

**SZENT ISTVÁN UNIVERSITY
GÖDÖLLŐ**

**THE ADAPTATION OF CHANGING COMMON
AGRICULTURAL POLICY IN HUNGARY**

Theorems of the Ph.D. Thesis

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1. Premise – Timeliness of the subject

Globalization and integration are two main phenomena in the beginning of the 21st century. In this era, those small countries that have an open economy and are in development in several aspects, tend to be involved in strong economic integrations in order to reach their aims and to ensure some macroeconomic growth. Hungary is one of these countries.

By accessing to the European Union, Hungary and another nine Central and Eastern European Countries have had the opportunity to close up economically and socially. This progress is promoted significantly by the EU membership, but main advances still depend on the decisions of the Member States.

Among EU policies, one of the most important (and also the most expensive) is the Common Agricultural Policy (CAP), performing the guidance and the coordination of agriculture on Community level. As a matter of fact, CAP is the only policy operating effectively and having real competencies in the EU. In the course of Hungary's accession, the participation in the system of CAP was of a high importance. Hungary's natural endowments and historical fundamentals were complemented with the opportunities and financial resources of the CAP, and supported by the legal frameworks and market system controlled by the EU; thus a good occasion was available to get to the starting point of an era of development and prosperity. At this time, the Hungarian agriculture had a chance to create and stabilize the bases of modernization and a sustainable operation. However, it meant a great task for agricultural participants to make the system work, and to accept the measures of the common market organization and the integrated rural development, as the application of radically new rules and processes were required. Hungarian agricultural and economical adaptation may be successful only in condition that the Common Agricultural Policy as well as its complex regulation system are entirely explored and implemented, with a special regard to further possible transformations and their influences. Even the operation of the system is a great challenge, but another task is the cooperation with an environment of strong competitiveness not known earlier.

A further difficulty is that the CAP is in a permanent change: problems are emerging in the conflict of the Member States' needs on the one hand, and the budget on the other. That situation makes national adaptation and functioning even harder.

The acceptance of the CAP in a permanent change is a question of continuous actuality for the Hungarian economic analyses. In fact, agricultural adaptation has not been completed even in several years; the legal framework is in a continuous change because of internal and external impacts, and further transformations result in new obligations to further changes.

To apply the complicated regulation system of the CAP, a long and expensive preparation period was necessary. Meanwhile, the Community requirements and regulations were gradually integrated into Hungarian law and public administration. Legal harmonization and the restructuring of the institution system were supported effectively by pre-accession programs. Being a Member State, Hungary is able not only to apply the agricultural policies of the EU but also to take part in the elaboration of new rules.

2. Objectives of the Thesis

The economic and social changes as well as the scientific developments of the last few years emphasized the need to make a comprehensive economic analysis of the adaptation to the EU, notably the acceptance of CAP. Several researchers have already analyzed the matter, but the subject being of huge extent, there are still unexplored fields left. The period to be analyzed comprehensively is the period 2000-2010 of the Hungarian agriculture. This era saw important changes in agricultural policies. Expected and unexpected effects on Hungarian agriculture were caused by the pre-accession period, by the completion of the accession negotiations, by the changes in CAP realized in parallel, and then by the acquired membership. The question is emerging, however, whether we are winners or losers of the agricultural integration, analyzed and mentioned widely, and expected beforehand to be definitely successful.

In my dissertation, I try to find the answers for the above question by examining the economic influences of accepting CAP, and by analyzing the essential agricultural economical results in the period 2004-2010. The matter being complex and complicated my main goal was to demonstrate research and results covering those specific fields important for Hungary.

While defining my goals, several factors had to be considered, among which the following ones should be emphasized.

