

Economic conditions of Hungarian agricultural producers in 1990s

Ekonomické podmínky maďarských zemědělských producentů v devadesátých letech

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Abstract: The main aims of this study are to describe how much the economic role of agriculture decreased, and this decrease comes mainly from some economic difficulties, for example weak income position of producers based on weak capital accumulation. So agricultural producers need financial supports to improve their production and favourable credit conditions. In 1990s during the last decade, the role of agriculture in the national economy decreased, which contributed to its decreasing share in GDP and real value of agricultural GDP. In 2001, in spite of the fact that the plant production considerably increased and the animal husbandry stagnated, the whole agricultural production volume was by 20 percent under its level of 1989. Finally by the end of 2001, the share of agriculture declined to 4 percent of GDP and together with food industry, their share was about 7 percent. The agricultural scissors increased considerably, namely from 126.5 percent in 1992 to 138.4 percent in 2001. The income conditions made a significant influence on the capacity of the agricultural sector in fields of investments and accumulation. The main problem was the decline of real value of investments. For example the real value of investments in 2001 had not implemented half of investments realised in 1989. This situation showed the low level of technological and technical development in the agricultural sector during a longer period, than a decade. It was important to increase different kinds of supports for agricultural producers, for example: export subsidies, interests of credits, supports for establishing new farmland structure. The share of supports for agricultural production and food industry was 12–14 percent of the two sectors' GDP in 1990s. The development of the main factors of agricultural incomes was determined by index calculations based on the data of the APEH (Hungarian Tax and Financial Supervising Office) and EAA (Economic Accounts for Agriculture). The supports are needed, which are as follows: based on the APEH data, the profit before tax of 23 billion HUF in 1997 decreased to the loss-level of 8 billion HUF by the end of 1990s. The main aim for agricultural producers was to increase their capital accumulation to implement improvement of production in order to be competitive on the world and domestic markets. There is a difficulty that at the end of 1990s, only about 30 percent of the supports was directly provided for agricultural producers. In Hungary, without taxes and other different deprivals, the current value of production supports was over the level of incomes obtained in agricultural sector, but according to the calculation methods of the OECD, the value of PSE (PSE= Producer Support Estimate) index was at a very low level and it had a decreasing tendency, which could not ensure enough income for agricultural producers in Hungary. So the development of agricultural production cannot be realised additionally to the unfavourable background conditions for the sector. Comparing the support structure experienced in the OECD with that in Hungary, it can be declared, that within the PSE (Producer Support Estimate) during 1997–2000, the MPS (Market Price Support) declined, similarly it was in Hungary. In the OECD, the 8–9 percent share of payments based on input use has remained at same level within the PSE. The subsidy based on input use in Hungary was a main element within the overall subsidy system, and its proportion within the producer subsidy increased from 9 percent to 27 percent during the same period. The payment based on the regulation on input use (environment friendly production) also decreased and shared 2 percent within producer subsidies. In the OECD, payments based on farming income totalled only 1 percent of the total producer subsidies, as well as it was experienced in Hungary. Hungarian market price subsidies by products reveal that milk, eggs and poultry enjoyed a high Market Price Support. On the other hand, Market Price Support to beef cattle remained low.

Keywords: economic role of agriculture, employment, investment, farm income, financial supports for agricultural producers

Abstrakt: V průběhu poslední dekády devadesátých let se úloha zemědělství v ekonomice výrazně snížila, což je vyjádřeno klesajícím podílem zemědělství na HDP a reálnou hodnotou zemědělského HDP. Cenové nůžky pro zemědělství se výrazně rozevřely, konkrétně ze 126,5 procent v roce 1992 na 138,4 procent v roce 2001. Významný je nárůst různých typů dotací pro zemědělské výrobce: exportních dotací, dotací úroků z úvěrů a dotací pro tvorbu nové faremní struktury. Podíl podpor pro zemědělství a potravinářský průmysl na HDP byl v devadesátých letech 12–14 procent. Tyto podpory jsou nezbytné, jak ukazují následující skutečnosti: zisk před zdaněním se podle údajů APEH snížil z 23 mld. HUF v roce 1997 na úroveň ztráty 8 mld. na konci devadesátých let. Hlavním cílem zemědělských výrobců je zvýšit akumulaci kapitálu ke zlepšení produkčního potenciálu a zvýšení konkurenceschopnosti na domácím i zahraničním trhu.

