned about accession's agricultural aspects from television, constituting the major information source as television combines the advantages of live speech, music, and virtual pictures. About 80% of those surveyed watch television regularly. The majority, 87%, watch channel MTV1, channel TV2 or RTL Klub. The most frequent viewing time is between 7pm and 9pm. Less frequent is between 5pm and 7pm. For this reason, the MARD's feature film productions about the EU and the Common Agricultural Policy (CAP) have been broadcasted at this time.

Daily papers and Professional Journals are the communication forms most highly distributed in terms of number of copies. If one considers the number of copies, dailies are actually a relatively cheap source of information. Professional Journals can competently satisfy a definite market segment, but circulation is limited.

A less effective way of attracting attention is *radio* as it does not visually stimulate the receiver which impedes communication. According to the research, all those surveyed are radio listeners, the most most popular station being Kossuth Radio (67%), usually listened to between 5am and 7am in the morning.

Brochures focus on a specific interest group. 25% of those surveyed (mostly working at medium or large size farms), received such brochures regarding Accession's impact on agriculture.

Organized events have a major role in communication. These events constitute forums where participants can form contacts, obtaining more sophisticated information better enabling them to make future decisions. Twenty-seven percent of those surveyed had already attended at least one event that dealt with EU Accession's impact on agriculture.

Regarding the above issue, sixty percent of the farmers would have willingly participated in dialogues, presentations, or some form of training People were mostly interested in production subsidies and quotas (63%), then plant production regulations (62%). After came rural development (52%), stock-breeding (35%), forestry (20%), and fishery regulations (7%).

In 2002 most producers did not have access to *electronic communication* equipment. The most relevant CAP information was available on the internet, but lack of internet access meant small-scale producers were most disadvantaged and the least informed.

At that time 33% of the large-scale farmers, 16% of the medium size producers, and 10% of the small-scale producers had internet access. This indicates that electronic information access, albeit small-scale, was starting to develop.

The survey as a whole indicates that a small portion of the farmers had excessive expectations of EU membership, while an even smaller portion of those surveyed were highly pessimistic. However, lack of information meant that the majority were most uncertain when it came to evaluating the implications of EU Accession.

4.2. Post-Accession Hungary and the Hungarian presidency: communication tools aimed at preparing agricultural producers

When implementing programs geared to meeting farmers' needs, special attention must be given to communicating with farmers. Providing vital information is a difficult task as the target group is scattered throughout the country.

Agricultural workers are varied and dispersed, and for this reason they have different concerns and communication patterns. Probing local and regional conditions is of particular importance when addressing the agricultural population.

Given the pessimism among the farming population, it is necessary to involve other organizations in the information process. These include professional organizations, public and civil bodies, the network of village consultants and experts in agricultural education, etc.

It is thus necessary that the Hungarian presidency thoroughly explain the reasons for and the possible effects of CAP reform, and every effort must be made to reach the widest range of agricultural producers using every possible communication tool. Based on the 2002 surveys, it is apparent that TV, plus newspaper and periodical articles, are most effective at communicating EU agricultural information.

But, based on previous experience related to afternoon broadcasts, TV does not constitute an economical form of communication. It is much cheaper and more effective to utilize regional and local papers and professional periodicals.

At the beginning of 2003, the Ministry of Agriculture and Rural Development organized a wide range of agricultural forums. These forums dealt with informing participants about the progress of Accession negotiations. They also presented CAP reform results which started as a 2003 Mid Term Review, and later fundamentally changed the agricultural sector. In 2007 the subsidy framework was outlined, then the potential for further progress and future CAP reform.

A useful way of informing agricultural producers about the EU is the Ministry's written materials which are published in agricultural papers and supplements.

As for access to electronic communication, providing producers with information has been successful. The MARD utilizes up-to-date electronic facilities to inform producers and professionals about the EU.

On the MARD website (www.fvm.hu), there is a special page devoted to European integration, supplying information on Accession, and up- to-date regulations regarding product lines. The EU-INFO (Internet 8), managed by GAK Kht, provides current information about the Common Agricultural Policy and relevant regulations. A teletext abridged version of this service is also available on Hungarian Channel MTV1 (Vajda et Baksa, 2008).

One can conclude by stating that the agricultural sector is the one most affected by EU Accession and, politically and socially, it is agriculture which is the most vulnerable, the one which suffers most due to joint European policies, meaning the CAP. Due to the sector's particular vulnerability, it is the area where adequate communication is most urgent. In fact, Hungary not only lags behind its western competitors in terms of subsidies, but also in terms of information quantity and quality.

Summary: present and future prospects

So what is the situation like 3 years prior to the Hungarian presidency? It is obvious that in the coming years EU-communication has its work cut out for it. Much remains to be done in order to enhance public awareness and strengthen citizens' bonds with the EU, and it is also imperative to motivate citizens to become more involved with the EU. Over the next few years, attention should focus on solving problems that so far have attracted scant attention.

Although Hungarians scored above average on certain EU issues, there are areas of national interest where Hungarians remain ignorant and these include agriculture, grant applications, etc. Thus, it is advisable that Hungarian presidential priorities focus on EU-communication.

When it comes to subjective knowledge about the EU, Hungarians have reached their nadir, and this could constitute a significant factor behind citizens' apathy and passiveness. If citizens are predominantly bewildered about the Union, then it is unlikely they will actively participate in EU issues. Besides providing practical everyday information, one should try to bolster self-esteem which is related to the use of knowledge.

In the years prior to Hungarian Accession, Eu-Communication was so 'successful' that Hungarians had unrealistic expectations. Gradually these expectations have turned to apathy or hostility. Nowadays Hungarians only feel optimistic about matters they are not yet acquainted with. They continue to believe in European organs and in the euro, and that the Union helps preserve peace. But they do not foresee any improvement in the Hungarian economy; nor do they believe Hungary will progress. The majority feel that Accession's positive effects won't appear for a long time yet.

Since Accession, participation in European matters has almost gone to zero. And this doesn't only hold true for the general public, but also for the elite. Evidence of this was already visible during the 2003 EU Accession referendum and the 2004 EU parliamentary elections, and skepticism regarding the political elite means that by 2009 the situation will likely worsen. Despite this, or rather because of this, politicians should strive to motivate the public, and provide alternative viewpoints not only in domestic but also in European affairs.

The Hungarian presidency offers not only an opportunity for Hungary to receive international attention and for the nation to help create a better Europe, but it also provides an opportunity for citizens to rethink Hungary's EU membership and see it as a success rather than a failure.

In the next three years many obstacles will need to be overcome. If those striving to improve communication obtain well-prepared, organized information that facilitates an alternative approach, then Hungarians could become knowledgeable and exuberant toward their 2011 presidency.

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Application of a multi-criteria decision making process to facilitate the Improvement of the Vásárhelyi Plan

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Abstract

In recent years floods have caused enormous damage and to prevent this the Government has launched a comprehensive programme called the Improvement of the Vásárhelyi Plan (IVP). In step with the original plan, new objectives have emerged, contributing to a solution for the Tisza Region's problems in water management and regional and rural development. In tandem with the planning stage, a strategic environmental assessment has also been conducted. The assessment's objective was to develop a multi-criteria system to help choose from a variety of feasible development plans, the ultimate goal being sustainability associated with social, economic, and environmental objectives. In its related decree, the Government recognised the results of the applied multi-criteria decision-making process.

Key words

Improvement of the Vásárhelyi Plan, sustainability, multi-criteria decision-making process, strategic environmental assessment

The processing and development for planning the IVP

Between 1998 and 2002, after a relatively dry decade, there were several unusual floods in the Tisza Valley, which increased the top water levels as never seen before. In March 2001, when the dyke on the right river bank between Tarpa and Tivadar broke, people living in communities in the Bereg flood basin had to be evacuated. After high floodtides occurred in the Tisza Region, there were inundations from excess water and a series of streamlet floods. Moreover, these extremely high water levels occurred despite the presence of comparatively favourable hydro-meteorological factors. The assessments indicated that even a slightly unfavourable change in meteorological conditions may have unusual consequences in the Upper Tisza region (*Vágás, 2001; Szlávik, 2005*).

150 years ago Count István Széchenyi's water management programme first began to modify the Tisza Valley's natural environment. The programme, which was called the Vásárhelyi Plan, satisfied the need for more land by initiating flood and excess water control and through the installation of irrigation systems which ensured water supplies. Water control primarily meant making most meanders shorter and restricting the river in narrow flood plains bordered by dykes. The length of the Tisza river was reduced by about 450 kms, (40%) and making the river-bed shorter created 136 kms. of new bed. Those Tisza Valley areas spared from flooding (about 1.4 million hectares) are three times greater than in the Po Valley, and the length of the dykes two times longer (2,940 kms in the Tisza Valley). This project, then unique by European standards, attained its goal and the Great Plain became a civilised, habitable place suitable for extensive farming and crops. Over the last hundred years, this has basically transformed the area's water balance conditions. Water control fundamentally altered the region and sparked development, but back then people did not realise the impact water control would have on the area's water balance (Szlávik, 2001; Süli-Zakar, 2001).

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The increase in flood water levels and related extreme water balance problems are linked to several overlapping and accumulating causes stemming from both human and natural factors:

- Initially, during floods they expected that an increase in water levels between the dykes would be compensated for by a deepening effect on the watercourse running in the beds that were made shorter, but this didn't happen. *(Ángyán et al, 2003)*.
- Because of the point bars rise caused by the floods' alluvial deposit, floodplain drainage starts later. Over the last one hundred years, hydraulically speaking, negative changes have occurred. Areas overrun with trees, numerous improperly constructed smaller summer dykes and other landforms have worsened hydraulic conditions, frequently preventing floodplain drainage *(AKII- KRF, 2005)*.
- In the last few years climate change factors have also been detected. (*Szlávik, 2001*), and resulting from this drought areas could increase as well as extreme weather conditions (e.g., torrential rains, snowfalls) which could cause serious flood damage (*VAHAVA, 2006*).
- Because of farming practices which didn't lend themselves to controlled flood and excess water drainage and to new ecological conditions, there was an increase in the excess water level and more drought (Szlávik, 2001).

Today the river's flow is restricted by dykes, and the river endangers an area of 2.1 million hectares rather than the previous 1.6 hectares. But despite the failure of the dyke system, flooding only occurs in the floodplains *(Ángyán et al., 2003)*. Therefore, unless concerted action is taken to stop or at least counteract these processes at the catchment area, there will more often be large-scale damage from floods, excess water, and drought.

The Tisza region constitutes at least one quarter of the country's area, and is inhabited by 17% of the population and their living conditions are basically determined by the above mentioned water balance conditions. Farming's decreasing economic role impacts heavily on this region because the population's livelihood and self-sufficiency is linked to agriculture. Only one third of the fields are suitable for cultivation, the remainder rendered unusable by a growing shortage of water. The area is economically depressed, with GDP per capita only two thirds the national average, and the employment rate only 31% compared to 36% nationally. This low level of activity constitutes the area's greatest weakness, not to mention the moderate decline in population when compared to the national average over the last ten years. All of this results in low per capita income *(VÁTI, 2004)*.

To prevent punishing floods around the Tisza, the Directorate of Water initiated a development programme, and the technical concept, which included comprehensive notions about flood safety, was in fact completed (*VIZITERV, 2001*). During planning, objectives were set containing planned measures to help resolve the Tisza's regions complex problems, stipulating that the budget include landscape management and regional nature protection conditions.

The Government in its March 2003 decree passed (see below)[3], decided on concepts to improve flood safety in the Tisza Valley, referred to as the Improvement of the Vásárhelyi Plan. The Decree declared that the technical investments should allow water to be sent to various locations, and that this water should be used for rural and regional development purposes and for the preservation and improvement of Tisza Valley natural habitats.

[3] Governmental Decree No. 1022 of 2003 (III.27.) on the re-examined development tasks of the flood safety constructions of the Danube and Tisza rivers and about the concepts concerning the increase of flood safety in the Tisza Valley (the Improvement of the Vásárhelyi-Plan).

The significance of Strategic Environmental Assessment in the planning

Besides technical planning, the Directorate of Water, during implementation of Phase I of the Improvement of the Vásárhelyi Plan, started to integrate rural and regional development into its planning, and ordered a Strategic Environmental Assessment (SEA) to help assess environmental concerns. The SEA's function is to gauge the environmental impact of certain plans, programmes, and proposed documents. Assessment of applicable methods may vary widely. Back then the advent of the SEA was considered innovative Although its birth followed the relevant EU directive, it nonetheless preceded the corresponding Hungarian law[4] (*ÖKO, 2003a*).

The IVP's research phase meant the planning levels' practical aspects harmonised with the general strategic level (the selection and analysis of those constructions implemented in Phase I). The SEA's major goal was to decrease flood risks and this determined the measures it took towards regulating the river bed and the construction of drainage reservoirs, but its mandate did not entail less detailed options and their assessments.

From the outset the SEA's basic task was to ensure that the planned drainage system had the potential to improve environmental and natural conditions both inside and outside the water reservoir areas. But further tasks included environmentally assessing the flood regulation plan and optimising flood protection and rural development. Another task was creating a new landscape management system toward a positive environmental and social impact.

Given the above factors, the assessment process focused on feedback derived from various viewpoints and interests, but these excluded implementation of environmental objectives and the examination of possible unfavourable environmental processes. This was meant to come up with the most suitable and **acceptable** plan to meet social, economic, and environmental needs. One of the SEA's main advantages is that it actually emerged in tandem with the plan, and thus it can spotlight various views and interests which harmonise environmental aspects with other viewpoints and interests, allowing it to create common ground among various interest groups. SEA objectives not only entail an assessment capable of revealing environmental effects, but also an assessment which results in decision making (*Szilvácsku, 2003*).

The priority and criteria system designed to ensure sustainability

In environmental protection it is imperative that sectoral policies blend together, a principle corroborated in several EU documents (*Mozsgai, 2004*). The assessment was also based on the principle that to be successful the IVP had to be "at the centre" of varying interests. Therefore, a solution was needed that was geared toward sustainability objectives. For this there are many different types of definitions, but today almost all relevant strategies call for a well-balanced approach dealing with three key dimensions: society, economy and environment (*Bulla et al, 2006*).

The IVP must meet several criteria, and these criteria fall under the umbrella of the three dimensions. Among these criteria are blunting local effects of extreme weather conditions, rural development, achieving popular acceptance, and protecting nature and the landscape. To be successful plans need to satisfy all these criteria. Consequently, the SEA's mandate extended to values regarding ecological protection but also sustainability which embraced the entire scope of development plans. The following figure details the process for the applied priority and criteria system designed to ensure sustainability within the SEA.

[4] Governmental Decree No. 2 of 2005. (I. 11.) on the environment assessment of certain plans and programme

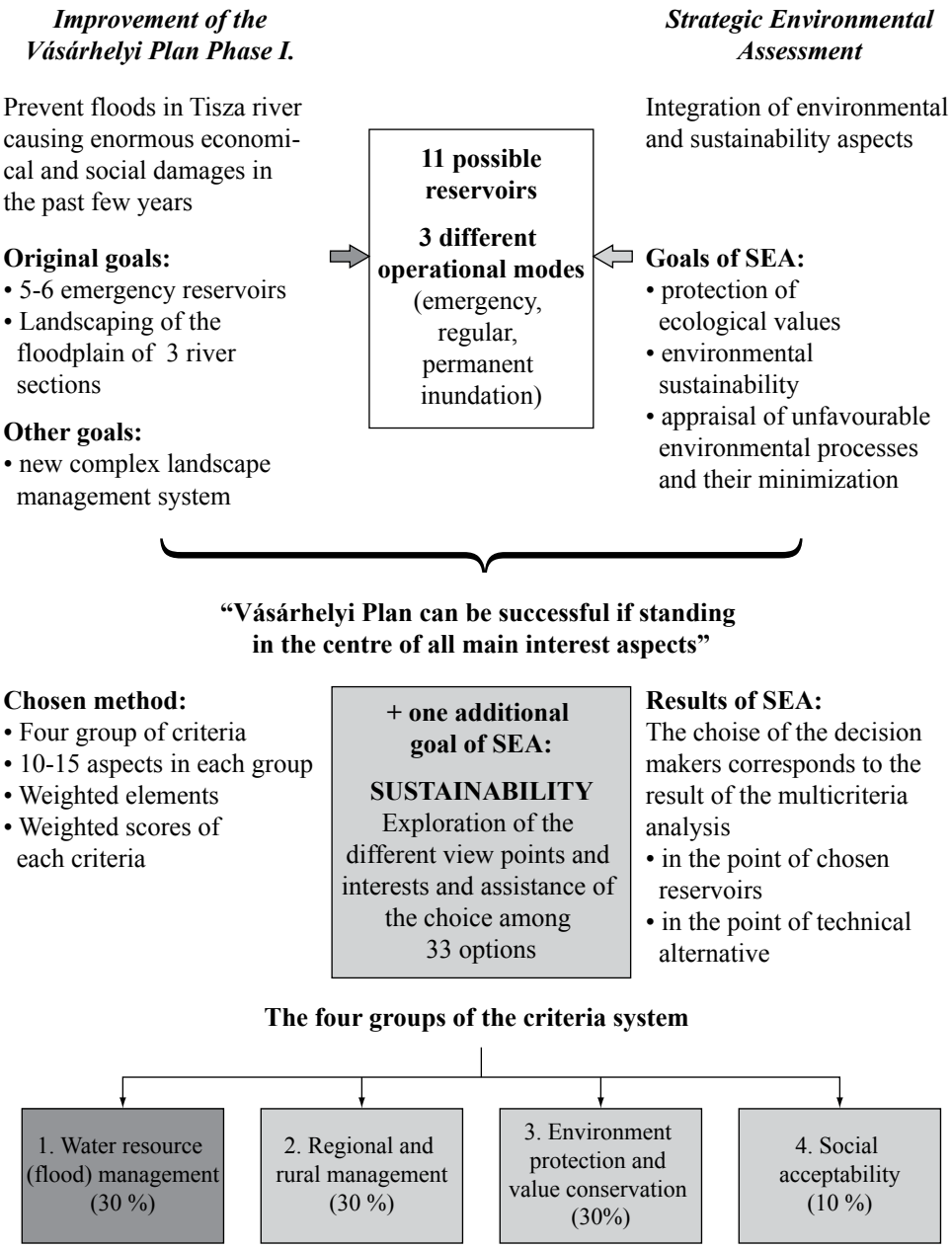

Figure 1: Application of multi-criteria decision making process to facilitate the Improvement of the Vásárhelyi Plan

Source: Authors' own construction

The assessed versions

The pertinent Decree regarding water management entailed numerous technical objectives. These objectives included enhanced flood safety, an increase in the drainage capacity of the main watercourse, and building water reservoirs and other drainage facilities to combat rare but damaging floods. Although rare, such floods potentially exceed acceptable water levels, and can cause dyke breakage and inundation. During planning, it was concluded that 1.5 billion m^3 of water can cause a projected one metre drop in flood levels along the entire length of the Tisza River. About 30 potential water storage sites were observed, 10 to 14 with the potential to accommodate the above mentioned capacity *(VIZITERV, 2001)*.