1. A With a view to evaluating CAP adaptation effectively and exploring the relationships involved, it is necessary to summarize the conditions of Hungarian adaptation and to collect and systematize the basic economic mechanisms implied. On this basis, some new partial relationships and sectoral specifications can be determined.
2. In the course of exploring main progresses, some partial fields are examined. These fields are:
 - a. Financial resources available for agriculture through the common budget, and especially the influence of direct payment system and the results stemming from it;
 - b. Production mechanisms and progresses emerging in plant production and animal husbandry, and the specificities of the different sectors;
 - c. Production factors and the political and market conditions having influence on production are overviewed, and the interconnections among them are demonstrated;
 - d. Market prices and their impacts on food industry are analyzed;
 - e. The consequences of the single market are analyzed, and the Hungarian exports and imports in the framework of competitiveness in the European market are evaluated, with a special view to the relation with the states of Visegrad Group.
3. On examining the above mentioned partial fields, we can determine, in which cases, and in what conditions we can consider agriculture or even a specific sector as being a winner or a loser of EU accession or CAP adaptation.
4. On the basis of the analyses of the situation, and considering the oncoming changes and expectations on CAP, we need to reach conclusions and make proposals on how the Hungarian agriculture can hold out in times of changes, and how it can insist on its interests and realize a further development.

While defining my goals, I'll have to answer the following questions:

- Did the application of direct payments increase agricultural production? Had it any effect on agricultural prices?
- Did the prevision come true, expecting crop production and fruits and vegetables sectors to be winners of EU accession, and animal husbandry and dairy sectors to be losers?

- What was the role of national food market during the adaptation period?
- As for foreign trade, could Hungary preserve its positions, and improve its foreign market conditions?
- Did the EU agricultural supports enhance the competitiveness and market positions of Hungarian agricultural products?

The publications and partial analyses prepared during my research and doctoral theses should be utilized in future research and in high education, and practical conclusions should be applied in government decisions.

In addition, the results found can support the operation of the Hungarian executive system (i.e. Hungarian Agricultural and Rural Development Agency). These results contribute to a thorough knowledge of the experiences gained through CAP adaptation, and designate those milestones the importance of which should be enhanced in future.

Material and Method

The scientific basis of my research was insured by references of Hungarian and foreign specialist literature. A thorough survey and a systematization of high importance national and foreign works were a great contribution to my theses. The treatment of this special literature made me possible to have a comprehensive knowledge of the reform of CAP and its acceptance, and to explore widely the benefits and drawbacks of the Hungarian adaptation.

To make an overview of the subjects and references, the works of the following authors must be emphasized.

- The progresses, changes, theoretical relations of CAP are analyzed in detail by Halmai, Popp, Udovecz, Potori, Fischler, Swinbank and Horseman, among others.
- The economical aspects of the acceptance of CAP are examined in several studies by Halmai, Popp and Udovecz.
- As regards the specific sectoral research and the emphasized items of CAP, the sources the most important are those coming from the Research Institute of Agricultural Economics, the Agricultural and Rural Development Agency and the Ministry of Rural Development; and some relevant studies made by specific professional organizations (e. g. FruitVeb, Dairy Product Council) must also be mentioned.
- Rural development, the second pillar of CAP and its Hungarian adaptation is discussed in the works of Maácz and Halmai and in some documentations of the Ministry of Rural Development.

Besides these main references concerning the matter, lots of further information was provided by periodicals, essays and professional discussions, treating of the problems in broad or limited aspects. Among international sources, *Agra Europe*, *AgraFacts*, *Agra Focus*, *CAP Monitor*, and *Rural Europe* must be mentioned. Hungarian periodicals include *Európa Tükör*, *Fejlesztés és Finanszírozás*, *Gazdálkodás*, *Közgazdasági Szemle*, *Külgazdaság*, and *Statisztikai Szemle*.

Online professional forums also communicate important information, especially on the oncoming changes of CAP. These online sources include *budgetinperspective.eu*, *cap2020ieep.eu*, *capreform.eu*, *defra.gov.ok*, *ecipe.org*, *eubusiness.com*, *farmsubsidy.org*, *notre-europe.eu*, *reformthecap.eu*, and *europa.eu*.

Furthermore, main information sources include data bases as follows:

- Community level professional documentations include the data bases published by the European Commission, the European Parliament, and EUROSTAT.

- The analyses of the Hungarian and international trends were completed by personal consultation and exchange of expertise with specialists, researchers, university professionals, Hungarian and foreign executives and diplomats, enabling a deeper exploration of the matter.
- Hungarian and international conferences and scientific discussions provided information for a better overview of the matter.