Klíčová slova: ekonomická role zemědělství, zaměstnanost, investice, důchod zemědělců, finanční podpora zemědělských výrobců

INTRODUCTION

The most important target is to create a competitive agricultural production, to produce more and more agricultural and food products adequate for the demands of the EU and the world market. The main aim of the Hungarian agricultural foreign economic strategy is to increase the export capacity of this sector and the positive balance of foreign trade and the national payment. Also law harmonisation and quality assurance of the EU – namely HAZARD, ISO 9000 and HACCP – have been realised in the Hungarian agricultural sector since the beginning of 1990s, in order that Hungary becomes ready to join the European Union.

The main aims of this study are to describe how much the economic role of agriculture decreased, and this decrease comes mainly from some economic difficulties, for example weak income position of producers based on weak capital accumulation. So agricultural producers need financial supports to improve their production and favourable credit conditions.

REVIEW OF LITERATURE

In 1997, the total amount of the financial supports coming from the governmental budget was 87.4 billion HUF. The unfavourable financial background – namely income-losses of agricultural producers, low level of governmental supports, disadvantageous credit conditions – made the support for agriculture necessary. The capital outflow of the agriculture had in average been about 50–60 billion HUF in consequence of the opening agricultural price scissors since 1993 (Sipos 1996: 24).

As Borszéki, Éva declared: “One fifth of the total income produced by agricultural producers could be ob-

tained by them, and this form of net capital outflow from the agricultural sector, this process makes them be weak regarding their self-financing capacity. This stimulates the producers to get more external financial resources, like credits to finance agricultural development and investments” (Borszéki 2001: 11).

The authors called attention to other important problems: “There is a significant problem, that there is not an efficient information flow between the policy makers and the practice. The agricultural production demands a relative stable background for the food production” (Puskás, Villányi 1997: 541).

MATERIALS AND METHODS

Proportion of agricultural sector in Hungarian economy

In 1990s during the last decade, the *role of the agriculture* in the national economy decreased very much, which accorded to its decreasing share in GDP and the real value of agricultural GDP. Gross production volume of agriculture has decreased since 1989. The main decline was in the production in 1993 and 2000, but between 1994–1996, the agricultural production volume moderately increased regarding the plant production. In 2001, in spite of the fact that plant production considerably increased and the animal husbandry stagnated, the whole agricultural production volume was less than 20 percent under its level of 1989. Finally by the end of 2001, the share of agriculture declined to 4 percent of the GDP and together with food industry, their share was about 7 percent (Table 1).

Naturally also the share of agriculture in the GDP was the same in highly developed countries. But in Hungary

Table 1. The role of agricultural sector and food industry in the national economy in Hungary (in percent)

Year	Share in GDP		Share in investment		Share in export total in agriculture and food industry
	agriculture	total in agriculture and food industry	agriculture	total in agriculture and food industry	
1991	7.8	12.4	4.3	6.8	...
1992	6.5	10.7	2.9	5.2	26.0
1993	5.8	9.8	3.1	6.0	23.4
1994	6.0	9.8	2.9	5.4	22.7
1995	6.2	9.7	2.9	7.9	23.6
1996	5.8	9.3	3.4	7.1	21.6
1997	5.2	8.5	3.6	7.4	15.5
1998	4.9	8.0	3.6	7.2	12.4
1999	4.2	7.0	3.3	6.9	9.6
2000	3.7	6.7	2.7	6.0	8.4
2001*	3.8	7.1	3.5	...	8.1

*previous data

Sources: Agricultural Statistical Yearbook, Budapest 2001

the *decreasing role of agriculture* was coming from the deteriorating market, farm-land structure and financial reasons. The worsening market positions of agricultural producers consisted of unfavourable purchasing power resulting in declining consumption, which narrowed the domestic market demands, also changing product structure of the world market, and significantly increasing qualitative demands. Finally, the worsening market and financial background resulted in unfavourable income conditions for agricultural producers in Hungary by the end of 1990s. This unfavourable financial background coming from the decrease of supports for agricultural producers, opening agricultural price scissors and lack of capital on farms. The agricultural producers price index increased from 113.2 percent in 1992 to 408.7 percent in 2001, but the price index of industrial inputs used in agricultural production increased from 143.2 percent in 1992 to 565.7 percent in 2001. It can be seen that the agricultural price scissors opened considerably, namely from 126.5 percent in 1992 to 138.4 percent in 2001.