In the concept 31 water reservoirs were assessed and there were 8 possible reservoirs contained in Phase I. However, later three new reservoirs were added in Tiszakarád, Dél-Borsod and at Nagykörű. This was done to satisfy the economic interests of the inhabitants living in the affected areas. The decision makers decided to begin construction where the project was popular on condition that the reservoirs conformed with the original objectives. Within the framework of the strategic environmental assessment, 11 reservoirs were assessed. The locations were: Szamosköz, Szamos-Kraszna-köz, Cigánd, Tiszakarád, Dél-Borsod, Tiszanána, Hany-Jászság, Hany-Tiszasüly, Nagykunság, Tiszaroff and Nagykörű. *(VIZITERV-VÁTI, 2003)*.

Between 2004 and 2007 Phase I allowed for the building of 5 or 6 water reservoirs and complete floodplain regulation of three river reaches. Phase I objectives also entailed construction of effective flood control reservoirs. However, these reservoirs needed to have broad popular support and be immune to environmental, nature and heritage protection factors. Building reservoirs and floodplain construction according to these criteria meant a potential 60% decrease in flood levels at the most critical sections of the Tisza River, and entailed about 35% of the entire cost.

There are three possible ways to divert enough excess water from the Tisza to floodplain reservoirs in the course of drainage. These three options are possible for all the reservoirs, and thus the assessment had to extend to these operational modes (VIZITERV-VÁTI, 2003;Bokartisz, 2003):

- **emergency (flood) reservoirs**: Normally this type of reservoir is not in use and its drainage capacity is only used during heavy flooding when flood levels are above normal. The reservoir is used to prevent catastrophes and dykes from being breached. Building the system enhances emergency flood water storage, and allows the area to be inundated. In the given area there is also traditional dry land farming, and the system is also capable of meeting the farms' water needs. Inundation is primarily used for flood safety.
- **regular reservoirs**: Here the system regulates water flow to ensure planned inundations and irrigation for landscape management. Every year the area in question is inundated but the land is also used for emergency water storage, but this practice doesn't reduce its effectiveness. In the area there is floodplain landscape management. Sufficient and regular inundation meeting ecological and agricultural water needs must be guaranteed. Constructing such a system cost 10 to 15% more than in the other two cases. The area affected by inundation (for additional water supply) can exceed the area used for water storage.
- **permanent reservoirs**: these are reservoirs where the water level must at least in some places be constant. These reservoirs are shallower or the surface smaller than with emergency water storage, and thus these reservoirs have significantly lower flood prevention effectiveness.

When defining reservoirs it was important to consider three possible technical options for each reservoir. The three options differ in their operational modes, and their design is geared toward different priorities. Thus, their social, economic and environmental effects are also different, meaning the assessment encompassed the three different operational modes regarding eleven reservoirs, equalling a total of thirty-three options.

Achieving water storage in certain sections of the Tisza was a further IVP concept condition, meaning when choosing the reservoirs additional criteria had to be met:

- there had to be at least one reservoir (from among the Szamosközi, Szamos-Krasznaközi reservoirs) on the Upper Tisza,
- at least one in Bodrogköz (from among the Cigándi, Tiszakarádi reservoirs),
- and at least two or three reservoirs in the Middle Tisza (from among Dél-Borsodi, Tiszanánai, Hanyi-Jászsági, Hanyi-Tiszasülyi, Nagykörűi, Nagykunsági, Tiszaroffi reservoirs) had to be constructed.

The main elements of the multi-criteria decision-making method which were applied when evaluating reservoirs

Based on the above principles, the objective was to develop a criteria system to further the assessment of the building projects. The assessment had to be consistent and allow comparison of the various conditions in a way that could be easily processed by the decision makers.

A multi-criteria decision making method proved adequate for the assessment. This method is easily applicable in cases where a project or a decision must satisfy often controversial objectives. The method is viable because it means that assessment is done using various measures and information isn't lost when one assigns homogeneous values – financial values – to every single criterion. A multi-criteria decision retains the diversity of the original dimensions *(Marjainé, 2005)*.

According to *Omann (2000)* multi-criteria decision analysis consists of the following steps:

1. definition and structuring of the problem,
2. creation of options,
3. defining a set of evaluation criteria,
4. a choice between discrete and continuous methods,
5. preparation of the decision (supply of data)
6. identifying the preference system by the decision maker and those who will be eventually affected
7. choice of an aggregation procedure, carrying out of the procedure; using feedback loops with the people affected by the decision.

We established four criteria groups and chose the weighted scoring method as the basis for the assessment. Our basic assumption was that the first three criteria groups appearing as immediate objectives (water management, socio-economical and environmental conditions) must be granted the same stature in the interest of sustainability, so these must be afforded the same weight when they are evaluated. The fourth criterion group is popular acceptance and here a dual approach must be applied. If the construction of a reservoir is rejected by local residents, the reservoir cannot be considered feasible. However, popular acceptance tends to be subjective and volatile so one must remain open to change. Consequently, smaller weight was assigned to this criterion system; but when it was established its exclusive criteria were also determined.

Within the individual criteria groups, several criteria were identified, and we assigned different scoring scales to criteria according to their weight. A small portion of the criteria have an exclusive nature, and thus the construction of a given reservoir is slotted until that given criterion is met. A problem such as a current lack of popular acceptance or when a protected nature conservation area is affected and there is no agreement with those managing that area. Only one such criterion is enough to cancel the construction of a Phase I reservoir. Most criteria are designed to evaluate which reservoirs have advantages or disadvantages based on the individual criteria.

For exclusive criteria, the assessed option is ruled out by the application of a naught (0) multiplier. To determine the favourable or unfavourable tendencies, the scale can extend to both positive and negative directions if it is justified. The scoring system uses negative numbers if there are unfavourable effects from the aspect of the given criterion. The general case where one can expect both positive and negative effects can be assessed on a scale extending from –10 to +10, where the zero means a neutral state. Higher scores can be assigned to key questions where the maximum figures can be between –20 or +20. There were criteria where the scale is not asymmetric. After we summed up the scores for the individual criterion groups, and calculated the mean for those scores, we multiplied them with the weight assigned to the given group. We assessed the orders set up on the basis of these scores both together and separately in the individual groups. If the result was negative, it meant that the solution assessed by the given criteria system is problematic, and the given reservoir alternative cannot be supported in its present form. We divided the interval between zero and the maximum score into three parts. If the score was in the uppermost third of the scale, we rated the alternative as "good" If the score was in the middle third, we rated it as "adequate", and if it was in the lowest third, but was assigned at least a score of 15, we rated it "acceptable." Options scoring below 15 were rated as "low" usability options, which are inadequate solutions in their present form.

In order to determine the concrete figures of the criteria, we used the results and conclusions of studies which were prepared for this assessment by professional experts. (see *Bibliography*.) The applied method is located in the next chapter within the Cigánd reservoir example.

The criteria necessary to select the reservoirs and their operational mode and the major results of the applied method

The objective of the **water management criteria** is to select the possible methods and places to improve water reservoirs, flood safety, and the water balance in the Tisza River's catchment area. This criteria system consists of such water management aspects which can, in a complex way, assess potential for reducing flood damage, excess water, and drought regarding natural conditions and technical parameters. The identified water management criteria can be found in Annex 1.

The total scores above zero were asymmetric. The reason for this is that the water reservoir system is primarily designed for water management purposes, meaning the relevant positive characteristics are naturally higher. Of the 10 criteria, 8 were determinable in this phase of the planning. (Criteria 1.3 and 1.5 were not assessed.)

The data and information needed for the assessment were from background studies by the experts involved in the research (*VITUKI, 2003; VIZITERV Consult-VÁTI, 2003*). Mainly the regular reservoirs were able to satisfy the complex water management criteria. Within the criteria group, almost all the 11 regular reservoirs were among those ranked as good or adequate. The reservoirs in Nagykunság and Tiszaroff could also regarded as permanent reservoirs.

The results regarding water management in terms of the number of reservoir necessary in certain sections of the Tisza:

Upper Tisza: In terms of water management all the reservoirs at Szamosköz and Szamos-Kraszna-köz were rated as good, so selection will be determined by the other criteria. From a hydraulic point of view, the Szamosköz reservoir rates best.

Bodrogköz: The reservoir at Cigánd received a high rating in all aspects of water management, and ranks first.

Middle-Tisza: All the regular reservoirs in Nagykunság, at Tiszaroff, Hany-Tiszasüly, Nagykörű, Hany-Jászság achieved virtually the same good rating, but the reservoir in Nagykunság came second best among all rated reservoirs. For water management, the emergency reservoirs in Dél-Borsod and at Tiszanána were the least adequate solutions.

The **regional and rural development criteria group** sets objectives corresponding with the preservation of natural values, and which further sustainable forms of agriculture and help preserve population numbers in the region. Regarding construction of the reservoirs, this system examines the extent to which traditional forms of agriculture in use near the reservoirs harmonise with nature and the landscape and how they can be given priority in the context of flood safety objectives. The chosen regional and rural development objectives can be found in Annex 2.

Here the assessment system is also asymmetric in the positive direction, but the reason for this is located in the criteria established for the plans; a plan is deemed acceptable if it aids the affected inhabitants. The required data and assessment information were from background studies conducted by the experts involved in the examination *(VÁTI, 2003a,b; Bokartisz, 2003; BKÁE, 2003).*

The assessment has shown that at the regional development and landscape management level, regular water storage is by far the most effective. In Phase I all the reservoirs are ready for potential landscape management. The assessment indicates that the emergency reservoirs offer little financial benefit to the people affected. Naturally, the permanent reservoirs are less amenable to landscape management; however, none of these reservoirs is completely deleterious (a large negative figure) if one considers tourism, or fishing potential, etc. But abandoning present farming practices would have devastating financial and social consequences.

Results regarding rural development in view of the necessary number of reservoirs needed in certain sections of the Tisza:

Upper Tisza: The reservoir in Szamosköz is rated better than the one in Szamos-Krasznaköz (especially regarding aspects 3., 4. and 6.).

Bodrogköz: The reservoirs in Cigánd and in Tiszakarád have are the mostly highly rated and have almost the same scores.

Middle-Tisza: The Nagykunság reservoir also is awarded the highest scores, whereas the other regular reservoir options receive similar, adequate ratings with little variation from the pattern.

The **elements of the system of aspects pertaining to environmental and value protection** can primarily be interpreted according to the natural, cultural, and landscape values found in the reservoirs and their impact areas. Another important aspect is developing the area's natural resources in

a sustainable manner. The value protection pertaining to certain operational modes (e.g., permanent) is doubtful, and thus in these cases exclusive criteria were formed. The assessed elements of the criteria system are can be found in Annex 3.

The data and information used by the assessment are provided by the background studies *(ÖKO, 2003b; VÁTI, 2003c; MTA TAKI, 2003; Env-in-Cent, 2003)*.

With respect to the environment and value protection criteria group, we found a reason preventing (excluding) completion of the Szamosköz reservoir, and this reason involves all three operational mode options. In fact, the reason was that some protected areas were affected, but the National Park Directorate did not expressly reject this solution. With the other reservoirs no significant environmental problems are apparent, but careful planning and construction are necessary in order to reduce risks. From an environmental aspect regarding the other reservoirs, the regular operational mode offers more advantages for every reservoir, and were thus rated as adequate.

The environmental and value protection point of view regarding the necessary number of reservoirs needed in certain Tisza sections:

Upper-Tisza: The only adequate alternative is the construction of the (regular) reservoir in Szamos-Kraszna-köz. The Szamosköz reservoir would affect protected areas and this is considered to be an excluding factor.

Bodrogköz: The regular reservoirs at Cigánd and Tiszakarád have similarly favourable ratings regarding environment protection.

Middle-Tisza: The Middle-Tisza section regular reservoirs are not significantly different However, regarding the Nagykörű and Tiszanána reservoirs, both the emergency and permanent operational options are unfavourable in terms of environment protection. The emergency reservoirs at Dél-Borsod, at Hany-Tiszasüly and at Tiszaroff border on being unacceptable.

One of the basic requirements concerning planning is that the area's citizens should be involved in decision making to the greatest possible extent. The **criteria group for popular acceptance and acceptability** assesses on the one hand the options and possibilities to improve local living conditions, and on the other finding options which are best suited to local interests. If local inhabitants strongly oppose it, the assessment excludes construction of a reservoir in Phase I. The assessed elements of the criterion system can be found in Annex 4.

Among these criteria the greatest weight was assigned to the aspect of popular acceptance (1.). Besides this, we also assessed the expected psychological impact linked to, among other things, the proximity of large quantities of water in the reservoirs at flood events. This criterion has a special role in the long-term operation of the reservoir.

The data and information needed for the assessment were from background studies conducted by the experts involved in the examination *(Bokartisz, 2003; VÁTI, 2003b)*. The results showed that in most places the popular acceptance of reservoirs with a regular operational mode is high, or at least neutral (positive scores), except for the reservoir in Szamosköz, which in its given form can be considered rejected.

The results in terms of popular acceptance regarding the necessary number of reservoirs needed for certain Tisza sections:

Upper-Tisza: At present popular acceptance is restricted to the regular reservoir in Szamos-Krasznaköz, making it the sole solution (the construction of other operational modes enjoy no popular acceptance). Popular acceptance for the reservoir in Szamosköz is highly limited, making it unviable.

Bodrogköz: The regular reservoir at Cigánd rates highest of all reservoirs, but popular acceptance of the regular reservoir at Tiszakarádi is also high.

Middle-Tisza: The regular reservoir at Nagykörű has the highest acceptance rate in the Middle Tisza section. Regarding the reservoir at Hany-Tiszasüly, all three options have gained popular acceptance. Among the regular reservoirs in Dél-Borsod and Nagykunság, the Tiszanána reservoir having the permanent operational mode would be highly popular.

In the aggregate assessment the highest possible scores are around 100, but this was somewhat modified due to unanswered questions. For the aggregate assessment, not only were the allotted scores significant, but also the really good options did not receive negative scores for any of the criteria.

At least for Phase I, we chose not to propose the construction of the Szamosköz reservoir. Most of the problems concerning this reservoir are of an environmental nature (protected areas are affected), and popular acceptance of the reservoir is rather unlikely.

With the exception of the one in Szamosköz, all the reservoir options proved to be at least adequate, and the Cigánd reservoir received the highest rating (good). Regarding **water storage, all the reservoirs fall into the acceptable category; therefore, for these options selection remains basically open** As for emergency storage**, t**he reservoirs in Nagykunság, at Hany-Tiszasüly and at Tiszaroff are among the strong candidates concerning acceptability. Of the reservoirs having emergency operational mode, two (at Nagykörű and Tiszanána) have total scores which render them unsuitable. Moreover the permanent operational mode options were given the worst qualifications; all receiving negative scores in at least one respect (see Annex 5).

The summary of the results regarding the necessary number of reservoirs needed by certain sections of the Tisza:

Upper-Tisza: the **regular reservoir in Szamos-Tisza köz**.

Bodrogköz: The reservoir at **Cigánd rates** best among all reservoirs.

Middle-Tisza: **The reservoirs in Nagykunság, at Tiszaroff and at Hany-Tiszasüly** having the regular operational mode were deemed adequate, and with emergency operational mode were rated acceptable given that they did not have negative scores in any of the criterion groups. The reservoir at **Nagykörű,** regarding the regular operational mode, had favourable ratings while for other operational modes it had negative scores in more than one criteria group.

Results: their use and usability

The set of reservoirs that are to be built in Phase I were recorded in a Governmental Decree passed in November, 2003[5]. The decision makers accepted the importance of regular water storage, and that the projected reservoirs be completed and combined with the technical facilities serving water flow regulation and the further conveyance of water. Regarding the chosen reservoirs, the decision makers agreed with the Phase I conclusions arrived at using the multi-criteria decision-making system, which stipulated the construction of six regular reservoirs out of the eleven, and which entailed combining two reservoirs (Cigánd-Tiszakarád, Szamos-Krasznaköz, Nagykunság, Hany-Tiszasüly, Tiszaroff, and Nagykörű I. Phase).

Initially, planning for the reservoirs at Cigánd and Tiszaroff was started, and then a law was passed to facilitate the planning and licensing processes (Law No. LXVII. of 2004). Even though the licensing procedures and land expropriation took longer than expected *(Bognár, 2007)*, the considerable delay in project completion was mainly due to a lack of domestic financial resources. The reservoirs in Szamos-Krasznaköz, Nagykunság and at Hany-Tiszasüly are reliant on EU financial help which became available from 2007 onward. Planning for this started last year, but completion is only anticipated between 2008-2009. Regarding the reservoir at Nagykörű, probably only landscape management programme elements will ever be completed.