Methods

In the course of accepting and applying CAP, special features and mechanisms have taken place. In order to systematize the progresses on national level, the use of applied economic research was necessary. In my work, I had recourse to the following economic methods:

Analysis, comparison of special literature

The basis of my research were technical books, studies, and articles published by excellent authors of Hungarian and international special literature. This basis gave me a complex and comparative view. This wide range of information enabled me to explore the deep relations of adaptation.

Analysis of documents

Being the matter specific and continuously new, I found it important to treat and evaluate the documentations already existing: decrees, laws, rules for operation, procedure and execution, statistical data bases, and various analyses. Besides, a separate information basis was provided by the official and unofficial documentations and research results of the Commission and the Council of the European Union. In my theses, I utilized the professional publications already existing.

Comparative analyses

With a view to evaluating the operation of CAP in Hungary, and to positioning it in the inner markets of the EU, it is necessary to make some comparison between Hungary and other Member States. The states of the Visegrad Group (V4) are good for comparing, as both their accession took place also in 2004, and their conditions had been similar previously. The comparisons carried out highlighted the successes and failures of the Hungarian implementation.

Statistical and quantitative methods

The type and heterogeneity of data make it necessary sometimes to utilize statistical methods. To explain the set of information emerging as a result of data collection, the analysis of time series, correlation and regression examinations can give further information.

Status evaluation and SWOT analysis

In order to sum up and collate results, I make an overview of the experiments and results, and I define the present capacities and drawbacks of the Hungarian agriculture, and the emerging risks. So I outline systematically how the application of CAP, and the changes taking place in CAP meanwhile influenced the whole agriculture and its segments in the period after accession. So it is possible to make a prospective analysis of what kind of present and expected circumstances will influence further progresses of Hungary, and our view concerning the future of CAP. This latter subject was examined by SWOT analysis.

Deep interview methods and personal consultations

While interpreting and evaluating the deep and complicated relationships in the subject, it was essential that I had the opportunity to get to know the thoughts and opinions of those Hungarian and international professionals who are expert in the matter. In the course of these consultations, I met the difference in views and argumentation of scientific and government experts, and I could utilize their thoughts emerging this way. Besides, I had professional consultations with colleagues working

in EU institutions and in the Permanent Representation of Hungary to the European Union. Moreover, in the framework of a foreign service of several months, I was able to make personal relationships with colleagues who had high expertise of the matter. So a professionally sound and nuanced expression of opinions was possible. Both this foreign service and my actual employment made me possible to have professional discussions and deep interviews with several members of Hungarian agricultural diplomacy and agricultural administration; with people who were or are prominent members of their bodies. The above mentioned discussions helped me a lot to explore the matter comprehensively and thoroughly and to develop a complex approach.

Empirical method

My professional knowledge and experience have grown a lot due to the fact that I have been an employee of the Ministry of Rural Development since 2000. In this period, and in the framework of several duties, I have dealt a lot with measures concerning CAP adaptation. This led me to have a high knowledge based on my own experiments, some of which I integrated into my theses. In the course of the technical and professional preparation and arrangement of my research, I could utilize my wide range knowledge acquired through questionnaire programs, impact studies, background documents, and participating on Hungarian and international conferences, and presenting several professional papers.

3. Results

1. The changes in European agricultural policies had a great effect on European agricultural progresses, and directly influenced Hungary's agricultural policy as a Member State.

When the reform of the Common Agricultural Policy of 2003 came to application in 2005, several necessary changes were introduced. Partly because a decision was made that the system of agricultural policy should be revised entirely in 2008, partly because it was necessary to evaluate the effectiveness of the reforms and the success of the goals, and to analyze the effects made on markets involved.

The revision included the adjustment (Health Check) of the CAP reform, and also determined the future of CAP. Main conclusions can be stated as follows.