The income conditions made a significant influence on the capacity of the agricultural sector in the fields of investments and accumulation. The main problem was the decline of real value of investments. For example the real value of investments in 2001 had not implemented half of the investments realised in 1989. This situation showed the low level of technical and technological development in the agricultural sector during a longer period, than a decade.

According to Hungary joining the European Union, the economic background for agricultural production should be changed in several fields, which are as follows: 1 – improving the financial support system; 2 – supports for establishing new farm-land structure; 3 – increasing trends in different kinds of supports for agricultural producers, for example: export subsidies, interests of cred-

its; 4 – establishing a new form of advisory systems (see Table 2 for changing supports).

All kinds of supports should be able to stimulate the agricultural producers to develop their investments based on improving the technical and technological modernisation. Naturally the supports should be provided only for the agricultural producers, who are capable of living.

The increasing direct payments provided by the government and possibilities of the technological improvement and investment in the agricultural production can make ensure favourable income conditions for producers. Additionally to the financial supports given by the government, the role of credit conditions should increase in order to improve the capital accumulation for the agricultural producers.

RESULTS AND DISCUSSION

Supports for agricultural producers and food industry

The supports for the agricultural producers, forestry and food industry decreased in the first half of 1990s. In spite of the fact that the support had increased since 1996, its real value remained under the level of 1990s until the end of 2000. The share of supports for agricultural production and food industry was 12–14 percent of the two sectors GDP in 1990s. But in 2001, the financial support for agricultural production and food industry was really very high, namely about 18 percent of their GDP.

There is a difficulty that at the end of 1990s, only about 30 percent of the supports was directly provided for agricultural producers. In Hungary, without taxes and other different deductions, the current value of production supports was over the level of incomes obtained in agricultural sector, but according to the calculation methods of the OECD, the value of PSE index was very low level and it had a decreasing tendency, which could not ensure enough income for agricultural producers in Hungary. So the development of agricultural production cannot be realised additionally to the unfavourable background conditions for the sector.

Income conditions of the agricultural producers

Based on the APEH (Hungarian Tax and Financial Supervising Office) and EAA (Economic Accounts of Agriculture) data of the last several years from 1997 and considering the agricultural income volume and the profitability, 1999 was most favourable one for agriculture. In this year, the profitability proportion of production value was calculated by the two systems below was –0.9% and as 3.3%. By analysing of the FADN, the same value was even more unfavourable, namely it was 1.8 percent.

The change of the material costs influenced on the change of income-volume on holdings. Based on the

Table 2. Agricultural supports (in current prices)

Years	Billion HUF
1986–1990 average	80.3
1991	37.3
1992	33.5
1993	46.9
1994	74.3
1995	73.3
1996	92.6
1997	87.4
1998	110.9
1999	131.9
2000	134.7
2001	190.9

Source: Central Statistical Office (KSH), Budapest Ministry of Finance (PM), and Ministry of Agriculture and Rural Development (FVM), Budapest in different years

FADN (Farm Accountancy Data Network) data, the income position of individual entrepreneur farmers and of large-scale associations was much more favourable.

The development of the main factors of agricultural incomes was determined by index calculations based on the data of the APEH and EAA.

In both systems, the income-decrease reached its top low-level value in 1999, therefore the data of 1997 and 1998 were compared.

Based on the APEH data, the profit before taxation of 23 billion HUF in 1997 decreased to the loss-level of 8 billion HUF by the end of 1990s. The profit decrease resulted in increasing costs exceeding the increase of the incomes by 31 billion HUF. Approximately one third of the income increase only came from increasing prices, and two thirds resulted from the increase of production volume. Concerning the opposite situation in the field of costs, the input increase of 144 billion HUF, which was consisting of 90 billion HUF was generated by the increasing inputs and only 54 billion HUF originated from the increase of the quantity. These numbers give proof to, on one hand, the increasing gap between the price standards of agricultural and industrial products, namely the opening agricultural price scissors, and on the other hand, to the improvement of the efficiency in agricultural production. The terms of trade – ratio between the relative prices of agricultural and industrial products – increased by 5.6%, but agricultural efficiency improved only by 2%. The improvement of efficiency in agricultural activities could be much higher if financial transactions did not decrease the profitability of industrial activities.

