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SCIENTIFIC PAPER

RESULTS AND POTENTIALS IN AGRIBUSINESS DEVELOPMENT – 10 YEARS IN THE EU*

István Kapronczai

Research Institute of Agricultural Economics, Hungary

* Based on the lecture at the Debrecen meeting of the Debrecen Regional Committee, Hungarian Academy of Sciences, the Expert Committee of Agricultural Sciences and the Agro-economic Working Committee on 20 November 2014.

A decade has elapsed since our country joined the European Union. It is a historical period. In 2004 – when Hungary became the member of the EU – the world surrounding Hungary went through a transformation. Have we achieved our goals? Are we disappointed? The answers to these questions are limited in their scope today. However, the author is convinced that the feeling of unsatisfaction is not the result of our EU membership.

Hungary placed great hope in its membership in the European Union. The goal of European integration was realized at the time of the political transformation, inducing excessive expectations as well. Many thought that agribusiness, taking the options of growing supports, would work off its disadvantages and become competitive, gain new markets and rapidly improve the income position of the sector. However, experts with a good understanding of the European Union, the Common Agricultural Policy and the special features of the agricultural sector in our country had a clear picture of not only the potentials but also the risks. They asserted their scepticism both in scientific publications and articles. These publications worded rather proposals on how to use the hidden potentials of the CAP instead of quantifying the impacts of our EU accession. Publications describing the concrete effects mostly called the readers' attention to the risks, and did not challenge the justification of our accession (Kartali 2004; Nyárs et al. 2004; Potori – Udovecz 2004, Popp 2003).

The question arises: was our agribusiness sector well-prepared to join the European Union? The answer cannot be summarized in one sentence, as the question may refer to economic conditions, the legislation and institution systems. If the answer focuses on economic conditions, it can be stated that Hungary was not prepared for the EU accession. To put it more precisely, it was not prepared any more. Although it is a hypothetical suggestion, but had Hungary's EU accession taken place in the 80s, the competitive position of agriculture would have been much stronger. Our earlier analyses clearly demonstrated that the position of agriculture in Hungary declined steadily in the two decades prior to our joining the EU, therefore the country could not defend its interests in the increasingly competitive business environment (Kapronczai 2003; Kapronczai 2014).

In terms of the legal system, our preparation, the preliminary condition of successful EU negotiations, was appropriate. However, the preparations of institutions were inadequate. As an example, mention must be made of the Integrated Administration and control system. Due to its unsatisfactory operation, Hungary was unable to fulfil its area payment obligations in the first year – 2014 - of the EU accession, leading to discontent among farmers and protests.

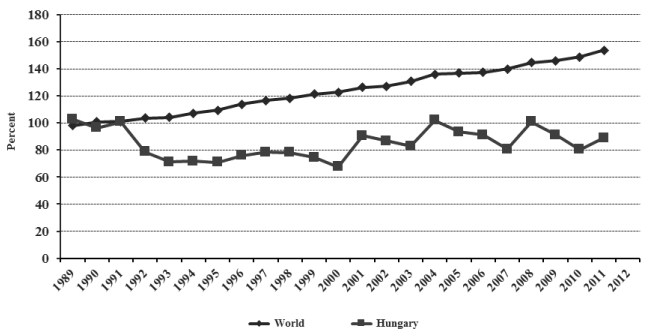
Nevertheless, our conviction is that despite all the risk-conscious expert opinions and re-emerging euscepticism, there is clear evidence that overall, the sector benefited from the EU accession. Although the countries who joined the EU simultaneously with Hungary, generally benefited from the potentials offered by the EU far better than our country, without the integration we would face much more problems, our production level would lag behind the present one, our export of products would be confronted with greater challenges, the standard of living and employment in rural areas were even lower.

Our role in the world and our position in the European Union

After World War II., until the period of the political transformation, Hungary played a leading role in agricultural development among the Eastern Block countries, competing head to head with the European ones. This is true even if the core problems of Hungarian agriculture emerged in the early-mid 1980s. However, drastic erosion started merely

after the political transformation. Whereas the expansion of global agricultural production exceeded 50% in 1990-2012, Hungarian agriculture dropped by 10%. (Figure 1.) The examination of the technical changes and development in the past two decades since the democratic transformation strongly suggests that at present Hungary is far from making full use of its agricultural resources.

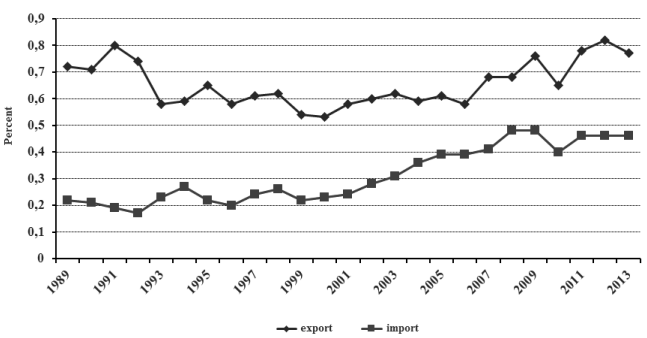
Figure 1.