- A The Health Check of the CAP reform contributed to the goal that agricultural producers can meet the new challenges.
- As a result of the Health Check, CAP may become more up-to-date, simpler and more reasonable; limitations concerning agricultural producers may cease, and producers may be able to react better to the signs of market and to meet new challenges.
- As a consequence of the arrangement, set aside of arable land was abolished, milk quotas were increased, and would be abolished gradually until 2015, and market intervention was transformed to a real safety net.

2. CAP adaptation basically determined the structure of the agricultural accession of Hungary.

The acceptance of CAP was a challenge for the agricultural economics of the Central and Eastern European Countries. In the period of the so called transformation crisis, they had to strengthen structures and integrate into the single market of the EU and to the system of Community policies at the same time.

The accession of Hungary took place as a result of a long period of preparation. This progress concerns also Hungarian agriculture, the conditions of which changed basically.

With no transition period, with a few transitional derogations and technical adaptations, Single Market immediately extended to Hungarian economics, including agriculture. The payment of direct aids, the greatest amount of aids of the Common Agricultural Policy is introduced gradually.

Naturally, full membership generated changed conditions of market accession, and gave new opportunities for both the old and the new Member States. The EU integration established a unified inner market, and this market was extended to agricultural basic products and processed products, too.

3. Hungarian application of the Common Agricultural Policy had a great influence on the production structure.

After accession, the production structure went on distorting towards extensive production. The share of plant production (and especially crop production) increased, while the share of animal production continued to decrease a lot. This progress is shown to occur basically as a result of favourite Single Market measures. It was mainly the effect of direct aids and intervention measures that the production structure of agriculture moved towards simplification, the production of mass products benefitting from the intervention system. As a result of this progress, agricultural structure significantly distorted, the subsistence capacity of agriculture went on decreasing, the market balance toppled for a long time, and the role and the operation of agriculture lost stability.

4. Direct aids had a strong effect on profitability and investments.

By means of correlation calculation, and on the basis of Agricultural Invoice System, I examined the relationship between production aids, net accumulation of fixed assets, and entrepreneurial market income. I examined the linearity of the correlations. In my examination, I worked up the results of two periods: the period of 2000 to 2009, and the period of 2004 to 2009. My aim was to analyze precisely the real effect of accession. As regards the results of the regression examination, it has to be emphasized that a mean negative (-0.61) correlation between market aids and income can be observed between 2000 and 2009, while it becomes stronger (-0.70) in the period after 2004 (see Table 1.). On the other hand, the correlation between market aids and the net accumulation of fixed assets changes from negative sign (-0.59) in the whole period to positive (0.54) in the period after accession. The probable cause of these results is the growth seen after 2006.

Table 1: Correlation data of the examined coefficients, (2000-2009; 2004-2009)

2000-2009									
	Production aids		Market income		Net accumulation of fixed assets		Net entrepreneurial income		
	Correlation	R2	Correlation	R2	Correlation	R2	Correlation	R2	
Production aids	-	-	-0,61	0,37	-0,59	0,35	0,82	0,67	
Market income	-0,61	0,37	-	-	-0,08	0,01	0,82	0,67	
net accumulation of fixed assets	-0,59	0,35	-0,08	0,01	-	-	-0,55	0,31	
Net entrepreneurial income	0,82	0,67	0,82	0,67	0,87	0,76	-	-	
2004-2009									
	Production aids		Market income		Net accumulation of fixed assets		Net entrepreneurial income		
	Correlation	R2	Correlation	R2	Correlation	R2	Correlation	R2	
Production aids	-	-	-0.70	0.48	0.54	0.29	0.39	0.15	
Market income	-0.70	0.48	-	-	-0.73	0.53	0.85	0.72	
net accumulation of fixed assets	0.54	0.29	-0.73	0.53	-	-	0.92	0.84	
Net entrepreneurial income	0.39	0.15	0.85	0.72	0.92	0.84	-	-	

Source: KSH, own compilation on the basis of 2010a

When examining the correlation results of net entrepreneurial income, I found that instead of the market income cleared from aids, the net entrepreneurial income including aids had a value of 0.82 justifying a strong correlation in the period 2000 to 2009, and decreased to a value of 0.39 in the 5 years' period, showing a weak correlation. That means that the growth of the accessible aids had a weak effect on net incomes, while the volume of net income had a strong influence on market income (0.82; 0.85) and on net accumulation of fixed assets (0.87; 0.92).