According to the account of 1998, the situation was similar to the previous year, however, the incomes and costs have moderately increased and in this process, the impact of prices was dominant. By comparing the two years, the improving efficiency of industrial activities decreased due to financial transactions. Also based on the EAA data calculation, the changes of income-volume had also an unfavourable tendency.

According to the results of the analysed data given by the system of EAA, it could be emphasised, that the terms of trade became higher than those, which were given by the APEH. This problem was probably regarding the higher flexibility of input prices of individual entrepreneur farmers. Income forecasts for 2000 can only be prepared by the EAA. According to these forecasts, the prospects for the last year were more favourable than for 1999.

Finally it can be emphasised, that the unfavourable incomes of agricultural producers did not come from the measure of financial supports from the governmental budget, because the subsidies were higher than the payment of agricultural producers for the budget in the period of 1997–1999. This income situation came from the negative balance between the input and output prices in

agricultural production, the increasing agricultural scissors, and the terms of trade for agricultural products.

Financial resources of farmers from supports

Comparing the support structure experienced in the OECD with that in Hungary, it can be declared, that *within the PSE* (Producer Support Estimate) during 1997–2000, *MPS* (Market Price Support) *declined*, similarly it was in Hungary. In the OECD, the 8–9 percent share of payments based on *input use* has *remained at same level* within the PSE. *The subsidy based on input use in Hungary* was the main element within the overall subsidy system, and its proportion within the producer subsidy increased *from 9 percent to 27 percent* during the same period. The payment based on *regulation on input use* (environment friendly production) also *decreased and shared 2 percent* within producer subsidies. In the OECD, payments based on *farming income* totalled *only 1 percent* of the total producer subsidies, as well as it was experienced in Hungary. Payments based on *area sown and livestock* have declined since 1998, between 1998–2000 the average subsidy was the same as between 1986–1988, namely 11 percent, but in Hungary it was 4 percent of total producer subsidies in two periods. Earlier, this type of subsidies played the main role in the European Union.

The support level of the Hungarian agricultural sector can be compared with calculations performed in accordance with the new methodology of the OECD.

The total subsidies granted to Hungarian agricultural producers (PSE) increased by 21% between 1998 and 1999, then decreased by 22% between 1999 and 2000. The average *percentage PSE was 20% in Hungary* in the period of 1998 to 2000, remaining *well below the OECD average of 35%*.

Total Support Estimate (i.e. TSE as a percentage of GDP) was 2.6% in Hungary, while the OECD average stood at 1.3% in the period under review. This means that the *total agricultural support compared to GDP in Hungary* (TSE expressed in percentage) *was twice as much as that of the OECD average*. Within the total support (TSE), the proportion of PSE is determinant, as the general services support estimate (GSSE = General Services Support Estimate) was 17% – both in Hungary and in the OECD countries – in the period under review.

In addition to *government subsidies*¹ – subsidies in the PSE and subsidies in the GSSE within – *the PSE* were also greatly influenced by *Market Price Support* (MPS). The significance of MPS is evidenced by the fact that this type of support represented 57% in Hungary (OECD average being 66%) *within the PSE* in the period under review.

The analysis of the *Hungarian market price subsidies by products* reveals that *milk, eggs and poultry enjoy high Market Price Support*. On the other hand, *Market*

¹ The sum of government subsidies includes not only subsidies under the scope of the FVM, but also any other kind of subsidies related to agriculture, for example educational, organisational or operational costs.

Table 3. Index of capital conditions of the Hungarian agriculture

Nomination	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Capital self sufficient	72.0	69.5	68.8	67.2	62.2	59.2	54.1	52.2	49.9	51.3
Capital out of farm from total capital	27.0	29.3	29.6	31.1	36.1	40.7	44.0	45.1	47.3	45.3
Long term capital out of farm from total capital	4.1	4.7	5.9	7.2	7.6	11.9	14.5	14.0	14.3	12.5

Sources: Agricultural ventures having single and double book-keeping according to calculation based on APEH data, Budapest
APEH = Hungarian Tax and Financial Supervising Office

Price Support to beef cattle remained low. For other meat products, a varying level of subsidies exists. Changes in cereal prices are particularly important as a large-scale production can have a significant impact on the level of market price subsidies. In the case of corn, the Market Price Support was negative. As for wheat, due to a raise in domestic prices, an increase was seen in the Market Price Support. The earlier positive Market Price Support for barley moved to negative Market Price Support. Sunflower had negative, sugar had positive Market Price Support in the years under review.