Development of Hungarian agricultural production (Average of 1989-1991 = 100%) AKI: Research Institute of Agricultural Economics
Source: Author's own elaboration based on FAO ...

By virtue of its size, Hungary accounts for an insignificant proportion of global agricultural production. For lack of comparable production values, we use foreign trade ratios for the demonstration of this fact. Hungary's share of global agricultural export has been lower than 1% for several decades. As a net agricultural exporter, our export share exceeds mutatis mutandis our share in production. In 2011, the year of outstandingly high domestic export turnover, Hungary accounted for 0.78% of global agricultural export. (2. Table) Our ratio of global agricultural import rose sharply, reflecting a steady growth from 0.28% in 2002 and its average in the final years of the studied period approximated 0.5%.

Figure 2.

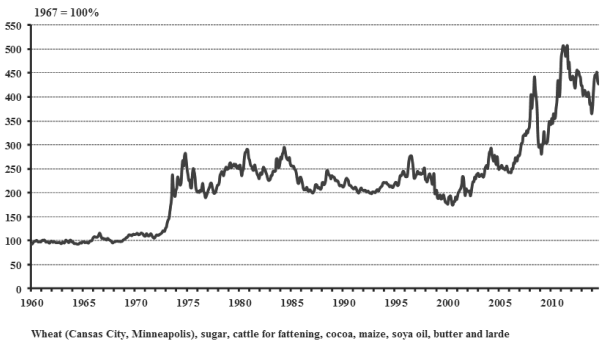


Share of Hungary in global agricultural foreign trade
Source: FAO, EUROSTAT, KSH

All these changes took place in the period when the main feature of global food trade was market for the demand and foods increasingly became strategic products. The process can be underpinned by the analysis of the CRB food-sub index (price index) (3. Table). It demonstrates the development of food prices on the world market and it can be broken down into three strikingly marked phases:

- moderate prices and high price stability were characteristic of the global food market until the first oil price explosion, approximately until 1973-74.
- after the oil price explosion, food prices soared by about 250 % and volatility could be observed, which manifested in the 15-20% fluctuation of food prices;
- from 2006-2007, due to the crisis of property and financial markets, speculation intensified on the food market; the powerful growth of Chinese and Indian food demand, the headway of renewable energy production competing for food products induced drastic price rises and even sharper price fluctuations on global food markets.

Figure 3.



The development of CRB food-sub index (January 1960 - August 2014). Wheat (Cansas City, Minneapolis), sugar, cattle for fattening, cocoa, maize, soya oil, butter and larde)
Source: TR/J CRB, Barchart

Ultimately, Hungarian agriculture had to position itself in the framework of the European Union. The question arises: could we meet this challenge, have we improved or worsened our situation?

The answer to this question is not simple at all. Research findings by Attila Jámbor suggest that the agricultural production index was the highest for Poland, Estonia and Lithuania among the newly accessed member states, whereas Slovakia, Latvia and Hungary could exploit the agriculture-related opportunities of our EU membership less successfully (Jámbor 2014). In the present study, our position can be assessed in terms of our share of EU agricultural output.

Data presented by Table 1. demonstrate that the agricultural output of EU-25 member states[1] calculated at basic price exceeded the average of 2004-2006 by 20.7%, set against the average of 2011-2013. The growth rate of Hungarian agricultural output was 2% higher, i.e. 22.7%.

1 Comparable data for the period of 2004-2013 are merely available for the EU-25 member states.

Table 1.
Development of agricultural output in EU 25 member states (at basic price) Unit of quantity: billion Euro

Countries	2004-2006	2007-2010	2011-2013	2011-2013/2004-2006 (%)
EU-25	316.3	339.7	381.7	120.7
Austria	5.5	6.2	7.1	129.6
Belgium	6.9	7.7	8.3	121.1
Cyprus	0.6	0.7	0.7	112.0
The Czech Republic	3.6	4.2	4.9	137.2
Denmark	8.2	9.1	11.4	138.7
United Kingdom	22.3	23.5	28.6	127.9
Estonia	0.5	0.7	0.9	161.6
Finland	3.8	4.1	5.0	130.2
France	63.1	66.6	74.9	118.7
Greece	11.5	10.6	10.8	93.5
The Netherlands	21.3	23.9	26.3	123.7
Ireland	5.8	5.7	7.0	121.4
Poland	15.1	19.8	22.8	150.6
Latvia	0.8	1.0	1.2	160.1
Lithuania	1.5	2.1	2.8	183.5
Luxemburg	0.3	0.3	0.4	135.1
Hungary	**6.2**	**6.6**	**7.6**	**122.7**
Malta	0.1	0.1	0.1	104.6
Germany	41.1	46.5	52.9	128.8
Italy	44.9	45.2	49.1	109.5
Portugal	6.1	6.3	6.5	105.7
Spain	39.5	40.6	42.5	107.6
Sweden	4.6	5.1	6.3	135.4
Slovakia	1.8	2.0	2.3	130.4
Slovenia	1.1	1.1	1.2	110.3