Other than the completion of Phase I for the Improvement of the Vásárhelyi Plan, several other sectoral infrastructural development projects will occur in Hungary, and they will be co-financed by Hungary and the EU. From a Hungarian standpoint, an essential objective is that these projects should encompass social, economic and environmental aspects to ensure that they will not be deleterious in either the short or long run, something which can only be countered through costly investment. The method presented above bolsters the creation of a basis for sustainability concious decisions.

The strategic environmental assessment potentially provides an important framework toward integrating environmental issues with sectoral policy decisions. Moreover, both the pertinent EU Directive and the Hungarian laws offer a wide scope concerning the contents of strategic environmental assessments. As in other EU member states, it would be necessary to publish a summary of those methods applied in successful Hungarian assessments, and this collection could serve as a model and contribute toward unifying strategic environmental assessment methodology and enhance the accuracy of future research.

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[5] Governmental decree No. 1107 of 2003 (XI.5.) on the programme for the improvement of flood safety in the Tisza-Valley and the regional and rural development of the affected area (the Improvement of the Vásárhelyi-Plan).

Annex 1

I. Water management criteria group

Criteria (Weight: 30 %)	Score		Cigánd regular
	Min.	Max.	
1. The planned solution should assume a role as big as possible in the fulfilment of the basic objectives of the IVP: "The level of ice-free flood passing 1.0 m higher than the design flood level must be reduced by a minimum of 1.0 m along the Tisza. That is, water levels exceeding the design flood level should not be allowed to occur on the Tisza." (60 cm is to be achieved in the first phase)	0	20	17
2. The reduction of flood risks should be carried out in a way that the reverse extreme weather conditions occurring in the same area – dryness and damages caused by droughts – should be moderated to the greatest possible extent.	0	20	18
3. The area's suitability for various storage purposes based on the connections of the geographic structure of the relief, its declines and levels, and the water levels of the Tisza.	-10	10	10
4. Flood storage should be solved by causing the least possible damage, and, at the same time, the advantages originating from the construction of the system should also be exploited.	-10	10	10
5. The flood risk or dangerously high water level to other territories should not be exported.	-10	0	0
6. The water flow regulation possibilities formed by natural conditions and by existing and planned technical constructions should be flexible.	0	15	15
7. The satisfaction of the ecological water demand on the outskirts of reservoirs should be ensured as much as possible.	0	10	7
8. The effects of the developments should not worsen the problems caused by excess waters at areas which are to be protected from excess waters.	-10	5	5
9. In the respect of areas bordering on reservoirs, the smaller the number of those impact bearers sensitive to excess waters, the bigger the advantage is. However, at the determination of the areas of the reservoirs, the territories exposed to the danger of excess waters, and low floodplains are at an advantage.	-10	10	10
10. The technical solutions needed to utilise the storaged water on the area of the planned reservoir and on the bordering areas should be already on hand after the completion of Phase I. (e.g., the possibilities of water flow regulation).	0	10	8
Total	**-50**	**110**	**100**
Weighted total	**-15**	**33**	**30**

Source: ÖKO, 2003a

Annex 2

II. Regional and rural development criteria group

Criteria (Weight: 30 %)	Score		Cigánd regular
	Min.	Max.	
1. In terms of property and value protection, fewer inhabitants should be exposed to the danger of this kind.	-10	0	-1
2. The change of land use is justified by the aspects of the cost of living, it is desirable if it is helped by the inhabitants' professional qualifications and, in the meantime, the population supporting ability of the area is also improved.	-10	20	20
3. The large proportion of areas which, in a morphological sense, capable of floodplain cultivation (floodplain orchards and ancient type of ecological farming using flood openings "fok" management etc.) and the preservation of the traditions of these areas are considered an advantage both in the reservoir and at areas surrounding it.	0	10	8
4. The characteristics which can ensure the possibility of forming areas that are capable of fisheries mean advantages.	0	10	7
5. The possibility of escaping should be ensured as easily as possible for the game stock.	0	5	4
6. To what extent sustainable soil usage adapted to the conditions of the area can be provided for after inundation	-10	10	5
7. The constructions should contribute to the prevention of possible, unfavourable climactic changes.	0	5	4
8. The changes in the values of nature's capital should be as positive as possible.	0	10	8
9. The landscape potential should increase and the land use should be more reasonable.	-10	10	5
Total	**-40**	**80**	**60**
Weighted total	**-13,3**	**26,7**	**20**

Source: ÖKO, 2003a

Annex 3

III. Environment and value protection criteria group

Criteria (Weight: 30 %)	Score		Cigánd regular
	Min.	Max.	
Natural assets			
1. Nature protected values cannot be in areas affected by inundations	multiplier 0 if there is		1
2. The development should support the functioning of the Tisza as a continuous ecological corridor.	-10	20	15
3. The chances for the survival of valuable wet land and aquatic habitats should be increased as well as their preservation conditions and the possibilities of their restoration.	-10	10	9
4. In the case where valuable habitats are flooded, the water level and the interval of the inundation should not endanger the survival of the habitat.	-10	10	8
5. The developments are at an advantage where they can help to form valuable water types.	0	10	10
6. The characteristics and the technical possibilities on hand should provide good conditions to avoid the damage in fish stock and to assist their reproduction.	-10	10	-4
7. The cultivation in the area of the reservoirs should promote to restore the traditional landscape types (habitats) on flood plains.	-10	10	7
Cultural heritage			
8. No territories that are parts of World Heritage can be in the area of the reservoirs or in their impact area.	multiplier 0 if there is		1
9. No reservoirs can be constructed where there are highly or strongly protected archaeological sites, historical earthworks or protected values.	multiplier 0 if there is		1
10. The number of registered archaeological sites should be the lowest possible.	-10	10	-4
11. The number of cultural values: architectural, etnographical and others should be the lowest possible.	-10	10	-3
Protection of landscape and settlements			
12. The water reservoir and its operation should not have an unfavourable effect on other areas (important holiday resorts, historical wine regions, protected areas of water supplies, other regional and settlement values) which are valuable from other than nature preservation aspects.	-10	10	-2
13. In the impact area, safe waste water treatment and waste disposal should be solved as extensively as possible.	-10	0	-5
14. Natural features should be used as great extent as possible at the construction of reservoirs.	-10	20	10

Criteria (Weight: 30 %)	Score		Cigánd regular
	Min.	Max.	
Sustainable usage of natural resources			
15. The regional and integrated assessment of the soil conditions.	-20	20	10
16. From a physical and chemical point of view, the quality of the stored water should fall into the category of Class II (good water quality) determined by the EU Water Framework Directive.	-10	10	10
17. The composition and abundance of the aquatic communities evolved in the reservoir during water storage should reflect the Class II (good) ecological status determined by the EU Water Framework **Directive**	-10	10	10
18. The impacts of the developments (e.g., the quality of the water fed back to the Tisza) cannot impair the Tisza's current water quality according to water quality classification.	-10	10	10
19. In the area of the reservoir, there cannot be any point or diffuse source which spoils the quality of the stored water including the excessive accumulation of nutrients. (e.g. intensive use of fertilisers.)	multiplier 0 if there is		1
	-10	0	-3
Total	**-160**	**170**	**79**
Weighted total	**-30**	**31,9**	**14,8**

Source: ÖKO, 2003a

Annex 4

IV. Social acceptance criteria group

Criteria (Weight: 10 %)	Score		Cigánd regular
	Min.	Max.	
1. The social acceptance of the constructions should be as high as possible.	Total reject: multiplier 0		1
	-10	20	20
2. The possibilities to choose between the alternatives of farming should be increased by the developments.	-10	10	10
3. The existence of institutional conditions (emergency, regular, permanent storage) of the planned land use is an advantage.	0	10	10
4. The planned solutions should improve the cooperation of common interests between the affected settlements and regions.	-10	10	6
5. The developments and facilities which are to be built should have as little impact as possible on settlements and habitable environment. (Psychological burden.)	-10	0	-2
Total	**-40**	**50**	**44**
Weighted total	**-8**	**10**	**8,8**

Source: ÖKO, 2003a

Annex 5

Final ranking based on reservoirs' location and operational modes

Location of Reservoirs	Operational Modes	Scores	Qualifications
Cigánd	***Regular***	***73,6***	***Good***
Tiszakarád	**Regular**	**63,7**	
Nagykunság	**Regular**	**61,7**	
Nagykörű	**Regular**	**60,8**	
Tiszaroff	**Regular**	**59,1**	
Szamos-Krasznaköz	**Regular**	**57,2**	**Adequate**
Hany Tiszasüly	**Regular**	**54,5**	
Hany-Jászság	**Regular**	**52,8**	
Dél-Borsod	**Regular**	**51,9**	
Tiszanána	**Regular**	**50,6**	
Tiszaroff	*Emergency*	*24,6*	
Tiszanána	*Permanent*	*24,4*	
Nagykunság	*Emergency*	*23,2*	
Tiszaroff	*Permanent*	*22,8*	
Cigánd	*Emergency*	*21,1*	
Nagykunság	*Permanent*	*20,4*	
Szamos-Krasznaköz	*Emergency*	*20,4*	*Acceptable*
Cigánd	*Permanent*	*20,3*	
Hany Tiszasüly	*Emergency*	*19,1*	
Hany-Jászság	*Emergency*	*18,7*	
Hanyi Tiszasüly	*Permanent*	*18,7*	
Dél-Borsod	*Emergency*	*15,5*	
Tiszakarád	*Emergency*	*15*	
Nagykörű	Emergency	14,8	
Hany-Jászság	*Permanent*	14,3	
Nagykörű	*Permanent*	14,1	
Tiszakarád	*Permanent*	10,9	Low Usability
Dél-Borsod	*Permanent*	10,4	
Tiszanána	Emergency	7,9	
Szamos-Krasznaköz	*Permanent*	3,8	
Not supported in Phase I:			
Szamosköz	Emergency	0	
Szamosköz	Regular	0	Excluded
Szamosköz	*Permanent*	0	

Source: (ÖKO, 2003a)

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Business concentration in the Hungarian food retail market

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Abstract

Retail market consolidation and its effects on micro enterprises and corner shops present a long-term challenge to the Hungarian retail grocery market. The authors hope this study will help the concerned parties deal with this challenge. The study is one of the first attempts at a comprehensive analysis, and employs concentration tables and concentration ratios. It is based on a database from all businesses, including partnerships and individual entrepreneurs, and focuses on the quantifiable trends and the magnitude of market concentration regarding retail sales and specific areas affected by the consolidation process. Our research revealed that, by 2004, concentration in the retail food market was at a high level, considerably higher than the overall industry indicator. However, based on the various categories studied, no similar consolidation was revealed related to the specialized grocery operators' market segment (specialized retail market). There are two essential reasons for this difference. One of them is trade-specific. Mass retail involves a broad product range, high levels of capitalization, and a high turnover, and is thus highly concentrated. However, in the specialized retail market the level of consolidation is relatively lower as less capital is required and the product ranges and turnovers are smaller. The other reason is also related to trade-specific characteristics: the presence of highly capital-intensive multinational corporations. While their increase in market share led to growing concentration in the food focused retail market, in specialized grocery retail their market share was negligible. Regarding employment, small and medium-sized companies prevailed at the industry level and in the specialized grocery market. However, in the food focused retail market, large corporations had attained a market share nearly equivalent to that of small and medium-sized businesses. Since there is a strong correlation between corporate size and economic power, small and medium-sized enterprises have been increasingly weaker vis-à-vis large companies. Greater consolidation means economies of scale factors are becoming more and more important. Compared to large companies, the smallest micro enterprises have suffered a serious handicap. Therefore, a high level of market consolidation will mean a decline in the number of businesses and retail outlets. In the Hungarian corner shop segment, rationalization is certainly justified as makeshift garage stores are often superfluous in the modern retail environment. However, in the future suitable corner shops will continue to be required due to consumer, employment, and social considerations. The trend toward concentration requires a shift in approach and strategies which may help independent retailers and corner shops survive. Compared to being totally independent, partnerships, with their ability to integrate sales and purchases, offer increased security for corner shops.

Keywords

Grocery retail, concentration, micro enterprises, small grocery (corner) shops, Hungary

Source of the paper

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Introduction

Concentration is one of the key questions concerning future trends in the grocery retail market. Market consolidation is a major trend. In advanced countries, it has almost everywhere served to strengthen mass retail chains, and accentuated the conflicts between large and small businesses which differ in store sizes. Micro enterprises and corner shops are in a particularly difficult situation.

Retail market consolidation's negative effects on micro enterprises and corner shops present long-term challenges to the Hungarian grocery retail market. What potential future role can they play and how can they possibly adapt?

Our study endeavours to analyse market concentration trends and some of the areas affected. We also intend to review micro enterprises' and corner shops' position, their future and their opportunities for adjustment.

Database and methods

Market concentration trends were observed by processing the Statistical Office's (KSH) comprehensive database for effectively functioning (taxpaying) business partnerships and individual entrepreneurs from 1999 to 2004. We chose that particular period because a comprehensive business database was then available when we concluded our research. The indicators reveal medium-term changes.

One of the factors considered for the market concentration study is the change in the traditional roles in grocery retail (retail, wholesale, international trade), meaning a great deal of businesses are involved in the entire range of activities or at least in several of them, from production to foreign trade to wholesale purchasing to direct sales. Other than the core product group (groceries), businesses also tend to specialise in other product groups and in additional activities beyond their basic trading activity. The economic potential and the magnitude for grocery retail businesses' diversification into various activities and sales channels often involve both horizontal and vertical integration. This magnitude and potential are more accurately revealed by an indicator covering their entire activity spectrum and product range, since business performance entails diverse product ranges and activities. Total net sales represent the kind of synthesized indicator representing the closest correlation with sales factors (assets and human resources), and for this reason the total net sales indicator has been used to study market concentration.

Changes in concentration level were studied using TEÁOR/NACE, meaning the uniform industry-based classification system for economic activities. This system emphasizes classification in the food focused retail market's core activity and the food, beverage, and tobacco specialized retail markets. Subsequently these two sectors were compared with the industry level (total retail market). The food focused retail market includes mixed retail businesses specialising in a wide range of goods; other than the principal product of groceries, it includes alcohol and tobacco products, plus domestic chemicals, stationery, and perfumes. Larger stores offer clothing, furniture, fittings, metal ware and electric household appliances. Businesses in that sector range from multinational companies operating large hypermarkets and supermarkets specialised in the FMCG market to micro enterprises running corner shops. However, the grocery, beverage and tobacco retail market (specialized grocery market), has grocery stores whose speciality is fish, meat, fruit and vegetable, bakery, confectionery and beverages.

In our comparison only the years 1999 and 2004 were included because merely slight yearly changes had occurred and the concentration trend was steady.

To study concentration using the database, two methods were applied, the first method being the concentration table. The distribution of the number of businesses and their sales turnover of businesses was studied for separate groups of micro enterprises. These included small enterprises, medium-sized enterprises, large enterprises. Employee categories were the following: 0-49 employees = small enterprise; 0-9 employees = micro enterprise; 50-249 employees = medium-sized enterprise. More than 250 employees = large enterprise. For micro enterprises, a separate staff number category was established from 0 to 4 employees. This was necessary because the overwhelming majority of retail businesses fall into this category. The KSH database showed that, as of September 30th. 2006, 77% of micro enterprises (independent retailers) were operating a single shop. (KSH, 2006) Therefore, studying these businesses means studying the corner shop as in this category it is one and the same.

Other than the concentration table based on staff number categories, the concentration ratio (CR) indicator supplied the other research method, meaning the net sales market share for the 5, 10, 20 and 50 companies with the highest turnover. Here, the criterion for concentration is net sales rather than the number of employees.

The following techniques were employed to survey the micro enterprises' position (corner shops):

- Three part studies drawn up by participating researchers.
- In cooperation with the Pest County KISOSZ, a questionnaire survey was distributed to 100 independent retailers operating a single corner shop in communities of various sizes. 14 completed questionnaires were returned.
- 30 interviews were conducted with 17 businesses, 5 business federations or chamber organisations, 5 senior ministry or municipal officials or experts, and 3 independent retailers).

Level of concentration

Opposite trends were revealed regarding the two grocery sectors' position. By 2004, concentration in the food focused retail market reached a high level, considerably higher than the overall industry indicator. Nearly 60 percent of total sales were concentrated in 28 large companies, accounting for only 0.1 percent of the number of employees. The 17,735 micro enterprises accounted for 95 percent of employees, but turnover was as little as 19 percent of total sales. Concentration within this sector is further increased because this is where most purchasing and sales partnerships have been established.

However, the specialized grocery shop market has remained largely diffuse in terms of the employee number categories under review. Small and medium-sized businesses still dominate the market large companies only approaching 3 percent. In this market, micro enterprises have in fact been able to increase their market share.

Table 1 shows the trends in market concentration based on the concentration table.

Table 1

Market consolidation

(distribution, %)

Staff number category	1999		2004	
	Number	Net turnover	Number	Net turnover
Total retail				
0-9 employees	96.60	40.0	96.20	32.0
of which: 0-4 employees	90.30	27.0	88.60	21.0
10-49 employees	2.90	21.0	3.30	19.0
50-249 employees	0.40	14.0	0.40	13.0
250 or more employees	0.10	25.0	0.10	36.0
Retailing with food dominance				
0-9 employees	95.50	26.8	94.80	19.0
of which: 0-4 employees	88.30	19.2	86.20	13.1
10-49 employees	3.40	12.8	4.20	10.8
50-249 employees	0.90	15.1	0.90	12.3
250 or more employees	0.20	45.3	0.10	57.9
Food, alcoholic beverage and tobacco retail (specialized)				
0-9 employees	97.33	55.9	97.43	58.3
of which: 0-4 employees	92.10	40.1	91.18	42.8
10-49 employees	2.45	26.7	2.39	23.2
50-249 employees	0.21	16.7	0.17	15.6
250 or more employees	0.01	0.7	0.01	2.9

Source: Calculations on the basis of KSH (Hungarian Central Statistical Office) data

In neither of the two grocery markets have small and medium-sized businesses (10 to 49 and 50 to 249-employee categories) been able to maintain their respective position. In the food focused retail market, the consolidation trend has obviously benefited large companies at the expense of micro, small and medium-sized enterprises.