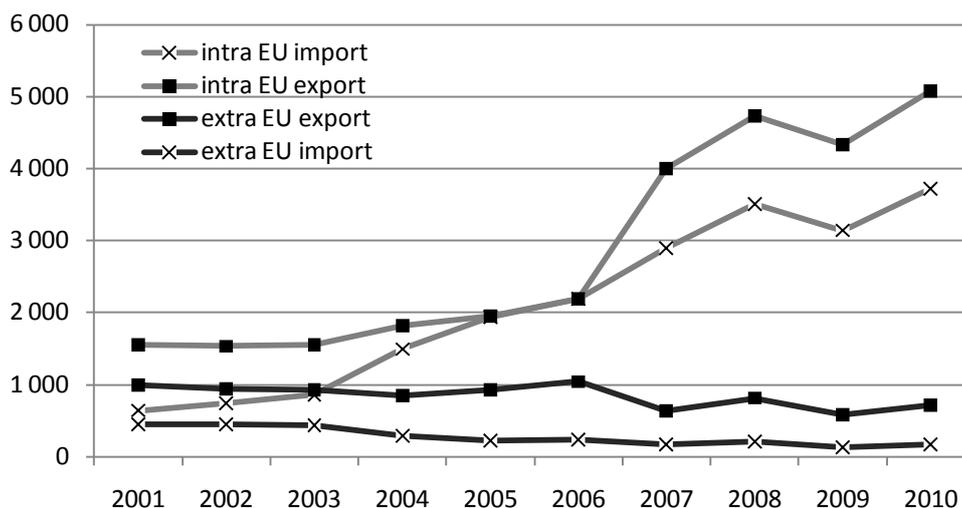
Table 1 shows explicitly that there are opposite trends in investments and income since the time of accession. It can be stated clearly that there is a strong negative correlation between the increase in the amounts of aids, the growth of incomes, and investments. After the accession, the growth in incomes did not immediately entail the growth of investments. Progresses took place in the opposite direction as expected. Evidently, the effects of an income growth of such a dimension should have

had a significant effect on the level of investments, promoting the change in agricultural structure and the enhancement of competitiveness.

5. Increase in Hungarian agricultural foreign trade took place after accession.

After the removal of customs frontiers, an important growth in the trade of agricultural products took place after 2004. As compared to the data of 2003 (and as compared to 2001, being the amount of exports nearly the same), the growth of trade was nearly 128 per cent in the second year of membership, and the expansion was the highest in 2008 (Figure 1).

Figure 1 Change of the Hungarian agricultural foreign trade with countries inner the EU and external the EU (million euro, 2001-2009)



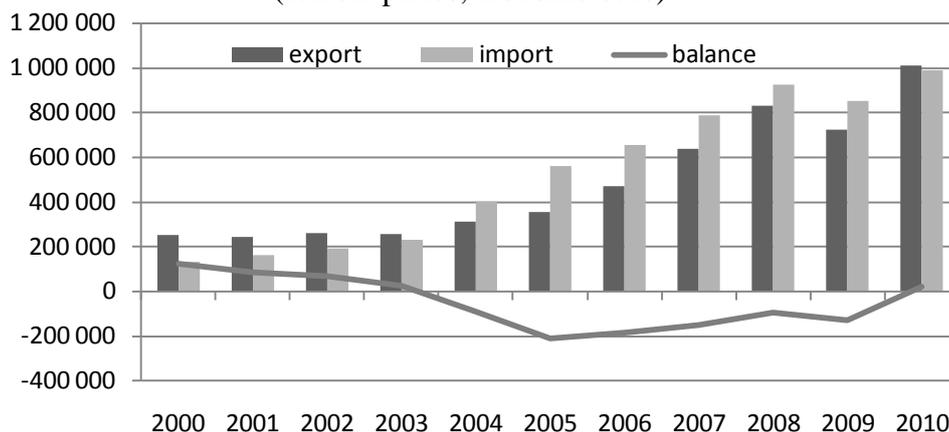
Source: EUROSTAT 2006, FVM 2003-2009, VM 2010