Source: EUROSTAT

Despite this, most member states saw a more enhanced expansion in the output of the sector than Hungary. In 14 member states, growth exceeded the domestic value and merely 10 countries fell short of it. The weak performance of southern countries is outstanding, the reasons might need an in-depth analysis. A comparison with countries accessing the EU simultaneously with Hungary gives food for thought. As opposed to Hungary's 22.7% growth, the output of Slovakia was 30.4%, that of the Czech Republic 37.2%, Poland 50.6%, Latvia and Estonia 60-62%, respectively, and Lithuania 83.5%.

The financial situation of Hungarian agriculture has stabilised

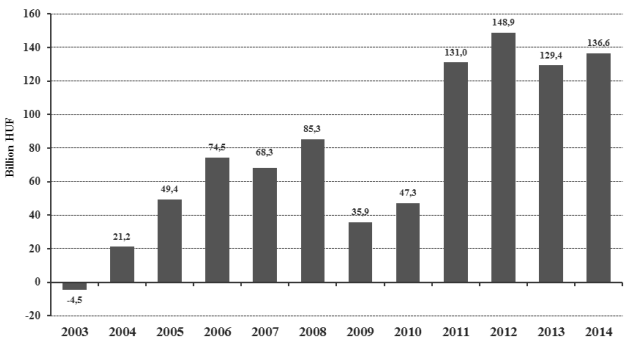
As for agriculture, we can state that in the past 2-3 decades the economic situation of the sector was not as favourable as in the past couple of years. Therefore we cannot claim that the fundamental structural problems of the sector have been solved, we can "merely" say that agriculture witnessed a financially stable period. The causes originate in internal influences only to some extent, they are rather due to the two following factors:

- price rise of agricultural products;
- EU subsidy scheme.

Data on Table 4. demonstrate the favourable financial situation, showing the profit before tax for agricultural enterprises and an outstandingly rising trend. In 2003, the pre-tax loss of enterprises submitting tax return statements exceeded the pre-tax profit by 4.5 billion HUF. From this period, with the exception of three years, the income of enterprises rose and their profit before tax exceeded 146 billion HUF in 2012. This figure is unlikely to drop below 130 billion HUF in 2013.

The second reason of the several ones behind the favourable financial situation is the subsidy scheme. Since May 2004, the Hungarian agricultural support scheme has been stipulated by the regulations of the Common Agricultural Policy of the European Union. In the framework of the CAP, subsidies from EU sources and co-financed supports complement each other. Direct payments and subsidies financed in the framework of rural development programs play a crucial role. As compared to the earlier domestic model, the significance of investment supports has dropped, whereas that of income support has increased. Aid policies tend to develop increasingly in the direction of less market and trade distortive supports.

Figure 4.



Profit before tax for agricultural enterprises
Based on data by companies submitting tax return forms
Source: AKI (Research Institute of Agricultural Economics) calculation based on NAV (Hungarian Tax and Customs Administration) data base

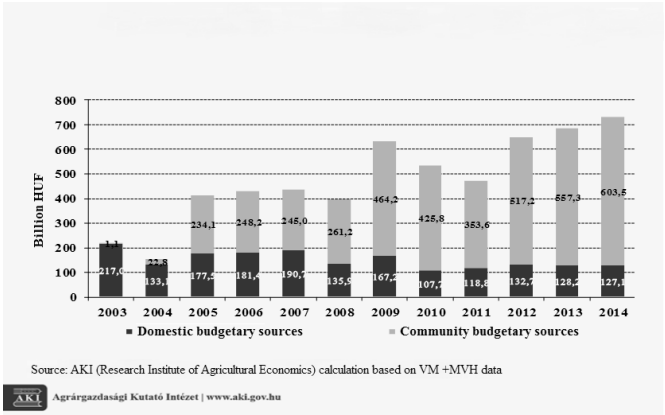
In total, our EU accession has exerted a favourable effect on the support of domestic farmers. The typical amount of agricultural and regional development supports in 2002-2003 rose to about 400 billion HUF by 2004[2]. In 2013 the prospective amount of supports approximated 700 billion HUF (Figure 5.).

One of the advantages of becoming an EU member state is that community sources tend to finance higher proportions of growing agricultural subsidies. Whereas until the accession – mutatis mutandis - our domestic budget provided for 100% of

2 In the first year of the EU membership, the amount of subsidy payments was merely 156 billion HUF. The main driver of this process was that due to the lack of institutional preparedness of the Mezőgazdasági és Vidékfejlesztési Hivatal (MVH, Agricultural and Rural Development Agency) and the deficiencies of the Integrated Administration and Control System – IACS (IIER) the majority of Single Area Payments were made at the beginning of 2005.

subsidy payments, this ratio fell to 85% in 2004 and to 43% in 2005. This decrease continued in the past years, partly as a result of the growing figures of EU subsidies (e.g. SAPS) and the withdrawal of domestic budgetary resources (e.g. Top-up). In 2013 more than 4/5 of agricultural supports were financed by the EU.