There are two basic reasons behind the differences between the two markets. One of them is trade-specific. Mass retail involves a broad product range, high levels of capitalisation, and a high turnover, and is thus highly concentrated. But the level of consolidation is relatively lower in the specialized retail market where less capital is required and product ranges and turnovers are smaller.

The other reason is also related to trade-specific characteristics, and it is the presence of highly capital-intensive multinational corporations. Although growth in their market share led to growing concentration in the retail market, their presence in specialist grocery retail was highly limited.

The application of the concentration ratio reveals further information. (Table 2)

Table 2

Market shares of the 5, 10, 20 and 50 companies of the highest net turnover (%)

Market category	1999				2004			
	5	10	20	50	5	10	20	50
Retail, total	14%	17%	21%	26%	21%	26%	32%	38%
Retailing with food dominance	31%	37%	42%	49%	42%	51%	57%	62%
Food, alcoholic beverages and tobacco retail (specialized)	10%	14%	20%	30%	21%	25%	31%	38%

Source: KSH

In food focused retailing, the concentration ratio shows a trend similar to the one in the concentration table. However, the data for the 20 and 50 companies with the highest sales in the specialized grocery market show concentration to be higher than on the basis of employee number categories. Since in the 2004 data large companies were insignificant, the relatively high level of concentration had emerged within the small and medium-sized business sector.

Using the concentration ratio, a study of Tables 2 and 3 allows comparison between the retail and, more specifically, Hungarian and US grocery markets. There are no significant differences regarding the studied years 2004 vs. 2002, and the categories applied (5, 10, 20 and 50 vs. 4, 8, 20 and 50). The two countries differ in development and size, but their data show both analogies and differences.

As far as the overall industry, in 2002 the level of market consolidation was smaller in the US than in Hungary in 2004. In the FMCG market, the concentration level in the multiple and specialised grocery markets is respectively higher and lower than the overall industry average both in Hungary and the US. With the FMCG markets, the concentration level is similar. The consolidation level in the specialist grocery market entails the greatest difference between the two countries. Here, concentration in the US was much lower in 2002 than in Hungary in 2004.

Table 3

Market shares of the 4, 8, 20 and 50 companies of the highest net turnover on the US retail market (%)

Market category	1997				2002			
	4	8	20	50	4	8	20	50
Retail, total	8%	12%	19%	26%	11%	15%	24%	32%
Grocery and liquor stores, total	18%	30%	43%	54%	31%	43%	55%	65%
of which:								
Grocery stores, total	20%	33%	47%	59%	31%	43%	55%	65%
Supermarkets and multiple grocery shops	21%	35%	49%	62%	33%	46%	57%	68%
Convenience stores	15%	19%	24%	28%	16%	18%	22%	25%
Specialized grocery stores (e.g. meat, bakeries)	6%	9%	13%	18%	7%	9%	13%	18%

Source: US Census Bureau, 2000 and 2004

Areas affected by market consolidation

Table 4 shows the change in the number of businesses.

Table 4

Change of the number of businesses, index: 2004/1999

Staff number category	Total retail	Retail with food dominance	Specialized grocers
0-9 employees	90	90	73
of which: 0-4 employees	89	89	72
10-49 employees	104	112	71
50-249 employees	88	87	59
250 or more employees	100	88	100
Total	91	91	73

Source: Calculations based on KSH data.

The general trend has been a decline or stagnation in the number of companies. The substantial increase in the number of small businesses in the multiple grocery market represents an exception to the general rule. The greatest decline occurred in the specialized grocery market, where the number of medium-sized businesses almost halved.

Table 5 shows the changes in terms of staff number categories.

Generally at the overall industry level and in the grocery market large companies have employed substantially more workers, but the number of employees in small and medium-sized businesses has declined or remained the same, which is due to their shrinking market share. In the multiple grocery market the 10 to 49 small business category is an exception. Here, employee numbers increased by 10 percent thanks to their improving market position.

Table 5

Employee numbers and the related changes (index)

Employee number category	Total retail			Retail with food dominance			Food, alcoholic beverage and tobacco retail (specialized)		
	1999	2004	2004/1999	1999	2004	2004/1999	1999	2004	2004/1999
0-9	143,795	141,997	99	39,020	37,940	97	18,042	14,354	80
of which: 0-4	111,671	106,416	95	29,703	27,799	94	14,569	11,300	78
10-49	41,984	43,036	103	12,815	14,029	110	4,502	3,088	69
50-249	34,933	30,561	87	19,693	17,152	87	1,898	1,208	64
250 or more	37,205	65,666	177	26,971	48,872	181	260	297	114
Total	257,917	281,260	109	98,499	117,993	120	24,702	18,947	77

Source: KSH and authors' own calculations

The number of people employed by micro enterprises in the food focused retail market has declined at a smaller rate than the micro enterprises (net sales based) market share. This is partly due to people attempting to open a small grocery store after losing their previous jobs in non-retail sectors. A family run corner shop is often the family's only source of income. Consequently, for lack of alternative income, many small grocers keep going despite a low and declining income.

In the specialised grocery market employee numbers moved in the opposite direction. For micro enterprises the number of employees decreased while market share increased. But in the small and medium-sized category the number of employees declined much faster than their respective market share.

One of the reasons explaining the two markets' differing trends is that in the multiple grocery market there was less pressure to cut staff due to the higher product line complexity than in the specialised grocery market.

Table 6 shows the role of small and medium-sized businesses in terms of employment.

In 2004, small and medium-sized companies retained their dominance in terms of the number of employees both at the overall industry level and the specialised grocery market. However, for the food focused grocery market, by 2004 the large corporation market share increased to 41 percent, almost equaling that of small and medium-sized businesses. The unemployment rate will probably increase in both grocery markets due to the continued increase in the market consolidation level and the consequent weakening of small and medium-sized businesses' market position, coupled with the increasingly hostile environment for such enterprises. This is because technical and technological development enable global retail chains to reduce specific labour requirements to an ever lower level, as shown in Table 8.

Table 6

The distribution of the staff levels of businesses (total = 100 percent)

Employee number category	Total retail		Retail with food dominance		Food, alcoholic beverage and tobacco retail (specialized)	
	1999	2004	1999	2004	1999	2004
0-9	56	51	40	32	73	76
of which: 0-4	43	38	30	24	59	60
10-49	16	15	13	12	18	16
50-249	14	11	20	15	8	6
250 or more	14	23	27	41	1	2

Source: Calculations based on KSH data

Table 7 shows the trends for employee number categories based on the average sales turnover.

Table 7

Mean annual net sales per company at current prices, million HUF

Employee number category	Total retail		Retail with food dominance		Food, alcoholic beverage and tobacco retail (specialized)	
	1999	2004	1999	2004	1999	2004
0-9	12	17	12	18	9	15
of which: 0-4	9	12	10	14	7	12
10-49	208	297	167	237	166	242
50-249	934	1,611	731	1,291	1,228	2,323
250 or more	10,694	26,314	12,889	35,401	1,207	5,718
Total	28	52	44	91	15	25

Source: Calculations based on KSH data

At the industry level the overall trend indicated that in both grocery sectors the already substantial size difference between large companies and small and medium-sized businesses continued to grow until 2004. Size difference became the largest in the food focused retail market. In 2004, the average annual sales of a micro enterprise and a large company came to HUF 18 million and HUF 35.4 billion respectively.

The strong correlation between corporate size and economic power means that small and medium-sized enterprises have been at an increasing disadvantage vis-à-vis large companies.

As consolidation increases, economies of scale factors are becoming more important. In that respect, micro-enterprises have endured a serious handicap when compared to large companies. (Table 8)

Table 8

Mean annual net sales per capita at current prices, million HUF

Employee number category	Total retail		Multiple grocers		Food, alcoholic beverage and tobacco retail	
	1999	2004	1999	2004	1999	2004
0-9	6	9	6	9	5	8
of which: 0-4	6	8	6	8	4	7
10-49	12	17	9	13	10	15
50-249	9	16	7	12	14	25
250 or more	15	21	15	20	5	19
Total	9	14	9	15	7	10

Source: Calculated on the basis of KSH data

At the overall industry level and in the food focused retail market, business productivity increases with size, but this isn't true for medium-sized enterprises as they are less efficient than small ones. The substantial difference between large and micro enterprises that existed in 1999 continued to increase into 2004. However, in the specialized grocery market the trend differed as large companies were less efficient than medium-sized ones.

Micro enterprises and corner shops

Following the reviewed period of 1999-2004, consolidation in the grocery retail market has continued; in fact, since EU accession it has intensified. Micro-enterprises (independent retailers), plus the still numerous small grocery shops they operate, are those worst exposed to the disadvantages and risks within this trend.

But the comparative disadvantage facing independent retailers and corner shops in terms of economies of scale does not in itself mean that large numbers of them will go bankrupt. There is a difference between the capacity to improve and commercial viability. Many of them simply cannot generate sufficient profits to increase economic efficiency. However, such enterprises are capable of continuing for a long time as their turnover may still, even without any capital-intensive improvement or investment, support one person, a family, or even a few employees.

But the next major wave of closures may be due to the growing market share of multinational companies that operate large floor-area retail operations (hypermarkets, superstores and discount stores), causing a growing loss of market share for micro enterprises and corner shops. Since EU accession one of the obvious trends has been the increasing number of stores opened by established and new multinational companies in order to achieve national coverage. These new stores are often in areas traditionally serviced by small grocery stores run by independent retailers, meaning small towns, inner city areas, suburban locations, residential districts, etc. Continued market consolidation may hurt corner shops' market share. This is because in certain areas they still greatly outnumber larger outlets and enjoy a significant market share. Thus, large retails chains hope to grow by capturing some of their turnover.

Other disadvantages mean micro enterprises are in an even more difficult position. Firstly, they are not competitive in terms of purchasing, but this disadvantage may be partly offset by seeking discounts.

Also a lot of small corner shops have limited reserve stocks. Few of them have a big enough storeroom or enough funds to purchase larger quantities of goods. Their stock is often limited to quantities that fit in the customer area. They are mostly run as family businesses, where the work is done by various family members. An assortment policy is also non-existent as they only stock lines popular with the local community.

Their basic strategy is to survive, and there is no long-term strategy. Training or participation in training courses are often considered superfluous or not viable due to lack of time.

However, they cannot hold their ground without capital and know-how. Without basic marketing skills small entrepreneurs cannot learn even the simplest market research techniques. And without clear goals it is impossible for them to set priorities. A lack of required skills and ignorance regarding their customer base mean they cannot pinpoint an optimal assortment policy.

However, despite these disadvantages, an increase in overall market sales has prevented an even sharper decline in the number and the market share of micro enterprises.

But once market consolidation reaches a sufficiently high level, the number of retail outlets will inevitably decline. This is confirmed by KSH data for all operating stores, which reveal that since 2002 there has been a constant decline in the number of grocery stores in the segment of the grocery market where consolidation is the greatest.

If consolidation becomes more and more pronounced, numerous micro enterprises will go bankrupt during the next 10 to 15 years. During the coming years government measures aiming to control real wages and personal consumption could accelerate this trend as they could hurt small undercapitalised enterprises.

However, small and medium-sized businesses could fare better in certain niche areas where trade or market-specific characteristics make it uneconomical to establish highly capital-intensive large floor-area outlets. This is the case with small specialist grocery stores focused on selling small quantities of handmade or special-interest items or low-value goods.

Why small grocery stores are necessary

In the modern Hungarian retail environment there is certainly room for reducing the number of corner shops as makeshift garage stores have become superfluous. However, in the future some corner shops will continue to be required because of consumer, employment and social considerations. The vital role corner shops play in employment was discussed in the previous section. Next comes an analysis of related consumer and social factors.

Major retail chains offer a uniform network and uniform product range which can't satisfy diverse customer needs. But corner shops transcend large retail outlets and cater to specific consumer needs. Without corner shops the grocery retail market would be dull and incomplete.

Traditional small grocery stores constitute a vital part of city life, and are indispensable for reasons of urban design and tourism. Because small stores offer typically Hungarian products, they actually entail a tourist attraction.

Neighbourhood grocery stores cater to the needs of smaller communities, and if a significant number of them close this may damage major social groups as they will have to to travel further to shop. These vulnerable social groups include low-income consumers who only buy a small amount of goods during each shopping trip. Also vulnerable are families that do not own a car, numerous pensioners, people with physical disabilities, and those living in small, disadvantaged communities.

Small grocery stores are important for daily shopping involving small quantities of specialised (handmade) fresh goods with a short shelf-life, such as fruits and vegetables, dairy and bakery products, meat and meat products. Large monthly shopping trips at big supermarkets cannot substitute for this kind of regular shopping.

In remote, disadvantaged villages small shops are indispensable to the future of these communities. A village shop not only provides basic daily necessities, but also represents a place where villagers meet and bond with each other.

Thus in cities and villages small shops do not only fulfill a commercial function. In cities their purpose is multi-faceted (specialist products, convenience, tourism, etc.), but in many villages they represent the only source of supply for local demand.

Adjustment options

To ensure their long-term survival, independent retailers and small grocery stores will need to do a lot more themselves. They need to adjust in order to cope with consolidation, and emphasize strategy and marketing. They also need a a long-term business plan, an essential part of survival.

Both independent retailers and their employees should constantly engage in self-training and language courses, plus participate in training sessions and IT courses. They should also familiarise themselves with strategic concepts, marketing strategies, and marketing communication, as well as PR tools, basic bookkeeping, and legal information.

One of the basic factors behind this change in approach is that consolidation requires independent retailers and small shops to forsake some of their independence in certain areas by joining or establishing partnerships. They cannot insist on having 'their own way', meaning the bulk of micro enterprises and corner shops each making their own purchasing and sales decisions. The traditional approach is often unsuitable for reducing the competitive disadvantages facing small enterprises when competing against large-scale retail chains that take advantage of their size and economies of scale.

Compared to total independence, partnerships offer the ability to integrate sales and purchases. In their survey, Agárdi and Bauer (2007) demonstrate that retailers within a partnership can achieve better marketing and business performance than independent ones.

Belonging to a partnership allows a small grocery business to negotiate better purchasing terms and have more competitive prices. Moreover, continual distribution resolves stock-related problems and permits discount schemes which participating stores can benefit from. Marketing activities are undertaken by the partnership organisation, which also enhances members' turnover. The store is given a different image and membership may even mean new technical equipment. During the past five years certain partnerships have even provided training programmes.

A partnership improves small grocery business logistics and competitiveness, thus reducing drawbacks inherent in small size. Aspects of logistical improvement are a central warehouse, an information system, computerised control, and transportation.

Further advantages include cost reduction when the partnership enters into central service agreements (e.g. mobile phone, electricity and fuel providers), to cover the entire network. Such arrangements normally represent great advantages for small shops and to each member in general.

Because of their size or poor location some of the small stores operated by independent retailers are unsuitable for partnership. Partnerships tend to exclude stores below a certain size or which, for other reasons, the management does not wish to include in the partnership. However, some independent retailers are unwilling to renounce their independence.

Such businesses may have to develop strategies in order to adjust to the consolidation trend. Such strategies may include:

- a change in profile,
- narrowing the range of activities and assortments (specialisation) or diversifying into additional activities (e.g. adding more services)
- specialising in market niches (e.g. organic, handmade, individual, special-interest, non-mass products)

- taking advantage of the niches in the product range of large outlets (e.g. smaller choice and encouraging large-quantity shopping at discount stores),
- taking advantage of the concentration of purchasing power near hypermarkets and superstores by moving into the neighbourhood of large retail units, hence supplementing their product range,
- Filling the demand not met by large impersonal, standardised and uniform units. Value-added services that can make a difference include increased customer care, personal guidance, branded products, individual service, quality, the selling of 'profit' rather than a product, plus a distinctive, attractive environment,
- operating shops in green markets and market halls,
- operating shops in green markets and market halls,
- operating small convenience stores,
- serving market niches (eg bus and train stations, kiosks),
- theme shops differing from the traditional concept of specialized stores which offer a wide range of items associated with certain issues or lifestyles. (e.g. wellness),
- one possibility for small shops operating in an urban environment is to cater to the special needs of an ageing population.

In many cases, the store operator's skills and resourcefulness are the key to survival. The required skills include basic marketing knowledge, familiarity with assortment policy, and good knowledge regarding the consumer market. The store owner has to offer services different from competing hyper and supermarkets and discount stores. Numerous stores have been able to retain customer loyalty through the right assortment policy and personal, thoughtful service, enabling survival in the vicinity of multinational hypermarkets. This is mostly true for entrepreneurs who gained trade experience prior to going independent, whereas lifestyle entrepreneurs tend to have insufficient skills, which is part of the reason why they fail.

The overwhelming majority of independent retailers operate a single store. Building up a small network of stores (two, three or more outlets) gives increased security, as one store's potential losses may be offset by the others' profit. The 10 to 49-employee category's improved market position in the multiple grocery market appears to confirm this statement.

In terms of adaptation, hypermarkets and supermarkets have to be distinguished from malls within large floor-area units. Rather than running a retail outlet themselves, investors in malls let shops to entrepreneurs. These high-turnover units also allow poorly capitalised independent retailers to operate smaller specialized shops since, rather than a substantial upfront investment, the lease is financed from the shop's turnover.

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Values, attitudes, and goals of future Hungarian food engineers

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Summary

Over the last few decades Hungarian higher education has been radically transformed, and this transformation was implemented to counter the backwardness that previously plagued the education system. Agricultural education in particular was part of this transformation process, which included the disciplines of food science and related technology. This attempt at transformation yielded only a partial success; student numbers shot up, but there was no subsequent general improvement in the efficiency of higher education. This article is based on two surveys carried out in 1997 and 2007. The students' values can be characterised as pluralistic and heterogenous. Based on longitudinal research, a shift can be seen toward materialistic and hedonistic values. The motivation for choosing the Faculty of Food Science is varied in nature, mirroring the food industry's often critical current situation. High schools' professional orientation is weak. Although the Faculty's Budapest location is attractive, in the long run this is not sufficient to replace carefully planned promotional work. By structural equation modelling a significant relationship can be proven between the students' values, their types of knowledge, and their expectations for future types of work.