An explicit and remarkable feature is the sudden rise in the amount of imports. As regards the imports from third countries, the decrease may be reasoned by our neighbours becoming Member States. These changes cannot be explained entirely by the statistic effects of accession. Some old and new Member States became very active, and at the same time, Hungarian exportations stagnated. It can be explicitly stated the Hungarian agriculture and the food industry could not take the opportunities provided by the Single Market. On the other hand, some new Member States could. At the same time, the effect of the global economic crises manifested strongly, and the decline in foreign trade within EU was almost 10 per cent. On third markets, and partly as a consequence of low base values, this decline is nearly 29 per cent for exports, and 39 per cent for imports.

6. The agricultural foreign trade with new Member States has changed, especially with the states of the Visegrad Group.

In further analyses, I found it necessary to examine the trade movements with the states of the Visegrad Group. In the period of 2000 to 2010, an average of 45 per cent of Hungarian exports towards the EU12 was sent to Slovakia, the Czech Republic, and Poland, while an average of 80 per cent of imports from the EU12 came from these countries. In relation with these countries, it was conspicuous, that the value of imports increased significantly after EU enlargement (Figure 2.). In this respect, these states could exploit efficiently Hungarian market opportunities emerging as a result of the Single Market.

Figure 2 Hungarian trade of the agricultural and food products with the Visegrad Group (current prices, thousand euro)



Source: own compilation on the basis of KSH

The most important progresses in relation with the new Member States were seen with Poland and Slovakia. It was these two States that realized nearly 77 per cent of the imports, and 70 per cent of the exports of the Visegrad Group. With these two countries, the initial decline and negative commercial balance were followed by positive trends in 2006 and 2008. The favourite market opportunities and the benefits coming from the accession were exploited by Slovakian products more efficiently. The same as with Poland; but in Slovakia's case, our negative commercial balance did not decrease, and even grew higher as from the accession. In 2010, the negative balance of foreign trade reached EUR 252 thousand.

In the analysis of agricultural foreign trade, another essential trend is the restructuring of main sectors. Prior to accession, the share of animal products in exports was 34 per cent while the share of plant products 55 per cent. After the accession, the share of animal products in total exports decreased continuously, and declined to 25 per cent in 2009. At the same time, the share of plant products reached 63 per cent. As regards the main groups of exports of agricultural and food products, the cereal main group is outstanding in the period 2004 to 2009; the second place is taken by meat, slaughter by-products and offal. On the other hand, the main group the fruits and vegetables preparation had a strong decline in position.

The examinations explicitly showed the Hungary did not succeed to establish an effective and advantageous foreign trade with the new Member States. The share of products in foreign trade changed significantly, and so an effect of competition was generated. Correlation values initially high, and becoming lower after accession indicate that deep changes took place in export structure. At the same time, the relative importance of the different product groups might also change. This can happen because the exports may grow in certain product groups, while it decreases in other ones, influencing a little the concentration of exports.

7. The concentration of the foreign trade progresses changed a little in exports, but more significantly in imports.

To determine the concentration of a given market, economic analyses utilize the index Herfindahl-Hirschman. The value of this index may vary from 0 to 1. Higher values mean higher concentration.

In Table 2 we can see the H-H indexes of trade processes realized with different country groups. These values show the highest market concentration took place in relation with EU15 (and in a smaller degree also for the whole exports) though the index has decreased for six years since 2000. This shows that, as a consequence of the advantageous effects of the single market and the liberalization of agricultural trade, many different kinds of products could be sold gradually on this

market. Nevertheless, the rates of imports show a much more stable situation and a relatively low concentration. As regards the whole export trade realized with the EU15 and the EU12, the highest value was reached in 2007, when a significant rise can be seen. It was probably caused by the fact that the huge amounts of cereals produced in 2005-2006 and then stocked for intervention were sold on foreign markets. We can establish in each export market, a hectic character of concentration can be seen. At the same time, imports undergo processes of decreasing and stagnating concentration. That means that there are no determining product groups enhancing concentration of imports, and the structure of imports is relatively homogeneous and balanced (Table 2).