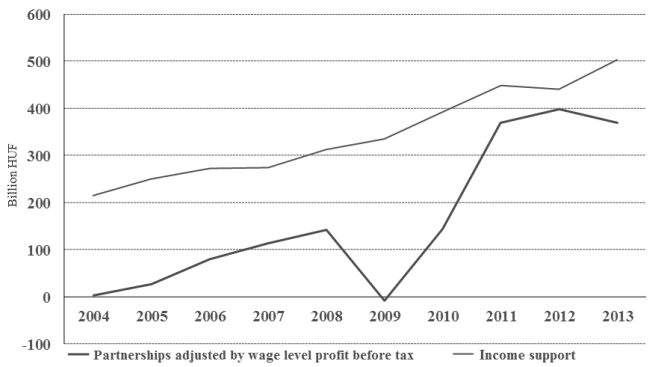
Figure 5.



Payment of supports by resources
Source: AKI calculation based on VM +MVH data

The balance of profit before tax and subsidy changes in agriculture is negative from year to year, i.e. a part of EU subsidies fills the gap of losses – similarly to the EU's practice (!). In Hungary, the amount of income realized upon income support in 2004-2009 was insignificant. However, due to the positive changes as of 2010, the amount of income supports hardly exceeded the profit before tax in 2011, 2012 and 2013 adjusted to the wage level of partnerships in the sector.[3] (Figure 6.).

Figure 6.

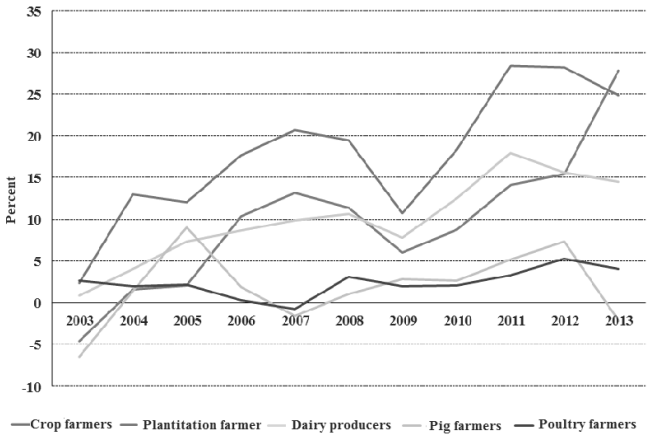


Development of agricultural income support and income (2004-2013)
Source: Farm Accountancy Data System, AKI

In addition the above mentioned positive issues, the evaluation of the situation of livestock farms is extremely difficult. Since the EU accession, approximately 4000 livestock farms have been terminated. After the accession, pig holdings suffered liquidation to the greatest extent, their number decreased to one-third. The number of dairy farmers was also considerably cut; however, that of sheep, goat and poultry farms stagnated. These data suggest that as a significant component of revenue growth in Hungary, livestock producers with the lowest profitability drop out of statistical calculations (Kapronczai et al. 2014).

The above process is also confirmed by income tests by type of plant (Figure 7.). In the past ten years, the profitability rate of crop farmers was extremely high. Since the date of our EU accession, the average profitability rate of dairy producers has been merely 55%, that of fruit producers 49%, pig farmers 17% and poultry farmers 11% set against crop farmers.

Figure 7.



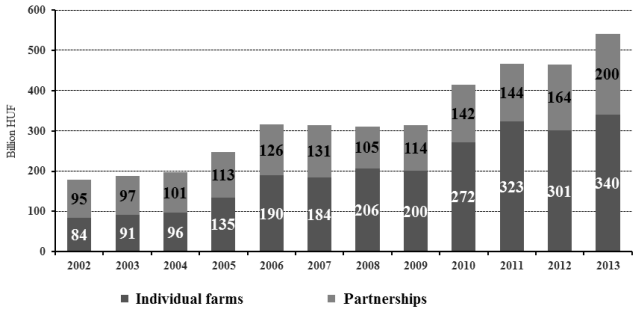
Changes in profitability proportional to the production-value in some highlighted types of farms. Source: Farm Accountancy Data System by the Department of Enterprise Analysis, AKI

Improvements, investments can be financed from someone's own resources, credit or support. The use of own resources are clearly presented by the changes of farm deposits. Figure 8. shows the deposits for individual farms and partnerships. We can see that in the past decade, the savings of enterprises were growing steadily and today the total stock of deposits is over 500 billion HUF, providing a solid basis for investment decisions. It is in the interests of national economy and the sector to use this sum of money in agriculture instead of keeping it in a bank.