Key words

higher education policy, human resource management, food science education, social psychology, empirical research

Introduction

The Hungarian education system's current situation is generally hard to understand, and this is particularly true for agricultural higher education (including food science and related technology) without a rough historical overview in which it is possible to divide the last ninety years into three periods.

Between the two world wars the structure and functioning of universities and other higher education institutes mirrored the semi-feudal, highly centralised structure of Hungarian society (Berend, 1998). The overwhelming majority of students came from the thin layer of upper or middle-class families (Simkus and Andorka, 1982). The ruling political and social elite as well as the churches worked all out to maintain "traditional Hungarian" values in the universities (Ladányi, 1993). The institutes had a fairly rigid organisational structure and curricula system. The lack of real competition among the universities meant there was no pressure to increase the efficiency of scientific and pedagogical work, but the universities had close bonds with foreign universities (above all German ones) and this strengthened the development of education (Palló, 2000). This system was characterised by its excellent working high school and professional qualification system, which was based on competition within and between the secondary schools (Palló, 1984). Professional education was closely geared to the needs of the expanding industrial sector and produced skilled graduates from technical high schools and colleges (Kárpáti, 1995).

Agricultural higher education had a modest role within the higher education system. In fact, there were only three agricultural faculties, and education was mainly practically oriented. The food engineer did not exist as specialists working in food industry enterprises had veterinary or chemical engineer qualifications.

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The end of the second world war brought in the communist era and in the second half of the 1940s there was a rapid and profound transformation in higher education. Many cadres in the new political elite had no higher education which is why they were wary of the intelligentsia. The most important aspects of this period were as follows:

- The political sphere's absolute supremacy in determining each and every strategic aspect regarding higher education institutes which were transmitted by various organs of the Hungarian party state. (Litván et al., 1996).
- Direct control of students, admitted to universities and high schools. The Party stressed careful vetting when it came to "new members of the intelligentsia". Student admission was 5 to 10 fewer than available spaces in order to filter out "unreliable" students. Even as late as the 1980s, students were sometimes granted post-secondary degrees without even having completed high school (Hanley and McKeever, 1997).
- At each level of higher education and in each institute compulsory ideological disciplines were introduced (Péteri, 2005).
- The organisational structure of scientific life and institutional systems resembled those in the Soviet Union (Péteri, 1993; Rainer and Péteri, 2005).

The contradictions of this systems became obvious in the early 1980s (Palovecz, 1985). In the early 1980s a Hungarian Socialist Workers' Party task group pointed out that the major problems facing higher education were the low number of students, compared to the developed states, and the fragmented structure of higher education. Other major problems were the separation of research and higher education, and that higher education facilities were scattered all over the place (Palovecz, 1987). Moreover, the basic problems facing the Hungarian higher education structure had been obvious for more than two decades.

During the post-Soviet era, the supposed change in the social system entailed totally altering established paradigms in almost every aspect of society and economy.

Analysing the government post-Soviet era programmes, it is obvious that every Hungarian government insisted on the strategic importance of higher education, but according to the specialists who analysed and evaluated the last two decades of Hungarian higher education there is a consensus on only one thing: **the number of students in universities and colleges exploded** and-if one focuses solely on this indicator-Hungary has supposedly caught up with the developed countries. In the late 80s, young people between 18-22 only composed 15% of student ranks, but in 2007 they composed 48% (HCSO, 2007). Other than on student numbers, public and professional opinion is completely divided regarding higher education. A good example of this ambivalence is the title of a Hungarian book on higher education problems. "Knowledge Factory or Paper Factory?" (Polónyi and Tímár, 2001)

A cursory glance seems to indicate that early 1980s reforms produced precisely the opposite of what they intended (Table 1).

Table 1

Governmental goals and their realisation in higher education system

Declared goals of different governments	Reality
Integration of higher education system: decreasing the number of higher education institutes	Increasing the number of higher education institutes
Increasing the quality of higher education	Inflation of value of diplomas, issued by the higher education
Increasing the personal interest of teaching staff in upgrading of quality of teaching	Increasing alienation of teaching staff from teaching, increasing distance between personal career and teaching burden and quality
Increasing of practice-orientation of higher education research	Decreasing practice orientation of academic sphere

Source: interviews with nineteen specialists, holding key positions in the Hungarian higher education system during the last fifteen years

Around the new millennium, Hungarian universities were ill-prepared for new challenges such as competition for students, inter-university competition, a changing relationship with the economic sphere. An erratic science and higher education policy could not adapt to the new economic and social environment.

Adapting to the new challenges has been especially important for agricultural education. After the second world war, parallel with the development of agricultural and industrial food production, there has been a rapid increase in demand for agricultural engineers, due to growing technical and technological advances in agricultural and industrial food production. But this greater demand is also due to Hungarian agriculture's successful model which integrates small and large-scale agricultural production and food processing. In one aspect, this comprised systematic development of former agricultural faculties, universities or academies, but also the establishment of new universities and colleges. Along with the increasing importance of industrial food processing, in the late 60s and early 70s new institutes were established. These were the Szeged Food Industry College and the Faculty of Industrial Preservation within the Budapest University of Horticulture. At this time education of food engineers was focussed on practical knowledge and teaching different food technologies. In the 80s the curriculum changed: the associated food science disciplines of microbiology and food chemistry gained in importance, because the development of industrial food production necessitated that specialists be better versed in their field. In post-Soviet Hungary the food industry has faced new challenges. The collapse of the former export system greatly limited the possibility of selling large quantities of low quality industrial food products. Due to these processes, food industry companies needs tilted toward food industry engineers, but it is worth mentioning that even then the food industry lacked specialists.

During the1990s numerous new trends surfaced in the Hungarian food economy. The most important of these are as follows:

- increasing importance of food safety and quality, and product-traceability;
- profound changes in food industry ownership structure because of privatisation, driven by foreign direct investment;
- fundamental changes in the food distribution system, and the emergence of large-scale food trade enterprises, combining wholesale and retail functions.

Simultaneously, there were fundamental changes in teaching at traditional agricultural universities and colleges. Formerly, these institutions had focussed on agricultural production. Demand for agricultural engineers seemed to be saturating, motivating the institutes to diversify, but they continued to create food engineering graduates. Going beyond the two existing facilities of food science and technology, this trend gave birth to numerous other faculties at other universities.

The Hungarian food industry was facing new challenges in first years of the new millennium. The most important strategic questions are as follows:

- increasing value added content of products, because the value added production of one Hungarian food industry worker is only one half the EU(25) average;
- increasing import competition in domestic markets;
- increasing food safety, with special emphasis on modernization and the operation of product-traceability systems. Preparing the food chain for possible or deliberate food safety events;
- development and production of healthier products, physical fitness and consumer health;.
- development of post-harvest technology within agricultural production, enhancing integration between agricultural production, food processing, and trade;
- preparation for new challenges caused by global warming;
- reducing food processing's environmental impact;
- utilisation of bio-energy;
- expanding knowledge transfer, enhancing food processing systems in other nations, especially in Third World countries through dissemination of scientific and technological results;
- expanding the level of services linked to food production (e.g. consulting, integration of food products into tourist attractions);
- combining food processing and catering and HORECA (hotel, restaurant, coffee) sector;
- improvement of food logistics systems in line with "from farm to the table" concept.

Obviously there are numerous new challenges facing the Hungarian food industry.

Under these conditions, the organizational and financial problems of higher education have gained in importance, but only a few studies are available that analyse how students see themselves and the educational process.

Theoretical and methodological considerations

The basic research methodology was survey questions, based on a questionnaire with 180 items.

In 1997-98 a comprehensive survey was conducted in various faculties to gauge student values, attitudes and goals in Hungarian higher education. In the survey's first stage 256 responses were obtained from the Faculty of Food Science. Results of this survey were published in the year 2000 Hungarian Journal of Higher Education. Ten years later, in 2007, we conducted the same survey with students from the Faculty of Food Science. Educational reforms mean the education system entails eight (!) different curricula. In our research we focused on regular students and obtained 450 valid responses, derived from students in different stages of their education.

Values are ideas held by human individuals or groups about what is desirable, proper, good or bad. Varying values represent key differences in human culture. What individuals value is strongly influenced by the specific culture in which they live (Giddens, 1997).

In sociology it is a subject of debate whether values are measurable and interpretable at an individual level. In the opinion of Parsons (1968) values exist at the community level, and they are not interpretable at an individual level. However, Maslow (1959) argues that they are present in individual needs, and universal for all human beings. Weber's classic theory (1904-05) claims values are inherently individual and not collective, because they are linked to individuals' lifestyles. This interpretation allows a wide scope for the measurement of values. One of the most widely used value tests was developed by Rokeach (1973). This test consists of ranking 18 terminal and 18 means/values. The Rokeach test has resulted in successful field research. In Hungary using the Rokeach Test to measure values is an established sociological practice which is why there are longitudinal data for the evaluation of changes of values in Hungarian society (Hankiss et al., 1984).

For our research we applied a simplified variation of the original Rokeach test. From 18 terminal values we chose 10, omitting eight values: for example, national safety and peace. The respondents were asked to rank these values.

Values, when measured on a ranking scale, sometimes raise eyebrows in terms of mathematically analysing results (Bishop, 1999). Johnston (1995) contends that ordinal, ipsative data provided by the Rokeach Value Survey are not suited to factor analysis, but in the literature there are numerous applications of the factor analysis method for analysing value surveys. For example, in Hungary Füstös and Szakolczai (1994) applied a simple factor analysis approach to evaluate results obtained by this test. In line with Johnson's suggestions (1995) we applied the categorical principal component analysis (CATPCA) procedure with SPSS 15.0 integrated statistical software (Kooij and Meulman, 2001). It is always an important question as to how many dimensions to separate. To answer this question we applied Chronbach's alpha. Following the usual practice, we increased the number of dimensions up to Chronbach's alpha, the last dimension no lower than 0.6 (Stamm and Hudnall, 1996).

Determining the significance of different factors, influencing the choice of the Faculty of Food Science was based on preliminary focus group interviews with students. In a future research phase it seems more practical to separate the factors behind choosing higher education in general (as opposed to work, or vocational training) and for choosing the Faculty of Food Science rather than other universities or colleges, but we did not wish to alter the previous questionnaire to obtain comparable and relatively easily interpretable results.

During the years of social transition Angelusz and Tardos (1990) published an important paper on social distribution of different types of knowledge and styles in Hungary. In this paper they determined three basic types of knowledge: cognitive-instrumental knowledge forms the basis for material or mental creative activity. The central point with this type of knowledge is obtaining active results which are achieved by utilising this knowledge. This result can be practically any kind of work, from artwork via plans (e.g. a part of a machine) to material products. Another category of knowledge is knowledge for building relationships and self-representation. The central result of this knowledge type is the effect. The third knowledge category is based on symbolic power-representative knowledge, serving to distinguish and express higher social status. In Angelusz and Tardos's work mastering different knowledge types has been determined by an item-scale, comprising the different activities which are associated with different types of knowledge. It is our view that the disposition to perform different activities reflects an attitude toward mastering types of knowledge required by different activities.

The different items were measured on a 1-5 scale, because respondents were familiar with this technique If a respondent found a given statement totally acceptable, then the respondent awarded the statement a 5. If absolutely unacceptable, then the respondent awarded a 1.

For simplicity, we applied a one-way variance analysis to detect the significant differences between the two dates of measurement.

To determine a system of relations between values, motivational factors, knowledge types and the expected type of future activities, we tried to set up a structural equation model using AMOS (analysis of moment structures) software (Arbuckle and Wothke, 2005). It was based on the following logic: we determined the component loadings for different groups of questions. Based on these loadings, it was easy to determine the object scores for each respondent by dimensions Up to this point the research was analogous with factor and cluster analysis, which can be considered a general method in marketing research (Lehota et al., 2004). Utilising these object scores in different dimensions according to different groups of questions, we tried to determine a structural equation model.

Results and discussion

The values of students show a considerable variance between the evaluations for different values (Figure 1). This fact highlights pluralism of value systems, and – on the other hand – the relatively erratic character of values.

Due to significant standardized variances it was impossible to determine significant differences in value-ranks between the two surveys. At the same time, the tendencies of changes are important, and mesh with results of other research on values.

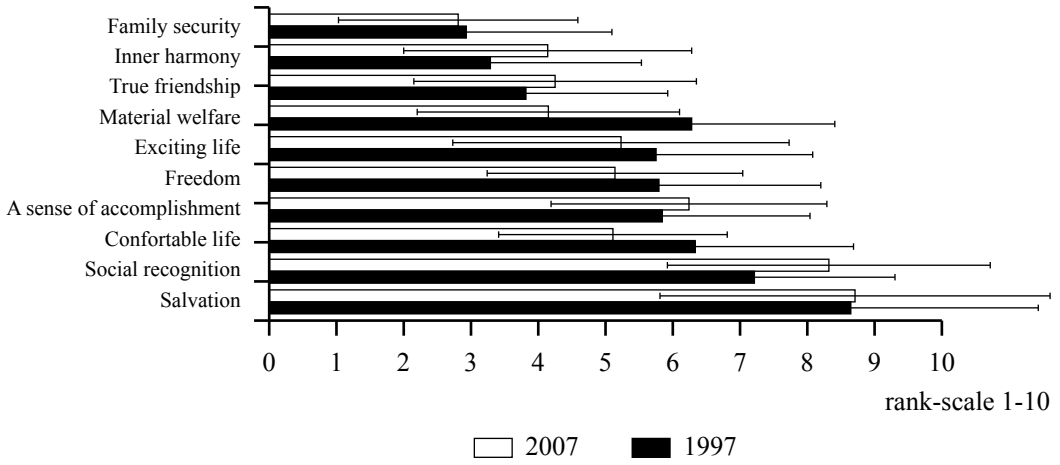

Figure 1: Results of simplified Rokeach-test

Source: authors' own research

According to Füstös and Szakolczai (1999) following the late 1980s change in social system there was a decline in the importance of traditional social democratic and socialist values, such as work and social esteem. Their results highlight the increasing importance of materialistic and hedonistic values. This corresponds with the rejection of the former collectivist values, supported by official communication of the former system, reflected by the growing popularity of a consumption

oriented lifestyle. In socialist times, those values associated with an individual's private life as family and human relationships were considered as opposing the official, collectivist values. A growing trend toward these values indicates that the respondents were retreating inside their private life to find refuge from an insecure social and economic environment. The trend detected by our survey regarding changes in values supports Füstös and Szakolczai's 1999 results and establishes that tendencies apparent during recent years' are still continuing. This trend can be perceived as negative because it indicates a departure from traditional (Catholic or Protestant) European values, which are work centered, and a a quest for harmonious relationships among individuals and society. (Esmer and Petersson, 2007)

The CATPCA method yielded three dimensions for ten variables (Table 2). In the first dimension the highest loading had the values associated with family and quality of life; in this dimension the traditional social-democratic or citizen values had negative loadings, which explains why in the structural model we labelled this dimension "family and comfort". In the second dimension the highest loadings were associated with traditional inner or socially related values, like friendship or salvation. After significant simplification, based on Weber's theorem (1904-05), we labelled this value as "Protestant". In the third dimension the only positive significant loading was associated with material welfare.

Table 2

Component loadings of simplified Rokeach Test, based on 2007 research (only the significant loadings are indicated)

	Dimensions		
	1	**2**	**3**
Material welfare		-0.287	0.806
Family security	0.746	-0.476	
Inner harmony	-0.530	-0.446	
A sense of accomplishment	-0.548	0.613	
Exciting life	0.654	-0.162	
True friendship		-0.468	-0.485
Comfortable life	0.693	-0.038	
Freedom	0.321	0.448	
Social recognition		0.678	
Salvation	-0.365	0.554	-0.382

Source: authors' own research

Students' basic motivation for entering the faculty mirrors complex Hungarian societal and food industry problems (Annex 1).

It is obvious that there is not one characteristic group of factors for choosing higher education in general, and that of the faculty in general.

Analysing the significance behind different arguments and motivations for choosing a given faculty offers numerous lessons. The most important of these are as follows:

- there was a definite increase in the importance of motivational factors connected to the general role of higher education, contrasting with the specific program available at the faculty. This is because numerous families deem higher education as the most important, and very often the only way of obtaining social respect and a secure job. One often hears: "first let's get a better diploma, then we'll take it from there...". Contrary to degrees (e.g. medicine, teacher, mechanical engineer...) the definition and scope of what a food engineer actually does is extremely difficult to grasp.
- Fundamental economic problems plaguing Hungarian agribusiness impact on students' desire to work in the food industry, and impact on their economic expectations regarding material and moral mobility stemming from a diploma. This can be considered a general trend throughout Europe. An indication of this is that the majority of former European agricultural and/or food science faculties define themselves as faculties of applied life-sciences, to avoid the "agricultural" or "food science" labels..
- An important factor governing the Budapest Faculty of Food Science is quite simply that it is located in Budapest as Budapest's central role in national economic, scientific, and cultural life is a major drawing card for students. In the short run, this offers an competitive advantage, but in the long term it means faculty might become complacent, too reliant on this geographical advantage.
- the glamour of student life has plummeted. The first survey indicated that, in the 1980s, students at the former University of Horticulture and Food Industry had fond memories of their student years, but in post-Soviet Hungary, every aspect of student life disintegrated.