Table 2 The Herfindahl-Hirschman indexes of the Hungarian agricultural trade with certain countries (2000-2010)

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
total	export	0.0938	0.1015	0.0950	0.0892	0.0867	0.0878	0.0861	0.1120	0.0975	0.0876	0.0893
	import	0.0831	0.0866	0.0825	0.0741	0.0652	0.0616	0.0601	0.0620	0.0610	0.0606	0.0613
EU15	export	0.1337	0.1305	0.1139	0.1073	0.1013	0.1051	0.0977	0.1364	0.1087	0.1116	0.1113
	import	0.0659	0.0728	0.0711	0.0691	0.0707	0.0695	0.0658	0.0683	0.0683	0.0661	0.0655
EU12	export	0.0742	0.0835	0.0790	0.0993	0.0774	0.0820	0.0752	0.1053	0.1000	0.0791	0.0791
	import	0.0806	0.0827	0.0901	0.0992	0.0791	0.0727	0.0738	0.0693	0.0686	0.0726	0.0680
V3	export	0.0733	0.0791	0.0760	0.0809	0.0825	0.0895	0.0833	0.0855	0.0931	0.0733	0.0777
	import	0.0986	0.0956	0.0976	0.0931	0.0812	0.0762	0.0774	0.0736	0.0732	0.0782	0.0751

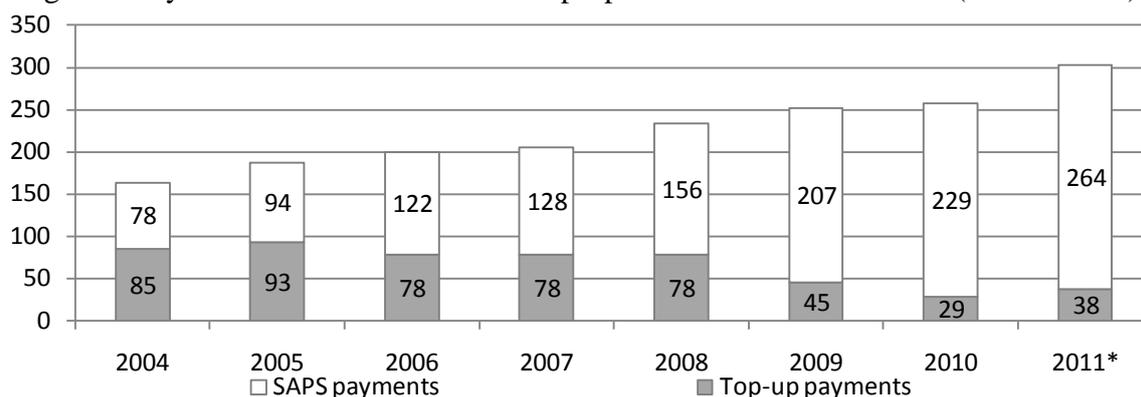
Source: own compilation on the basis of AKI, KSH

8. In Hungarian agricultural budget, the share of Community resources became important, while the role of national contribution decreased strongly.

As a consequence of the accession to the EU, huge amounts of financial transfers became available for the Hungarian agriculture. This had significant nominal consequences. As compared to the agricultural aid of HUF 213 billion in the year preceding accession, Community resources afforded nearly the double amount of financial possibilities. The amounts paid in the framework of the CAP in the past 10 year (calculated in fact as from 2004) totalled up to EUR 4299.4 million. That means 34 per cent of the whole EU transfer in this period. A special element is the changes in the structure and the payments of the budget. As an effect of the economic crisis of 2008, and as a result of economic difficulties and general recession, the utilization of rural development and cohesion resources, listed among other items, became slower, and in several cases, impossible.

After these processes, we can see clearly that the margins of national agricultural budget decreased strongly. This was realized on the charge of the top-up payments (CNDP). The process outlined below (Figure 3) demonstrates explicitly the margins of the Hungarian agricultural budget decreased strongly.