Similarly, data related to the outstanding loans of agricultural partnerships suggest that farm conditions are relatively favourable (Figure 9.). In spite of the crisis, the decline of the outstanding loans of agricultural partnerships was not drastic, and it was above 300 billion HUF in the past years as well. All these could be maintained through almost the complete termination of subsidised loans. In spite of the economic crisis, agriculture remained a stable debtor.

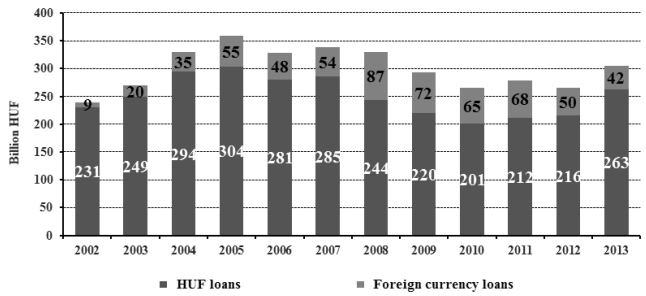
3 For easy comparison, we expressed the labour input of individual farms in the Farm Accountancy Data Network as the specific wage costs of partnerships.

Figure 8.



Stock of deposits owned by individual farms and partnerships in agriculture
2002-2007 data for partnerships include the value of the Fund and cheques
Source: NAV (Hungarian Tax and Customs Administration) and FADN (Farm Accountancy Data Network) data

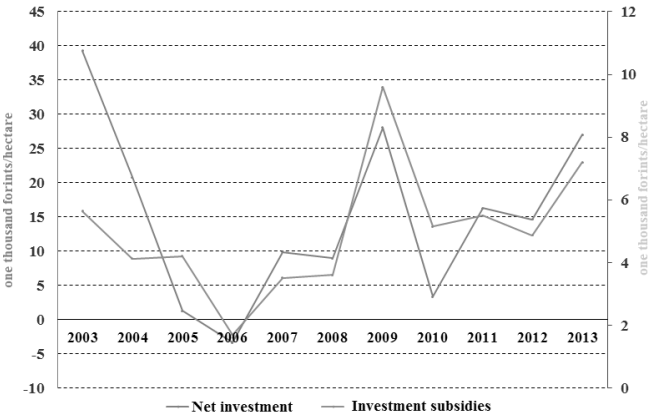
Figure 9.
Agricultural partnerships: breakdown and development of overall amount of credit by resource



.
Source: MNB (Hungarian National Bank)

We have already discussed the growth of supports, but the rational nature of investment decisions is highly influenced by the strong positive correlation between supports and investment performance. Data by the Business Analysis Department of the Research Institute of Agricultural Economics on Figure 10. demonstrate this close correlation, which challenges the rationality of decisions in several cases. Practical experience indicates that as a result of support orientation, businesses fail to implement improvements and substitutions in the optimal time in many cases, as they wait for potential supports. Many cases saw "over-investments" to gain supports, which later caused financial problems.

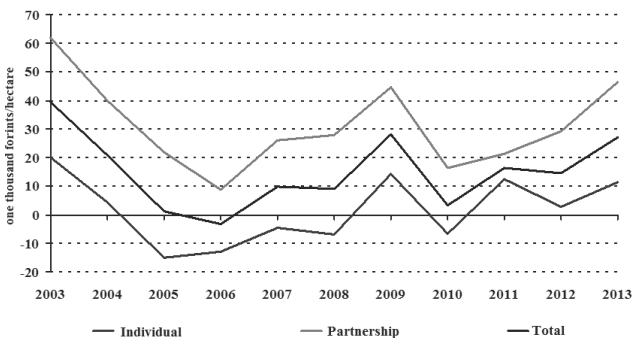
Figure 10.



Changes in net investment per hectare and investment subsidies (2003-2013)
Source: FADN, AKI

Agricultural investments have shown an overall positive development since the EU accession (11. Table). Net investment value per hectare was positive in each year with the exception of 2006, i.e. the gross value of investments was higher than depreciation. A study of net investments for individual enterprises and partnerships results in a more nuanced picture.[4] Partnerships of a usually larger scale implemented not only replacements but also improvements in each investigated year, whereas individual holdings were unable to replace even their depreciated assets.

Figure 11.