The principal component analysis of motivating factors provides useful information (Annex 2). In the first dimension the highest loading has the motivational factors associated with strong professional orientation, with a high level of openness toward new personal relationships. In this dimension the positive image enjoyed by the faculty and its diploma have high loading values. In this dimension the "chance to meet new people" also held a rather high value. In the second dimension the most important factors were linked to studying in a higher education institute and obtaining a diploma. The educational content has only secondary importance. Thus, the first dimension summarised the motivation, linked to the educational process, the second dimension highlights motivations associated with the student's lifestyle. It is worthy of mention that in this dimension the arguments related to the disciplines taught at the faculty had a significant negative value. This is valid for the statements related to post-study employment opportunities.

This constellation of dimensions reveals the contradictions with a considerable number of students: on the one hand they want to enjoy the student life, but a considerable number of them do not want to use these years to increase their knowledge. Of course this phenomenon has been always present in Hungarian higher education, but during recent years this behavioural pattern is increasingly prevalent.

The major causes behind this phenomenon can be attributed to three facts:

- the *weeding out* function of entrance exams has considerably diminished. Twenty years ago official statistics showed that 30 percent of applicants were accepted by colleges or universities, but nowadays it is over 80%;
- higher education institutes have a vested interest in retaining students because the most of the state subsidies are determined on a format based on the number of students. Given this financial reality, increasing academic pressure on students could harm the institutes' financial situation. Of course in the long run this strategy could diminish the prestige con-

ferred on diplomas' and those who have them, but one shouldn't forget that the majority of institutions face day-to-day financial problems and the possible consequences of lower academic standards will be felt only in the long run;

- the implementation of a credit system and rule changes governing study and exams offer virtually endless opportunities to prolong one's studies. The only limit is a family's financial constraints, which explains why the number of lacksadasical students is gradually increasing.

In the third dimension the highest loading involves motivations associated with suggestions or pressure coming from the social environment of the applicant. For example, in this dimension was the highest value for such arguments, as "continuing family traditions", or "recommendation of secondary education teachers", or the recommendation of family members and relatives. It is highly important that the motivations associated with the educational content have no significant loadings in this dimension. This phenomenon corresponds with the analysis of other tables, which emphasises the importance in choosing the faculty and the effect of factors, illustrating the student's own motivations. The consequences of this phenomenon are negative, and result in a heterogenous level of discipline and enthusiasm.

During recent years the attitude towards different types of activity has not changed significantly (Table 3). The most popular activities are negotiating, bargaining (3.57), strategic decision making (5.54), professional teaching (3.98) construction (3.49), laboratory work (3.44). The obvious heterogeneity of these activities supports the former analysis, showing the diverse values and attitudes of students. The above-mentioned activities entail highly different personality traits: bargaining and professional teaching require an extroverted personality, and construction, strategic decision making or working in a laboratory demand a relatively introverted personality. At the same time, this fact indicates practical differences. Numerous jobs require engineers willing and able to set up and maintain interpersonal relations, but there is a wide spectrum of jobs requiring young specialists who prefer remote work with materials or numbers. In our opinion, these different personality requirements should also be considered regarding curriculum development. That's why in new MSc programs there tend to be chemisty/biochemisty options and some oriented toward improving management skills.

It is noteworthy that the popularity of such activities such as "conducting business operations abroad" have greatly decreased. This can be explained by people's experience working for multinational firms or EU state services. Modern society necessitates a drastic increase in working with sophisticated information systems and calculations as well as planning. But these activities have not become sufficiently popular, which shows the importance of training students in the better integration of computer-aided information and decision support systems. This constitutes a capital-intensive activity, but over time this could be an important way of developing centres of education.

After applying categorical principle analysis, we were able to separate only two dimensions (Annex 3). This can be approximately attached to the first two knowledge categories in the Angelusz and Tardos model.

Table 3

Propensity to perform different types of activity in a future job, measured on a 1-5 interval-scale

Activities	1997	2007	Change (value of 2007-value of 1997)
control of work of another persons	2.71	2.97	0.26
discipline	1.67	1.71	0.04
analysis	2.91	2.98	0.07
transaction of affairs	3.18	3.25	0.07
transaction of affairs abroad	3.84	3.54	*-0.30
strategic decision-making	3.48	3.54	0.06
calculations, planning	2.74	2.74	0.00
working in laboratory	3.26	3.44	0.18
administration	1.73	1.94	*0.21
teaching	2.70	2.87	0.17
direct control of production processes	3.24	3.24	0.00
construction	3.39	3.49	0.10
professional learning	3.73	3.98	0.25
help desk operations	2.79	2.88	0.09
phoning	2.00	2.34	*0.34
running of machines	1.89	1.99	0.10
working with information systems	2.99	2.87	-0.12
negotiations, barging	3.61	3.57	-0.04
participation in professional meetings	2.92	3.10	0.18

Source: authors' own survey

In the first dimension the highest loadings entail activities associated with self-representation and verbal actions, meaning this is the knowledge dimension associated with the ability to establish relationships and self-representation. A good example of this is the high loadings for "negotiation, bargaining" and "participation in professional meetings", as well as "strategic decision making". These types of knowledge are rather removed from "classic" engineering activities, but we have to take into consideration that the majority of students find a position in food trade of catering. These economic fields focus mainly on marketing and logistics, highly required fields of knowledge. The second dimension corresponds with the cognitive-instrumental knowledge type. In this dimension the highest loadings have types of activity associated with planning, analysis, ans calculations. These are "classic" areas where engineers actively use this knowledge.

In comparing the two knowledge type dimensions, it is obvious that in practice they associate with different personality traits. One type of activity may be appealing for one student, but doesn't appeal to another, making it crucial for students to be able to specialise. Based on these principles the faculty has developed numerous MSc courses, ranging from unit operations engineering to food industrial management. This gives students the chance to choose the best program for them given that, after a three and a half year BSc course, they only got an overview of food engineering, and are then able to immerse themselves in practical activities.

Analysis of the Hungarian labour market 10-15 years after graduation produces a realistic picture (Table 4). During the last ten years logistics and marketing have definitely gained in importance. Although the appeal of some jobs such as operative management has not grown, there is still an increasing demand for specialists in this sphere. The old romantic image of the independent, small-scale food enterprise is fading, and this fact is mirrored in the results. But efforts at increasing the entrepreneurial spirit seem to be bearing fruit. Jobs in research and higher education have gained in popularity, but university or research activities are not as popular, which stems from the long-term crisis of food science research institutions and the relatively low wages (especially in the capital, where the average wage level is far higher than in other regions).

Table 4

Expected workplaces/positions after 10-15 years of graduation

Future position	1997	2007	Change (value of 2007-value of 1997)
Member of high-level management at a food processing company	3.98	3.22	-0.76
Member of decision – preparation team	3.79	3.65	-0.14
Analyst	2.62	3.10	0.48
Member of procuration	3.01	3.85	0.84
Member of marketing-team	3.54	4.50	0.96
Member of quality – control division	2.98	3.87	0.89
Product or process development	3.59	3.87	0.28
Member of department/company for professional education	2.71	3.84	1.13
Owner of a family – owned enterprise	3.54	3.11	-0.43
Entrepreneur	2.93	3.75	0.82
Production manager	2.96	3.11	0.15
Member of public administration	1.99	3.12	1.13
Researcher, university teacher	3.05	3.21	0.16
Other activity, demanding higher education	2.82	3.51	0.69
Other activity, not necessarily demanding higher qualification	2.34	2.81	0.47

Source: authors' own survey

The popularity of expected future positions has changed considerably. In 1997 the most popular position was top management in a food processing company. During the last decade it became obvious that this involved in-depth economic knowledge so students with such ambitions likely opted for economic faculties at Hungarian universities or colleges. Another possible explanation is the fact, that these positions seem volatile and short-term. At the same time, there was increasing popularity of "back office" activities.

McClelland (1971) believed that human needs fall under three distinct categories: the need for achievement, the need for affiliation, and the need for power. Like Maslow (1968) McClelland believed that needs were the source behind all motivation, but, unlike Maslow, he argued that one level of need prevailed over all others, and claimed that there should be a bias toward this

need because individuals motivated by achievement are most likely to be professionally successful. Moreover, achievement driven societies are more economically advanced than those societies which are not. Our research does not support categorization of students according to McClelland's classification because power is difficult to define: a production manager seemingly has a lot of power over the workers, but is still highly dependent on his/her bosses, but this model could serve as a starting point for further research.

Analysis of principal components yielded three dimensions. These can be approximately identified as managerial, "classical engineer", and independent entrepreneurial functions (Annex 4).

A priori, we expected that it would be possible to determine a model among the values, motivations for choosing the Food science faculty, attitudes towards different activities and the expected future positions. After some unsuccessful trials we had to recognise that it was impossible to determine one "elegant" system of equations among the different dimensions. The system of equations has not yielded any reliable result, and correspondence with the model was not up to standard. Minus the motivation for choosing a faculty, we were able to determine a more reliable model, significant to 95%. This model has established a system of relationships between the basic values, types of knowledge, and future job expectations (Annex 5). This fact is not a question of theoretical research and only: indicates the importance of differential pedagogical work and career orientation of future engineers. This is especially important for student motivation. All over the world motivation is a growing and general phenomenon in higher education, mainly because of increasing student numbers. For example, Bale and Donna (2000) contend that in the developed world students typically go through university with a pragmatic view toward their education, viewing their courses primarily as means to an end, meaning a well-paid job. "To this extent, they may deem the actual content of a given course to be only of limited interest or relevance to the things they care about. As a result, they are often resistant to becoming fully engaged in the readings, class activities and assignments. Yet they feel entitled to a good grade." We contend that it is only possible to increase student involvement and motivation by offering variety in higher education. The scientific, systematic analysis of students' needs and expectations is one of the most important ways to achieve this goal.

Acknowledgement

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Annex 1

Motivations for choosing the Faculty in 1997 and 2007 survey, measured on a 1-5 scale, arranged in descending order of averages of the1997 survey (significant differences are indicated by *)

Motivations	1997	2007	Difference between 2007-1997
My profession seemed to be interesting, I wanted to work here	3.92	3.54	-0.38
I can perform serious work, useful for the society after obtaining the diploma	3.87	3.84	-0.03
I wanted to broaden my mind	3.84	3.94	0.10
I have taken great interest in disciplines, thought at this faculty	3.78	3.34	-0.44
I wanted to obtain some degree/diploma*	3.73	4.01	0.28
Material welfare after graduation	3.56	3.42	-0.14
Possibility to meet with new people	3.48	3.58	0.10
High image and prestige of education at this faculty	3.34	3.24	-0.10
By my qualification I will be able to help to another people, to have the possibility to accomplish an useful work	3.30	3.41	0.11
High chance to get into this faculty	3.25	3.33	0.08
High social prestige and acknowledgement of qualification, obtainable at this faculty*	3.18	2.67	-0.51
I wanted to remain a student, I don't want to work yet*	3.10	3.75	0.65
During the studies I will have time enough for my hobby or another activity	2.90	2.97	0.07
Former personal and/or professional experiences e.g. summer work in food industry, professional secondary school*	2.77	2.31	-0.46
Advices of family members and relatives	2.72	2.64	-0.08
Favourable image of student-life*	2.67	2.15	-0.52
I know some successful persons from my future profession*	2.66	2.11	-0.55
I have been expected by my family to get a degree*	2.53	3.75	1.22
Possibility to live further from parents: to experience the independence	2.53	2.68	0.15
Continuation of family traditions*	2.43	1.45	-0.98
Possibility to build-up new pair connections*	2.19	2.65	0.46
yearning for adventures*	2.18	3.15	0.97
The majority of my friends is student in higher education: I didn't wanted to stay out of this*	2.11	2.98	0.87
Possibility to taste the city-life*	1.98	2.54	0.56
Recommendation of secondary education teachers	1.94	1.87	-0.07
Nearness of the University*	1.77	2.95	1.18

Source: authors' own calculations, based on the survey

Annex 2

Principal component analysis of factors behind choosing the Food Science faculty, based on research in 2007 (only the significant loadings are indicated)

Factors of choice of Food Science faculty	Dimensions		
	1	2	3
Continuation of family traditions			0.606
Material welfare after graduation	0.406		
During the studies I will have time enough for my hobby or another activity	0.440		0.327
Advices of family members and relatives			0.527
High image and prestige of education at this faculty	0.639		
Former personal and/or professional experiences e.g. summer work in food industry, professional secondary school, etc.	0.451		
I wanted to obtain some degree/diploma		0.440	
Favourable image of students life	0.661		
I have been expected by my family to get a diploma		0.564	0.317
Nearness of the university		0.451	
Recommendation of secondary education teachers			0.455
Yearning for adventures	0.391		
I have taken great interest in disciplines, thought at this faculty	0.396	-0.445	-0.359
I wanted to broaden my mind	0.360	-0.364	
Possibility to meet with new people	0.700		
I know some successful person from my future profession	0.650		
Possibility to build up new pair connections	0.528		
I wanted to remain a student. I don't want to work yet		0.681	
High social image and acknowledgement of qualification, obtainable at this faculty	0.617		
My future profession seemed to be interesting, I wanted to work here	0.437	-0.559	
Possibility to live further from my parent: to experience the independence	0.458		
By my qualification I will be able to help another people, to have the possibility of accomplish an useful and efficient work	0.512		
High chance to get into this faculty			-0.426
The majority of my friends is student in higher education: I didn't wanted to stay out of this		0.670	
I can perform serious work, useful to the society after obtaining the diploma	0.509	-0.333	
Possibility to taste the city-life		0.468	0.564

Source: authors' own calculations, based on the survey

Annex 3

Component loadings of propensity to perform different activity types, based on research in 2007 (only the significant loadings are indicated)

Activities	Dimensions	
	1	2
control of work of another persons	0.575	
discipline	0.563	
analysis	0.312	0.487
transaction of affairs	0.479	-0.515
transaction of affairs abroad	0.343	-0.512
strategic decision-making	0.655	
calculations, planning		0.622
working in laboratory		0.704
administration	0.405	0.383
teaching	0.452	0.375
direct control of production processes	0.307	0.516
construction		0.522
professional learning		
help desk operations	0.517	
Phoning	0.512	
running of machines		0.489
working with information systems		
negotiations, bargaining	0.602	
participation in professional meetings	0.637	

Source: authors' own calculations, based on the survey

Annex 4

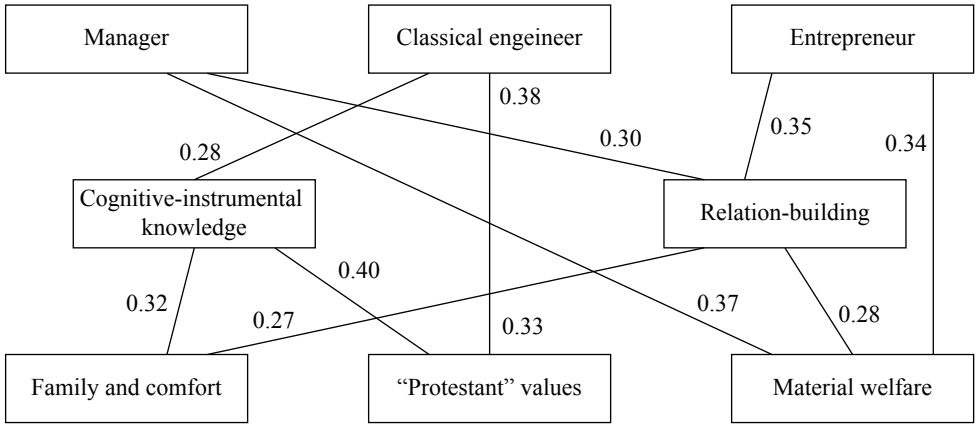
Component loadings of different future positions, based on research in 2007 (only the significant loadings are indicated)

Positions	Dimensions		
	1	2	3
Member of high-level management at a food processing company	0.694		
Member of decision-support team	0.767		
Economic analyst, controller		0.701	
Member of procuration division	0.693		
Member of marketing-team	0.729		
Member of quality-control division		0.685	
Product or process development		0.757	
Member of department/company for professional education	0.337	0.459	
Owner of a family-owned enterprise			0.854
Entrepreneur			0.670
Production manager	0.372	0.576	
Member of professional	0.359		-0.438
Researcher, university teacher	-0.320	0.655	
Other activity, demanding higher education			0.325
Other activity, not necessarily demanding higher qualification			0.311

Source: authors' own calculations, based on the survey

Annex 5

Results of structural equation modelling, based on research in 2007



Source: authors’ own calculations, based on the survey

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Segments in the market of Hungarian institutional catering

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Abstract

In our paper we are aiming to present food preference as a way of consumption typical of the individuals and consequently, a way of eating characterising working days. To carry out a more detailed preference examination, factor analysis was carried out followed by cluster analysis based on the segmenting effect of food consumer preferences. The role and the main features of institutional catering were analysed in comparing the segments of the whole sample and research. We assume that the differences outlined on the level of food preferences are reflected in choosing the way and circumstances of eating thus influencing the choice between several alternatives typical of working days.

Key words

Food consumer behaviour, out of home consumption, institutional catering, segmentation

Introduction

During the examination of food consuming behaviour we cannot ignore the changes in life-styles and value systems as the lifestyle of the individual is reflected in their food consuming behaviour and eating habits. The changes in the value systems of the last few decades, the co-presence of dissonant values – the appearance of contradictory nutrition trends – have had some effects on the domestic food consumption, as well.

The appreciation of leisure time as a global tendency has generated such changes in the value system that offer opportunities for the characterisation of new consumer target groups as a segmentation criterion. According to *Törőcsik*, the most characteristic difference in the old and new consumers' habits can be noticed in their relation to time dimension (Törőcsik, 2003). The new consumers constantly suffer from lack of time do for them time is more scarce than money. This fact has an effect on their buying habits and the composition of the consumer basket. *Lewis and Bridger* characterise the modern consumer of our times by lack of time and confidence in their model. The influencing effect behind the new consumer's decisions and behaviour derives from the relative scarcity of time and confidence (Lewis, 2001).