The Hungarian Consumer Support Estimate (CSE) remained *negative* all through the period under review, i.e. consumers were subject to a surcharge. The extent of this amounted to an average *-13% in Hungary*, whereas the *OECD average stood at -28%* in the period between 1998 and 2000. *Therefore, the average OECD figure shows a much larger extent of consumer tax than that in Hungary.*

CONCLUSIONS

1. In spite of the fact that the considerable financial supports are given for agricultural producers in Hungary, agricultural production could not become efficient. This problem partly comes from the unfavourable structure of financial supports. In Hungary, the proportion within the producer subsidy based on the input use increased from 9 percent to 27 percent, while in the OECD this proportion remained at the level of 8–9 percent. In Hungary, this considerable proportion of the producer subsidy had a social economic aim at remaining the large number of not effective unviable small and medium scale farms, which had only the average 2–3 hectare of land. On one hand, the financial supports were focused on providing additional incomes, as a part of producer subsidy, for these farms based on their small lands or plots. On the other hand, the large-scale farms could not obtain enough financial support from producer subsidy based on their large-scale lands. The average producer subsidy per hectare for small farms was much higher than that one for large-scale farms. The subsidy was not enough for the livelihood of small and medium scale farms, and also this subsidy was not enough for large-scale farms to implement high technical and technological improvement and development in the agricultural production.

This unfavourable support structure resulted in the increasing gap between the advanced highly developed level of the EU and the low Hungarian one.

2. The low level and unfavourable support structure made a negative influence on income position and capital situation of agricultural producers. The *capital self-sufficiency* of Hungarian agricultural producers was 72.0 percent of the total capital used in production in 1992, which decreased to 51.3 percent in 2001. Also the proportion of *external capital* in the total capital considerably increased, from 27.0 percent in 1992 to 45.3 percent in 2001. Naturally, the latter included the total financial support for agricultural producers. The capital accumulation process became very weak and followed the wronging tendency. Also the larger part of capital out of farm was for short term one, which means the agricultural producers should obtain more credit to cover cost of input, for example seeds, chemical materials (like fertiliser, pesticide) and fuel additionally to buy machines, technical equipment. The production process became very dependant on capital sources out of the farm (see Table 3).

3. Also there is another negative tendency of Hungarian agriculture, that source-increase for 1 percent of price income increased from 0.38 percent in average of 1992–1996 to 2.34 percent in 1999 relatively to 1998, but it de-

Table 4. Index of capital flexibility

Years	Increase of source	
	for 1% of netto price income	for 1% of total income
1992–1996 average	0.38	0.35
1997/1996	1.22	1.32
1998/1997	1.39	1.87
1999/1998	2.34	0.91
2000/1999	0.59	0.61
2001/2000	0.58	0.52
1997/2001 average	0.96	0.90

Source: Main data of economic activity of agricultural and food industry organisations between 1992–1996. (AKII = Research Institute for Agricultural Economics and Information) and Data of Agricultural Ventures 1997–2001 based on calculation of APEH data

APEH = Hungarian Tax and Financial Supervising Office

creased to 0.58 percent in 2001 relatively to 2000. Also source-increase for 1 percent of total income decreased from 1.87 percent in 1998 relatively to 1997 to 0.52 percent in 2001 relatively to 2000 (see Table 4).

4. *There is a number of reasons why the large co-operative farms are still in existence:* First, restitution led to fragmented farms, the average farm being no larger than 5 hectares. In Hungary, for example, the average farm size was 2–3 ha thereby making individual farming unattractive to most landowners. A land size of two or three hectares could not effectively compete in the open market. Farmers were forced to pool land in order to create a viable farm. The agricultural producers should establish co-operatives for themselves in order to decrease their average production cost, to increase their market position, competitiveness, income position, and to accelerate capital accumulation process.

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