Changes of net investments per hectare in 2003-2013
Source: Source: Farm Accountancy Data System by the Department of Enterprise Analysis, AKI

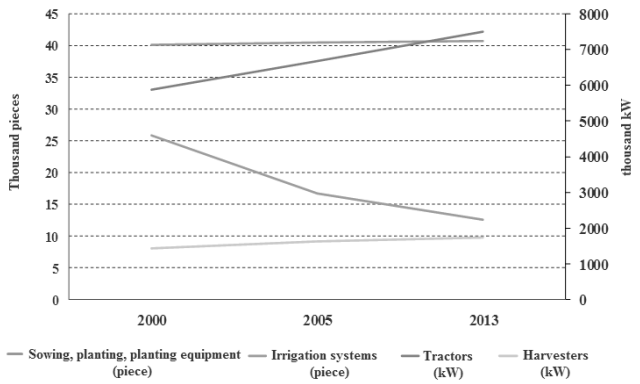
In reflection of the above mentioned, the statement of István Husti is particularly topical: the Hungarian agricultural sector was successful as long as the players of innovation performed their activities in coordination (Husti 2013). The situation has gone through considerable changes by now. In theory, the "old" practice could also be successful these days; however, small and medium enterprises (of whose significance

4 The examination of this issue is justified even if the technical literature accepts the fact that "clean" categories do not exist within individual holdings and partnerships. As for partnerships we can find a large number of ltd-s or partnerships which are "quasi" family businesses. (Haraszti-Rákos et al. 2013)

is dominant in the sector) do not have the suitable conditions to follow the model successfully.

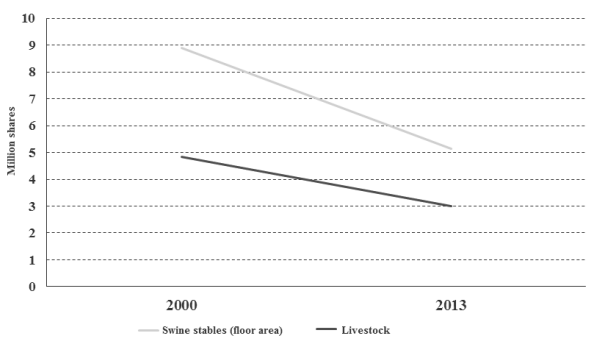
The analysis of how capacity data develop as a result of investments, brings an additional perspective to the comprehensive assessment of investments. Figures 12-14. demonstrate that investments triggered a performance boost mainly in crop production. In 2003-2013 the total kW capacity of the tractor fleet grew from 5.9 million to 7.5 million, whereas that of the combine-harvesters rose from 1.4 million to 1.7 million. The number of sowing, planting and planting equipment grew by 1.4%. The irrigation system suffered a drastic reduction. Whereas at the millennium 26 thousand mobile and stable irrigation systems operated in Hungary, their number has dropped to 12 thousand by now.

Figure 12.



Data on machinery capacity

Figure 13.



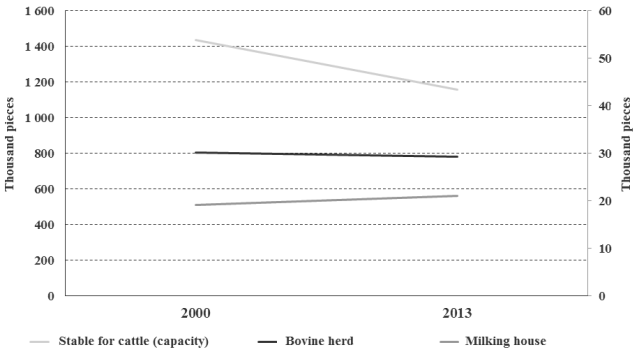
Pigs and development of floor area (capacity)

Swine stables (floor area) - livestock

Floor area (capacity) data for animal husbandry reveal a much more disadvantageous picture than that of plough land machines, especially in the pig sector. The pig capacity of 8.9 million dropped to 5.1 million during 13 years, exhibiting a more abrupt descent than the livestock slump. All these mean that if Hungary seeks to achieve the pig population of 6 million set in the strategic program, an investment of 1.5-2 million for the modernization of floor area (capacity) is to be considered.

Capacities tend to be more favourable in the cattle sector. Substantial farm developments were carried out in the past couple of years, and they resulted in a moderate reduction of floor area. Investment activities are indicated by milking parlour capacities at the millennium …???

Figure 14.



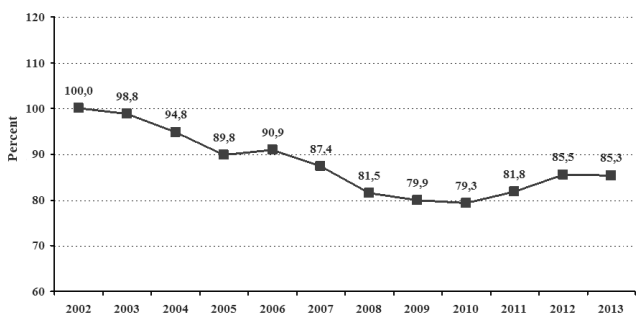
Cattle livestock and capacity data
Stable for cattle (capacity) - Bovine herd – Milking house
Source: KSH (Central Statistical Office)

Food industry: the bottleneck

A fundamental statement to best describe the situation of the food industry may be the following: the critical point of the food sector today is the food industry. Its main features are the following: the volume of production is decreasing, its revenue-generating potentials are low and its capital adequacy is also insufficient.