The present-day society can be characterised by constantly being „on the move" and the pressure of time can be felt both in the life cycles of man and their everyday life. The accelerated pace of life has resulted in social changes, the re-assessment of lifestyle thus basically altering eating and food consuming behaviour patterns. Traditional eating habits are continuously losing their one-time significance nowadays (deritualisation) and a part of the consumers regard nutrition as a way of satisfying needs quickly without any formalities. The number of those for whom fast food means a quick and adequate solution is growing. Even the health conscious group of consumers can be divided into two parts: one group prefers fresh and natural food while another hopes to gain their physical and mental well-being from the consumption of food produced on the basis of the most modern scientific results (high-tech health) (Kutsch et al.,1998).

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The central values of the Western European nutrition tendencies are ethical considerations, health, time and pleasures. These values are also stressed in the decision-making system of the domestic consumers but in a modified form. The appreciation of time, the growing importance of health and hedonistic aspects can be noticed in several parts of our nutrition culture (Horváth et al., 2005).

The appreciated leisure time has a significant impact on the order of importance of food consuming preferences and the choice between the circumstances of eating. In our present paper time and the trends, tendencies of acceleration as well as its impact on the change of eating habits are given special importance.

Research background

The impact of time on food consumption could also be shown in former research results: the Agro-Marketing Department of Gödöllő University succeeded in identifying 7 food consuming groups between 1991-1994 within the frames of OTKA project no. 1574, one of those was the "time-conscious" segment (Horváth, 1996).

In 2003 three consumer segments were differentiated during the primary research carried out on a 200-member sample in Pest County, one of which was labelled as the group of "time-conscious consumers" who regarded "requiring restaurant services to save time" an important service. (On the list the mean value of the sample was 2.06 while in the case of the time-conscious segment it was 3.6)

According to the research result of GFK Market Research Institute on surveying eating habits in 2003 there are two such time-conscious groups who take on the opportunity of eating out to save time on cooking. These two groups are the segments of the "modern" and "irregular eaters" (GfK, 2003).

The impact of time on food sales

Time consciousness and time sensitivity affecting certain consumer groups also have an effect on food sales turnover. This can be noticed in the changes of product-and service branch as well as the structure of the retail trade network (Table 1).

Table 1

The effect of the subjective acceleration of time on food sales

Factors inducing change	Areas of change		
	Product portfolio	**Trade**	**Services**
Time consciousness	Convenience food	Hypermarkets, stores	food delivery
	Ready and half-prepared food	Shopping centres	
	Small portions, packets of food	Take-away catering units	On-line and electronic shopping
	Pre-packed food	Food Courts	
	Finger foods		

Source: own compilation

In the supply portfolio of *products and services* the convenience considerations have gained ground as supported by the fact that the proportion of fresh and frozen ready-made food rose by 4.1% from 1998 to 2002 in the EU (AMC, 2004). The increased demand of convenience can also serve as an explanation of the increase in the sales of ready-packed and long life cold cuts. According to the data of AC Nielsen more than 7% more of ready-packed cold cuts – both in value and quantity – were sold in 2004 than in the previous year. The more expensive but convenient products are primarily bought by the young of higher income and open to novelties but it is more and more popular with the members of the older generations. That is why some producers offer convenience food not only in premium but also in cheaper price categories (Pintér, 2004).

The impact of a faster life tempo can also be felt in domestic catering with the appearance of such new product types like "finger foods". The gourmet portions consisting of 2-3 courses consumed by hand without any cutlery or "trendy products" are offered ready-made and in long life form, as well, as a convenience product by the food industry. "Finger food" is easy and fast to be prepared and can be consumed in several forms.

Due to their little free time, consumers have new demands for *services.* There is a dynamic expansion in the demand for meals that can be ordered via e-mail, sms or telephone. The companies that offer different types of convenience services like food delivery, preference of electronic buying can meet with serious success in the market.

The growing demand for convenience has changed buying habits and the relation to time is expressed in two reverse ways in choosing a shop or an outlet. Part of the consumers do the shopping in hypermarkets to save time. They usually spend much time at work, work more intensively and generally have higher income but less time to spend their money. For them, the relative value of time is appreciated. They want to get hold of the basic foodstuff under one roof to save time. This tendency defined as *One Stop Shopping* in the specialist literature has resulted in the fact that the market share of hypermarkets has kept growing on non-stop since 2001 so 22% of the turnover of daily consumer goods derive from this channel.

At the same time, another group of consumers experience the process of shopping as a way of spending their free time. In this consumer layer the time spent on shopping is growing – unlike in the case of consumers feeling the acceleration of time in a subjective sense (Kozák, 2004).

The market of eating out based on national and international data

In our research a special attention is paid to one of the alternatives of eating out, the market of institutional catering whose structural changes cannot be separated from the special features of the market of eating out as well as the factors and trends influencing it. That is why we think it is important to review some domestic and international changes typical of the latter one. One of the main advantages of eating out is its adaptability to the new consumer demands generated by the acceleration, mobility trend. While food sales at shops can give a limited shopping experience both geographically and often in time, the alternatives of eating out can reach the consumer any time with their supply: e.g. when meeting with friends, during relaxation, entertainment, travelling or even at work.

The turnover of the food service sector adapted to the changing consumer needs grew twice as fast (by 5%) as the market of food sales in *Western Europe between 1999 and 2001.* According to the specialists, this growth will be continuous and by *2010* it will have reached a share of *43%* in food sales in Western Europe (Whitehall and Frezia, 2006).

The *national proportion* of eating out lags behind the international data and can account for *8-10%* based on the estimation of the experts but its role and share in food consumption are expected to grow.

When examining the proportion of eating out in food sales there is a slow growth experienced since the *low point of 1995*. From the beginning of the 1960s till the mid-1990s there was a constant decline due to the economic recession, the worsening income situation of the population and a general decline in the living standards typical of that era. *After 1995 a slight but continuous growth* could be experienced as a result of more favourable economic impacts.

Table 2

Data of food consumed at home or outside (eating out) 1989-2001

Name	Breakdown of consumption (%)						
	1989	1991	1993	1995	1997	1999	2001
Total costs of food	100	100	100	100	100	100	100
From which: - eating at home	92.6	93.1	94.0	94.1	93.4	92.0	91.7
- eating out	7.4	6.9	6.0	5.9	6.6	8.0	8.3
Annual value per capita at 1989 unchanged price							
Total costs of food	21,634	19,909	18,547	16,326	15,448	15,821	16,893
From which: - eating at home	20,230	18,534	17,440	15,367	14,434	14,558	15,496
- eating out	1,595	1,374	1,107	959	1,014	1,263	1,397

Source: Mikesné Mencző, 2004

The increase in the number and revenue of catering outlets refers to the *more intensely increased role of eating out after 2001*.

Table 3

Number of catering outlets between 2001 and 2005

	2001	2002	2003	2004	2005
Commercial catering unit	47,951	49,201	50,077	50,328	50,475
Institutional catering units at work	4,076	4,571	5,071	5,358	5,819
Total number of outlets	52,027	53,772	55,148	55,686	56,294

Source: KSH (Hungarian Central Statistical Office), 2006

The role of institutional catering in eating out

In our paper we examine one alternative of eating out, the institutional catering within the frames of our primary research. Making use of the typically cheap, preferential institutional catering *decreased significantly* after the change of the regime *to 2001*. One of the *reasons for it is that only the biggest companies* and institutions could ensure *catering services* for their employees by running an own restaurant or canteen at preferential prices. On the other hand, the decline can also be explained by the fact that the significant part of *women living in the countryside disappeared form the labour market* thus reducing the potential number of those requiring institutional catering. Due to the economic necessities and decrease in opportunities, cooking has also become the main housework type- mainly in the case of strata with lower income.

The fact, that more and more people became addicted to health cult similarly to the European tendencies – especially the younger women of higher status and salary – has also contributed a lot to the spread of this process so fewer and fewer of this consumer stratum have required the services of institutional catering (Mikesné, 2004).

However, institutional catering developed a lot after 2001: there was a dynamic growth in the number and revenue of catering outlets. This development has far surpassed the rate that characterised the turnover of the domestic retail trade.

Table 4

Revenues of catering outlets between 2002 and 2005

Revenues of catering outlets (million HUF)	2002	2003	2004	2005
Commercial catering unit	421,513	443,077	496,785	567,047
Institutional catering units at work	44,933	53,411	68,026	67,206
Total	466,446	496,488	564,811	634,258

Source: KSH (Hungarian Central Statistical Office), 2006

The shift from the low point was significantly due to the fact that the office blocks of *multinational companies* operating in Hungary and employing a lot of people have a kitchen or a restaurant. The development and spread of institutional catering were also supported by the increase of *tax-free catering contributions* above the inflation rate and also the fact that *nowadays more and more workplaces cover the extra costs of* hot meals. There is a growing demand for cheap and fast *catering services for hot meals* on working days.

The objective of the research

The examination if time as a value-making factor appears on the level of food preference was extremely important for us – like during our previous research tasks. We also supposed that *the appreciation of time can influence the choice of eating circumstances typical of the working days*.

One of the starting points of our research was that besides the influences of macro-environment *individual food preferences also play an important role* in choosing eating alternatives typical of the working days.

Furthermore, we also had the hypothesis during the research that those requiring institutional catering can be divided into further unique segments on the basis of their food preference *if the differentiating effect of factors determining food consumption can be felt in the choice between the eating alternatives at work.*

Material and method

The reason for this latter one is that due to the nature of the research only the active workers of the given county were regarded to be basic majority. The sample is not a representative one on county level as only information about the socio-demographic criteria of the whole population would have been available and not the statistics about active workers so it was not possible to carry out sample taking by the representative quota. In our questionnaire we examined the habits of the single food consumers by employing a 5-grade discreet semantic differentiating scale as well as eat-

ing alternatives typical of working days on nominal measure level and by selective question types. Ranking questions and a 5-grade discreet semantic differentiating scale were used to measure the factors influencing the choice of eating alternatives typical of working days. Regarding the fact that the lifestyle of the individual is reflected in their food consuming habits, a separate group of questions were applied to the examination of the lifestyle typical of the individual in two main aspects: on the level of the value system and the structure of free time. We surveyed 200 inhabitants of Heves County during our primary research by means of a (pre-tested) standardised questionnaire. During data processing we got 197 questionnaires that could be evaluated and these were assessed by using SPSS 11.5 programme package. In our *questionnaire* we examined the food consuming habits of the individual, the eating alternatives typical of the working days as well as their choice and influencing factors. Regarding the fact that the individuals' lifestyles are reflected in their food consuming habits, we analysed the lifestyle typical of the individuals from two aspects: on the level of the value system and on the leisure-time structure.

The socio-demographic characteristics of the sample

The breakdown of the interviewees by gender and age are illustrated by Table 5.

Table 5

The breakdown of the sample by age and gender

Age/gender	18-29	30-39	40-59	60-69	total
Male (%)	24.7	22.6	38.7	14.0	100%
Female (%)	22.1	20.1	40.4	17.3	100%

Source: own compilation 2007, N = 197

62% of the sample have higher education qualification, 38% possess secondary school qualification and there was no one in the sample with basic-level education.

Regarding income relations, nearly about one-third of the sample live on a monthly net income of 40-80 thousand HUF per capita. A bit fewer, 31% have a net income of 80-120 thousand HUF per month. The third most populous income group (19%) earns 120-180 thousand HUF per month.

Taking domicile into consideration we can state that the representation of those living in the city and in the country was 50-50%. Almost half of the interviewees (47%) are married and almost the same proportion (18% and 17% respectively) are single men and women. Further 9-9% are widowed or divorced.

Regarding the number of the people in the household, the biggest part of the sample live in 2-person households followed by one (25%) and three-person ones (14%). Families of four or bigger were not represented in the sample.

Results

Factors determining the food consuming habits of the sample

The interviewees considered *outer, qualitative features* like "the freshness, good taste and smell of food" the most important. The decisive role of outer, qualitative features in food consumption is also supported by previous research results. (Lehota et al., 1998), (Horváth et al., 2005)

When taking the research results of GfK on domestic food consuming habits into consideration the first place is also occupied by "the importance of food taste" that also strengthens the leading role of the outer, qualitative features of food (GfK , 2005).

Table 6

Criteria of food consumption according to the sample

Factors		mean	rank
The most important factors (mean >= 4)			
Outer factors of quality	Freshness	4.8	1
	Taste, smell	4.7	2
Factor of health consciousness	Free from artificial agents	4.2	3
More important factors (mean >= 3.1)			
Inner factors of quality	Variety	3.9	4
	Vitamin-mineral content	3.9	4
Price-value proportion	Value for money	3.9	4
Parts of time factor	Adequate packing	3.5	5
	Long life	3.5	5
	Practical packaging	3.4	6
	Quick preparation	3.3	7
Less important factors (mean <= 3)			
	Geographical origin	2.8	8
	Brand name	2.6	9
	Eating in restaurants to save time	2.3	10

Source: own compilation 2007, N=197

As the third most important factor, the interviewees mentioned the criterion of being "free from artificial agents", which refers to the appearance of *health conscience* in eating habits. As a result of the frequent food scandals of these days for the consumers losing faith it is becoming more and more important to get reliable, controlled food.

The components of inner qualitative features such as "variety", "vitamin-and mineral content" were ranked the fourth most important place in the preference order of the sample of the same mean value with the statement "value for money". All this proves the dominant role of the suitable price-quality ratio in food buying preferences that is also proven by the examination of GfK in 2005 on surveying the eating habits of the Hungarian grown-up population. The research concluded that quality and the suitable price/value ration regarded as the most important factors of food purchase had been ranked the highest with almost the same values (GfK, 2005).

According to the sample, *time factor and its components* like "ready to prepare", "practical packaging", "adequate packing" are more important than average. This means that the points of view in connection with saving time and time consciousness have appeared but they have no priority over outer, qualitative features.

The opinion of the sample is in accord with the results of the national survey of GfK according to which the importance of the taste of food is prior to the rapidity of its preparation. The benefits of saving time have no priority over the price.

The last important factors of the preference order of our sample are "geographical origin" and "brand name". The position of this latter one comes from the fact that brand awareness is not even typical of food purchasing of the domestic consumers such as in Germany where only 10% of the young choose a branded product consciously (Hartmann, 2003).

"Eating in restaurants to save time" was not regarded too important (mean = 2.3) by the sample members in their decisions on food consumption. The result is not surprising as it is not a typical practice for the domestic consumers to require restaurant services to save time on cooking. In Hungary the proportion of eating out of the total costs on food is only slightly over 8% lagging considerably behind the nearly 40% typical of Western Europe (Food Service Trend, 2006).

The results of our examination also proves that the influencing effect of time-related preference on food choice can be felt in consumers' opinions but cannot by all means regarded dominant. The factors that can be linked to the outer and inner criteria of quality as well as price are definitely given priority.

Segments formed alongside food preferences

The factors determining the food consumption of the respondents were measured on a 5-grade discreet semantic differentiating scale. The correlations between the criteria determining food consuming preference were examined by factor analysis by varimax rotation. However, the analysis did not bring an interpretable professional result. That is why a cluster analysis examination by using the method of K-means cluster analysis was carried out based on a full range criteria list including all variables determining food consuming preference to make segments of the respondents by food preference. In this process our objective was to form such food consuming groups based on food consuming preference whose members resemble to one another and suitable differentiation between the groups should be ensured at the same time. In the K-means procedure the number of clusters was predetermined according to methodology and the algorithm divided the respondents into these groups based on the features of their food consumption.

Factor analysis carried out about the determining factors of the food consumption of the interviewees did not bring a professionally interpretable result so the cluster analysis examination was carried out on the basis of the full factor list. Our objective was to group respondents into segments based on the peculiarities of their food consumption.

On the basis of the result of variety analysis a significant diversion could be concluded between at least two clusters regarding all factors influencing food consumption. The cluster analysis resulted in the following groups:

- *Cluster 1: „Price-sensitive food customers" (23 persons):* These respondents ranked only the criterion "cheap" higher than the mean value of the sample. They regarded the outer quality, taste, smell of the food of average importance together with the suitable price-value ratio. Due to their dominant price sensitivity it is not surprising that the members of

this group attached no importance at all to eating out (1.08). That is why they are unlikely to become the target clientele of institutional catering.

- *Cluster 2: „Lovers of nutritive food" (51 persons): The members of the segment* regarded the freshness, variety and calorie content of food i.e. traditional points of view of food choice important so they are the lovers of nutritive, substantial foods.
- *Cluster 3: „Price sensitive cooking at home" (24 persons):* Practical food preparation *is important for them:* "ready to prepare", "long life" and "practical packaging. It is likely that these factors are important for those who are engaged in daily cooking. The criteria "cheap" and "value for money" were ranked the most important by them so it is not surprising that they do not require more expensive restaurant services to save time for cooking. The statement "restaurant services to save time" was ranked well below the mean (1.8). "Brand name" also had priority in their order of preference. Due to the price sensitivity typical of the members of this group it is likely that they prefer brands of cheap price category or commercial brands when buying food.
- *Cluster 4: „Pleasure-seeker consumers" (99 persons):* It is typical of the preference order of this group that only they attached a higher than average value to the statement about time consciousness and the importance of leisure time: "restaurant services to save time" (2.76). Furthermore, it is worth noting that they ranked the statement about the importance of price below the mean and, what is more, below than the three other groups (3.02). This fact also proves the hypothesis that primarily price sensitivity sets the limit to the widespread use of eating out in Hungary.

According to the chi-square test trial among the socio-demographic features gender, type of domicile and qualification influenced significantly the belonging to a certain segment. The cluster breakdown of age categories, marital status and income was examined in percentage as there were such segment- and demographic feature combinations whose correlation value was not interpretable sue to the low number of their components.