Development in the food industry is presented on Table 15. It shows that the performance of the sector dropped sharply in 2002 and 2010, in totality by more than 20%. This period saw merely two years – 2006 and 2012 – when the volume index from last year did not decrease. The reason behind the output growth in 2012 is not the performance expansion of classic food classes, but rather the run-up of bioethanol and pet-food production.

Figure 15.

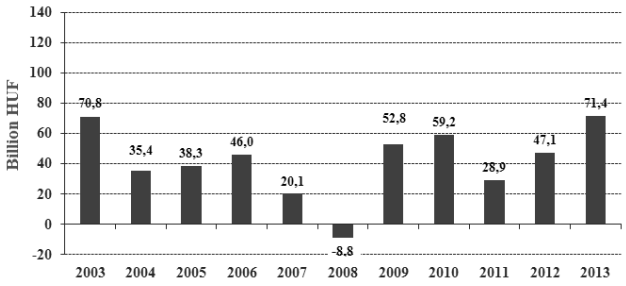


Volume index changes in food production
Source: KSH (Central Statistical Office)

The development of profit before tax is to be mentioned in relation to the general characteristics of food industry. The unfavourable profit position is shown on Figure 16. Whereas in the last year before the EU accession profit before tax in the industry was higher than 70 billion HUF, in the period since then – at current prices (!) it could come closer to this value in merely 2013. Moreover, about 50% of the 71 billion HUF profit before tax in 2013 was generated by 5 businesses, and 21 billion HUF of this amount was realized by a single enterprise.

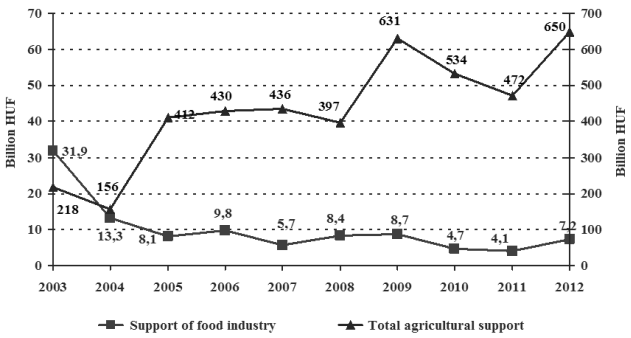
The development position of the sector is further deteriorated by the reduction of supports. Whereas approximately 15% of agricultural supports were spent in the food industry in the last years before the EU accession, this sum dropped to merely 6.8 billion HUF (0.99%) out of the 686 billion HUF support used in the sector in 2013 (Table 17.).

Figure 16.



Revenue before tax in the food industry

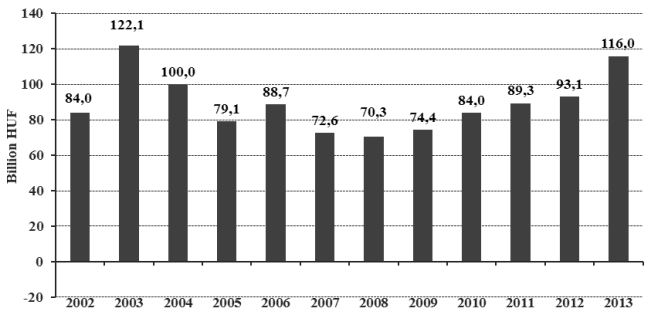
Figure 17.



Supports in the food industry in the study period
Source: Author's own elaboration based on data by APEH (food-industry) and VM (agricultural sector)

On these grounds, it can be stated that in the context of development financing, the food industry faces a less favourable situation than agriculture. It received hardy any funding in the past years and its low profitability led to scarce resources. Table 18. shows that the real value of deposits owned by food industry partnerships stagnated in the last years and hardly exceeded one fifth of agricultural deposits.

Figure 18.



* 2002-2007 data include the value of the Fund and cheques

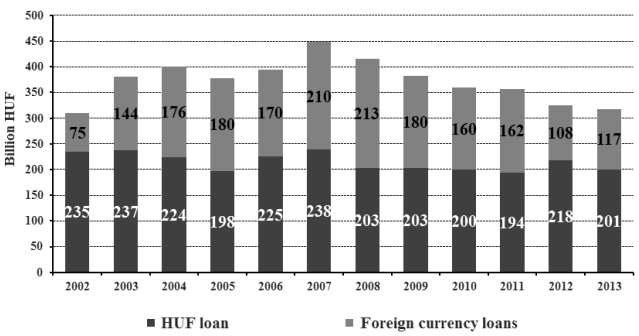
Deposits owned by food industry partnerships
2002-2007 data include the value of the Fund and cheques
Source: NAV database

As a direct consequence of scarce own resources and funding, the creditworthiness of food industry has become very low. The credit of food industry partnerships has been continuously decreasing since the onset of the global economic crisis (2008) and hardly goes beyond 300 billion HUF today. (19.Table)

Market potentials

For a country facing permanent loan problems and the constraint to import constantly and increasingly due to the scarcity of energy sources, the development of food industry with a permanent and steady positive trade balance is the main objective. This can be achieved by meeting the demands of domestic markets with a growing rate of home produce, and the further growth of our export preferably by increasing the rate of semi-finished and finished products. In conclusion, the enhancement of market potentials is the guarantor of progress.

Figure 19.



Distribution of the overall amount of credit owned by partnerships in the food industry per source

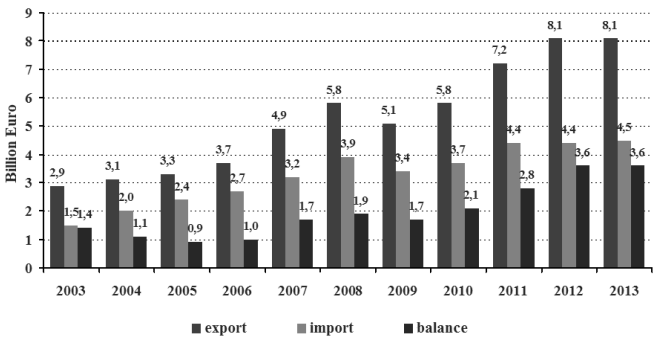
In the domestic food market, the rate of import products rose substantially and today it approximates 30% of overall turnover. Public opinion, including professionals and laymen as well find this rate too high and demand urgent actions to control this situation. If the question is addressed on a professional basis, it is clear that the rate of import food is rather high in domestic consumption, rising above the level

necessitated by the expansion of product range. The reason behind this is primarily not the influx of poor quality foreign products in our country, but rather our low competitiveness compared to foreign producers. However, the promotion of the implementation of administrative measures against import products is dangerous, as for a country with a positive agricultural import-export balance, the application of a protectionist trade policy is far from advantageous.

According to our judgement, the consumption rate of import food products can be realistically reduced to about 20% and it may result in approximately 10% demand growth related to domestically produced food.

However, potentials are much higher in foreign markets. Table 20. shows the development of Hungarian agricultural foreign trade, which was the success story in the past period. Its export performance soared from 2010 and in 2013 it went beyond 8 billion EUR. According to preliminary estimates, it also reached this value in 2014. This is a significant performance, even in consideration of the global price trends of agricultural products and the fluctuations of the HUF-EUR rate, which undoubtedly fuelled our export activities.

Figure 20.



The development of agricultural external trade
Source: KSH (Central Statistical Office)

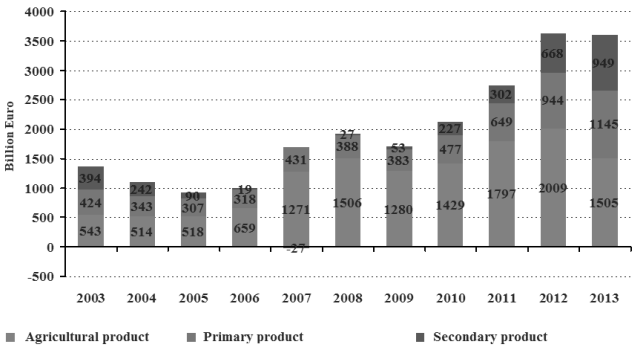
In previous years food import was characterised by a lower increase than food export, therefore their balance rose sharply and reached 3.6 EUR billion in 2012, 300% of the figure in the period after the EU accession. The question may arise: to what extent is the status quo of agro-external trade maintainable? The answer to this question requires an in-depth study on the structure of agro-export and import.

The composition of the Hungarian agricultural and food industry export can be classified into three groups and studied accordingly (Juhász – Wagner 2009).

Agricultural products include source materials (e.g. live pigs); products of primary processing (e.g. half carcases) indicate products at a lower level of processing, and products of secondary processing e.g. salami indicate a higher level of processing. The higher the level of processing, the higher the value added. If it is lower, the more job opportunities are "exported" out of the country.

The composition of export does not yet show a considerable structural problem, as marked export growth is characteristic of all the three product groups: the expansion rate of agricultural product import has risen by 242%, primary products by 150% and secondary products by 162% since the EU accession. We face real problems if we study the external trade balance of Hungarian agriculture and food industry in terms of components depending on the level of processing.

Figure 21.



The external trade balance of Hungarian agriculture and food industry, broken down by certain components Source: KSH, AKI

The structural analysis of the balance highlights three issues:

basic agricultural products tend to gain a more prominent role in the positive balance of external trade in agriculture and food industry;

the studied period included a year (2007) when external trade showed a negative export-import balance in relation to secondary products;

in the period following 2010, the balance of mostly secondary products rose sharply, but the primary drivers of this process, as mentioned above when the output of the food industry was discussed, are not "traditional" foods, but the export expansion of bioethanol, pet food and duty free products.

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