- *In the group of „Price-sensitive food customer"* the representatives of *males are dominant.* The members of *the older generations married and older than 40-59 living in the country* make up the biggest ratio (70%) of this segment, mainly (65%) with *secondary education* and their monthly income is *80-120 thousand HUF.*
- *The „Lovers of nutritive food" are also mainly men (55%),* young, aged between 18 and 39 *living in the city on their own*. In this segment the ratio of those with *higher education* is outstandingly high (88%) and they are the second well-off class with a net income of 120-180 thousand HUF per capita per month.
- *The representatives of „Price-sensitive cooking at home"* are mainly *women,"the weaker sex"* (62%), which is not surprising as cooking is still a traditional female role so it is quite understandable that the women-dominant group considered the factors of making cooking easier important. The bulk of this *segment* (75%) *is a city-dweller single.* Regarding age, the representatives of the *younger generations* make up the bigger ratio (61%). *The members of this group have the lowest income* (40-80 thousand HUF per capita per month) despite the fact that *48% of them have secondary and 52% higher education.*
- *In the case of "Pleasure-seeker consumers"* decisively *women make up the bulk* regarding gender: 64% of the group is women and 36% men. Typically (56%) they are *married, at the age between 40 and 59 with higher education and living in the city*. The members of this segment can manage the biggest budget as only this segment represented respondents (11%) with a net monthly income of *above 250 thousand HUF* per capita.

Table 7

Influencing factors of food consumption according to the sample and segments

Factors	mean	Price-sensitive food consumers	Lovers of nutritive food	Price-sensitive, cooking at home	Pleasure-seeker consumers not considering price
Eating in restaurants to save time	2.30	1.08	1.96	1.87	2.76
Brand name	2.60	1.13	2.05	2.75	3.11
Geographical origin	2.80	1.43	2.70	1.83	3.24
Calorie content	2.83	1.73	3.01	2.16	3.15
Protein content	2.78	1.86	2.52	2.37	3.38
Attractive packing	3.12	1.82	2.82	3.10	3.73
cheap	3.25	3.86	3.11	3.95	3.02
Easy to prepare	3.27	3.13	1.96	3.40	4.00
Low fat content	3.37	2.08	3.13	3.12	3.84
Practical packaging	3.44	2.00	2.56	3.66	4.17
Long life	3.47	3.43	2.39	3.66	4.00
Adequate packing	3.53	2.56	2.98	3.58	4.03
Appearance	3.57	2.08	3.52	3.20	4.04
Nutritive value	3.62	2.52	3.49	3.20	4.06
variety	3.87	2.34	4.09	3.83	4.12
Value for money	3.87	3.86	3.47	4.41	3.95
Vitamin-mineral content	3.91	2.65	3.80	3.41	4.39
Free from artificial agents	4.15	2.91	4.09	3.45	4.66
Taste, smell	4.69	4.69	4.35	4.58	4.89
Freshness	4.80	3.73	5.00	4.70	4.97

Source: own compilation 2007, N = 197

Judging institutional catering alternatives

Analysis was primarily based on the opinion of the respondents who use a kind of institutional catering alternative at least once a week. The results suggest that the deviations of choosing the way of eating can be traced back to the differences of food consuming factors typical of certain groups.

- „*Price-sensitive food consumers"*, as expected on the basis of their typical food preferences *use all institutional catering alternatives less than the mean value of the sample.* When examining ranking within the group canteen, food delivery and buffet – lagging significantly behind – are highlighted. The 13-13 per cent proportion of canteen and food delivery refers to the fact that these ways of eating are regarded relatively cheap and affordable even by the price-sensitive consumers.

- *In the case of „Lovers of nutritive food"* the need for substantial, nutritive food returns in choosing the alternative of institutional catering at work. The ranking with the alternatives of canteen, food delivery and fast food restaurant also proves this. This group consisting mainly of single men prefer *substantial meals, menus* that can substitute cooking on weekdays to alternatives offering smaller portions and lighter snacks.
- The members of *„Price-sensitive cooking at home"* have their meals mainly at a buffet on working days. It is followed by food delivery and canteen, which lags far behind. Their ranking suggests that they *have a quick snack during the day* and instead of main and hot meals they require the services of institutional catering mostly *at times between*. They are not interested in solutions ensuring hot meals and substituting cooking like canteen. The alternatives of having meals at times between the main meals are attractive for them.
- *„Pleasure-seeker consumers not considering price"* use the opportunities of canteen, buffet and food delivery most of the alternatives of institutional catering and these three solutions are used by them in the biggest proportion. *The members of this segment have both their main meals and those between within the opportunities of institutional catering.* As the factors connected to price are less important for them than the average it is not surprising that they prefer solutions more expensive but more convenient than cooking.

Table 8

Examination of institutional catering alternatives in comparison of sample and clusters of those using the service at least once a week (%)

Eating alternatives on workdays	Total sample	Price-sensitive food consumers	Lovers of nutritive food	Price-sensitive, cooking at home	Pleasure-seeker consumers not considering price
canteen	36	13	35	13	47
buffet	29	4	14	30	40
restaurants	9	3	14	8	10
food delivery	26	13	33	25	26
inn	9	3	11	9	11
fast food	15	3	31	8	14

Source: own compilation 2007*, N = 197; Relative frequency at which projection base is the number of those favouring the possibility of the given eating alternative at least weekly. The sample member could choose more alternatives simultaneously.

On the basis of our research results it can be stated that *those requiring forms of institutional catering are not homogeneous, even within them there are such segments identified where the points of time consciousness have special importance.* These consumers are the believers of convenient meals and strive to minimise the time spent on cooking and food preparation. "*Lovers of nutritive food" and "Pleasure-seeker consumers"* belong here who can be potential target groups of different institutional catering solutions especially alternatives standing in for main meals. The results of the research also prove that the factors typical of the food consumption of the individual are also decisive when choosing between the catering alternatives of the consumer on workdays. The segments created on the basis of food preferences have chosen different catering alternatives, i.e. *the preference order of food consumption determines the ranking of institutional catering alternatives*.

Judging the circumstances of eating

Table 9

Factors of eating circumstances typical of working days
(in average, 1= not important at all, 5= very important)

	Factors determining eating circumstances	Mean value of sample	Price-sensitive food consumers	Lovers of nutritive food	Price-sensitive, cooking at home	Pleasure-seeker consumers not considering price
Inner and outer aspects of quality	Nice surroundings	3.90	3.25	3.79	3.65	4.09
	Sight of food	3.60	4.25	3.75	3.50	3.53
	More menu	4.00	4.00	4.02	3.95	4.03
	Good quality	4.60	3.75	4.68	4.45	4.60
	Varied menu	4.10	4.00	4.00	3.70	4.20
	Organic food	2.88	1.00	2.40	2.40	3.30
	Quality assurance	3.35	1.00	2.70	3.60	3.70
Dimensions of convenience/time	Fast service	4.00	4.00	3.80	3.60	4.20
	Easily accessible	3.90	4.75	3.54	3.60	4.18
	Food delivery to workplace	3.66	4.00	3.30	3.25	3.90
	Well-known	3.31	1.00	2.80	3.25	3.70
	Promotion material	3.50	1.50	2.80	3.50	4.00
	Can be paid for by lunch voucher	3.70	3.50	3.40	3.70	3.80
Price factors	Value for money	4.30	4.75	4.00	4.30	4.30
	cheap	4.00	4.10	3.95	4.20	4.10

Source: own compilation 2007, N = 197

These factors were evaluated in a differentiated way by the respondents of the certain segments like in the case of food preferences and institutional catering alternatives.

- „*Price sensitive food customers*" preferred the factors connected to price when choosing the circumstances of eating: they ranked the statements "cheap" and "value for money" higher than the mean value of the sample. Besides the factors connected to price new demands also appear from their part: "easily accessible" and "ensuring food delivery" that *expands their system of criteria with time dimension*. *They considered the sight of food also important when choosing food.*
- *„Lovers of nutritive food"* ranked the alternatives of „good quality food" and „the alternatives of more menus" more important than average. In their case equivalents of qualitative criteria typical of their food consumption appeared among the criteria influencing the choice of eating circumstances.
- *The „Price-sensitive, cooking at home"* group seem to make decisions on the choice of eating circumstances also mainly on the basis of price. Beside price a new dimension also appears in this group, the *component connected to quality*. However, the group considered the fact of quality assurance from the part of the caterer more important than average.

- „*Pleasure-seeker consumers"* ranked everything to be more important than average except two factors as could be experienced in the examination of their food preference. The two factors of "good quality" and "the sight of food" were ranked as important as the mean value of the sample.

To sum it up we can state that factors determining food consumption appear in the choice of the way and circumstances of eating as a decisive criterion for the group members created during segmentation but *new expectations can also arise.* That is why the factors of convenience, time, quality and price cannot be so sharply distinguished when choosing eating circumstances as was illustrated in the case of food consumption. These dimensions are merged, affect together and simultaneously by creating a complex system of consumer requirements towards the caterers.

Conclusions

On the basis of our research results the dimensions that can be the main characters of institutional catering can be identified: convenience, time, quality and last but not least price as well as their suitable combinations. The players of the supply side of institutional catering compete in all the four dimensions at the same time. The domestic institutional caterers more and more driven among the rules of the competitive sphere are compelled to hold out at several levels. The participants of the supply side traditionally expect the institutional catering unit to mean a cheaper solution than the supply of commercial catering. Simultaneously, with the demand for cheapness further requirements typical of the consumer of the 21st century also come to the foreground: needs for adequate quality, varied food and ambient surroundings. On weekdays due to the short lunch break at work the aspects of saving time are becoming more and more important in the choice between ways of eating: fast service, easy accessibility or perhaps ensuring food delivery to the place of work. These criteria from the part of the consumer appear at the same time and they do not wish to neglect any of them to favour another. This situation poses a challenge to institutional catering operating on the borderline of public and commercial catering but the fact that new consumer demands can successfully be met in institutional catering is illustrated by several national examples.

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Csáki, Cs.; Forgács, Cs.; Milczarek-Adrewjewska, D. and Wilkin, J. (eds.): Restructuring market relations in food and agriculture in Central and Eastern Europe: Impacts upon small farmers[1]

Matthew Gorton[2]

This volume contains a selection of papers presented at a regional seminar of the Regoverning markets project "Changing Agri-Food Markets - Impacts upon Small-Scale Farmers". The regoverning markets project is funded by, amongst others, the UK's Department for International Development (DFID), the Canadian International Development Agency (CIDA), and the US Agency for International Development (USAID). The objective of the project is to understand the restructuring of agri-food supply chains in a wide range of post-socialist and developing countries, with a particularly focus on the participation of small-scale producers and policy measures to improve their inclusion in 'modern markets'. This book presents the findings for Central and Eastern Europe.

The volume is divided into three parts. Part 1 presents the overall framework and is comprised of two chapters. The first chapter by Vorley and Proctor details the overall objectives of the project and emerging findings. The authors conclude that many of the drivers of the restructuring of agrifood systems are inevitable but that policy initiatives can aid the inclusion of small-scale producers. However inclusion typically depends on subsidised external support and that 'market forces alone generally do not lead to inclusion' (p.27). This is followed by observations at the regional level (Central and Eastern Europe) by Csaki and Forgacs. The latter detail changes in farm structures since 1990, noting the persistence of 'hundreds of thousands or even millions of small farms' (p.37) in the region. Csaki and Forgacs are, however, pessimistic about their future prospects. Small farms face a rapidly changing environment, particularly concentration in food processing and a revolution in retailing stemming from the emergence of largely foreign owned retail chains. The changes in the market environment are thought to be adverse for small farms because transaction costs favour larger farms, small farms struggle to make sufficient investments to meet the needs of buyers and are typically unwilling to enter into co-operative arrangements to improve their bargaining position and attractiveness of market offerings (p.43). Producer organisations, which in some countries act as key intermediaries between international buyers and small scale producers are typically weak in the region. European and national support has most helped larger producers to improve their competitiveness and 'there is some evidence that public policies…may even worsen the situation for small farms' (p.47).

Part two is comprised of a very detailed and extensive study of the Polish dairy sector by Milczarek-Andrzejewska, Malak-Rawlikowska, Fałkowski and Wilkin (pages 55 to 148). The authors note that during the EU pre-accession period the number of commercial dairy farmers and processors decreased markedly. To understand the process of restructuring in greater depth qualitative interviews and focus groups were conducted with key actors (producers, retailers, wholesalers etc). These interviews highlight three key trends: greater specialisation in milk processing, the impact of supermarket chains on margins and assortment demands, and the preference of wholesalers and retailers for larger suppliers. Farmers regard herds of between of 15 and 30 cows as currently optimal in the Polish context. Co-operation between farmers in both sales and renting machinery is rare. The main reason uncovered for this was a lack of mutual confidence and 'farmers' mentality' (p.104).

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In addition, 397 dairy farming households were surveyed concerning their activities in the years 2001 and 2006. On the basis of this farms were classified into four groups (a) *always modern* (producers who supplied a dairy company directly in both 2001 and 2006), (b) *always traditional* (farms supplying milk to a collection point in both 2001 and 2006); *changed channel* (those that switched from traditional in 2001 to modern in 2006) and *not-survived* (those that stopped selling milk after 2001). The data indicate that always modern farms have significantly larger herds, greater specialisation and have made significantly larger investments. Those that had changed channel were more indebted which may reflect the costs of gaining access to modern supply chains. The growth in agricultural revenues of those that had changed channel or always been modern grew at a significantly higher rate than always traditional farmers.

Econometric evidence on the determinants of market channel choice suggest that unearned income is negatively related to the propensity to 'modernise' while the access to external funds (credit) is, in contrast, positive and highly significant. Human capital and households' initial physical capital endowments were found to be insignificant in explaining channel choice. The authors conclude that 'entering the modern marketing channel seems to be conditioned by the exogenous rather than endogenous factors' (p.128). Finally collaboration between farmers was also found to be minimal: only 1 farmer out of 323 still operating in 2006 was co-operating on the marketing of agricultural products.

Section 3 consists of five case study chapters. The first paper by Banaszak and Beckmann evaluates the implementation of legislation to support producer groups in Poland. For the Wielkopolska province, the authors identified 55 functioning and 19 disbanding producer groups from which in depth interviews were conducted with a selection of leaders from both categories. The availability of subsidies was a major motivation for the establishment of 22 per cent of producer groups. Other critical motives were the low level of prices received by farmers, a lack of bargaining power and poor individual marketing. Functioning groups identified that members had benefited from increased bargaining power, higher prices for their output and better market information. Fifty per cent of producer groups which failed were established by the extension service and none of those classified as successful were established by this agency. This suggests that policy implanted networks are more likely to fail where local leadership and drive is absent. The authors conclude policy assistance for producer groups should be geared to 'identifying local leaders and providing management training for them' (p.163) rather than taking over entire functions.

Bachev and Manolov present a case study of small-scale dairy farm inclusion in the Plovdiv region of Bulgaria. Specifically they consider the activities of "Dimitar Madzarov" Ltd. dairy, which was established in 1991. The firm has approximately 1000 farms which supply it with milk, of which five per cent were sampled for the study. The authors conclude that three factors have been critical for inclusion:

a) investment in relation-specific capital to suppliers such as good reputation, storage and collection facilities;
b) effective communication, incentive, sanction and payment systems;
c) interlinking of milk supply with provision of credit and services by the dairy (p.197).

These factors are similar to those identified by Swinnen (2005). Bachev and Manolov suggest that the model could be up-scaled and replicated elsewhere.

Bakucs, Fertő and Szabó examine in detail the Mórakert purchasing and service co-operative, located in Mórahalom. This successful fruit and vegetable co-operative was the first officially acknowledged producers' organisation in Hungary (p.207). The authors attribute the success of

Mórakert to the screening process of potential members, the enforcement of strict rules on quality and quantity of produce sold, and effective leadership which has engendered trust between management and members. It appears that the co-operative has been able to overcome problems common to others by effectively enforcing obligations on members to fulfil agreed contracts with the co-operative. In return the co-operative helps farmers sell their horticultural products, purchase inputs at favourable prices and 'offer long term security' (p.236). The authors conclude, therefore, that 'one of Mórakert's secrets is that they have developed a very efficient private contract enforcement mechanism' (p.246).

Juhász and Kürthy examine another Hungarian co-operative, that of Avium agricultural and Aviam 2000 poultry processing. Like Mórakert it is a purchasing and marketing co-operative, which was established in 1993 with the objective of reducing farmers' costs and improving their sales performance. In assessing the performance of Avium, the authors identify three success factors:

a) the personality of the president, who acts as the "central motor", and his personal and professional connections;
b) the founding of a processing co-operative by members of the agricultural co-operative to exploit the advantages of vertical co-ordination;
c) extending activities to cover wholesaling so that they can provide a full assortment of poultry products to retail partners (p.293-4).

However, the co-operative does not supply multinational retail companies, as this would require accepting lower prices. This means that the co-operative is dependent on small independent retailers and butchers, who are losing market share to the main chains. Opportunities for replicating Avium's business model may be limited as the niche for small-medium sized processors is limited.

The final chapter by Serova focuses on small-scale tomato producers in the Astrakhan region of Russia. She identifies that smallholders in Russia are 'almost fully excluded from the mainstream food chain and participate mostly in local traditional markets' (p.302). Unfortunately, local markets do not provide sustainable incomes and producers are detached from value-added opportunities in Moscow and Saint Petersburg. To overcome this gap a 'dispatcher system' of trucks to link Astrakhan with key markets has emerged. However, the dispatcher system acts outside of sanitary inspection controls and is 'undoubtedly shadow economy activity' (p.318). This has led to attempts to shut it down. Serova argues that this is a mistake and that public policy should focus on including such activities in the legal economy. However this may not be a simple task. Serova's case study illustrates that in countries where the informal / black economy is significant, inclusion of small-scale producers may face additional obstacles.

Overall the volume provides a detailed set of cases on the fortunes of small-scale farmers in Central and Eastern Europe and looks at the ability of a range of public and private initiatives to improve their position in restructured supply chains. Several common themes concerning leadership, enforcement mechanisms and service quality are identified. The book would benefit from an index and a concluding chapter evaluating the lessons from the region. It is nevertheless an important and illuminating collection of papers that is useful to both academics and policy makers.

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