Figure 3 Payments of the SAPS and the top-ups between 2004 and 2011 (billion forint)



Source: own compilation

*note: preliminary data

If I consider the possible maximum payments, i.e. the annual limit of national top-up approved by the European Commission, the situation is even worse. The possible top-up limit of 30 per cent has never been realized as a whole; and in the average of the examined 8 year, the rate of top-up payment was as low as 16.1 per cent. The lowest amount is seen in the budget of 2010, when not more than 5.5 per cent was paid instead of the possible 30 per cent. National budget margin is characterized with a significant decline. When examining the ratio of expenditures financed by national resources to expenditures of European resources, we can see the share of national resources in the whole agricultural expenditure decreased strongly after accession. The initial share of 100 per cent declined to 12 per cent in 2010, i.e. 88 per cent of the whole expenditure was covered by European resource. Meanwhile, as a consequence of the change in the ratio of the two resources, the Hungarian agriculture was financed by the EU in sevenfold ratio in 2009.

The above mentioned considerations show that essential changes have taken place in the financing system of agricultural aids, as a consequence of which aid possibilities of certain sectors (e.g. plant production, especially cereals) increased strongly, while the possibilities of other sectors (e.g. animal production, horticulture, food industry) decreased a lot. On the evidence of my examination, the progress is nevertheless positive as a whole.

9. The examination of the Hungarian system of the agricultural and rural development supports.

The Hungarian adaptation of the CAP brought changes above all in the amounts of agricultural and rural development aids. However, their structure and resource went through essential changes. Resources financed entirely from national budget before accession were gradually covered by the budget of the EU as from 2004. The ratio of the two resources grew from 16 per cent to nearly 88 per cent in the period 2004 to 2010. The biggest item of the Hungarian agricultural budget is the amount of single area payments, which increases gradually each year. The amount of rural development supports covered by co-financing also increases every year as rural development programs are realized; that gives the second biggest item.

The CAP adaptation, with the application of the new single area payment system, affected different sectors differently. As regards the growth of aids and the resulting growth of incomes, the producers of arable crops came to an advantageous situation, especially those producing cereals, oilseeds, protein crops, and fibre crops. In the sector of animal production, beef and sheep producers could get direct aids, so practically they are the only beneficiaries. Sectors not regulated directly, e.g. poultry and pig, can be supported in a limited degree for the charge of the national budget. This amount is intended for improving the conditions of animal welfare, waste destruction, and contribution to veterinary expenditures.

10. The effects of the CAP adaptation on Hungarian agricultural economy.

At the time of EU accession, several Hungarian and international research workshops mentioned favourably Hungary, which was considered undoubtedly a winner of integration. Due to its advantageous geographical, natural, and ecological endowments, Hungary is able to operate a multifunctional, exportable, and competitive agricultural economy. Furthermore, the strict Hungarian rules concerning food safety would help to meet EU regulations, and to enhance the exportability of the Hungarian products. The obvious drawbacks of the Hungarian agriculture are the lack of producer cooperation, the disorders of logistics, the under-financing, and the disorders of the structure of land property. It also seemed to be a fact that the uniform regulation system can help to plan for several years, to maintain producers' interests and income security.

Taking this as a starting point, we can establish the agricultural balance of the EU membership of Hungary is positive as a whole in the first six years, but is not as advantageous as expected before accession. With the EU accession, the Hungarian agricultural economy came into conditions very different than earlier. Hungary has to take part in the competition in the Single Market with those old Member States which created the conditions of competition, and were their beneficiaries for several decades.

11. The main challenges of the CAP and the Hungarian agricultural policy.

Because of the difficult challenges emerging from CAP, it is necessary and inevitable to examine a lot of external and internal factors. Most of these factors are in a close relation and an essential interaction. That is why I analyzed two main internal factors, which may influence significantly the system of CAP after 2013. They concern the proposals established for the following projection period of the common budget, and the resulting transformation of the CAP measures.

12. The analysis of the CAP after 2013 and the possible future ways of sustainable agriculture.

In the new reform of agricultural policy, several regards become essential; e. g. competitiveness, food security, the reduction of inequalities between EU15 and EU12, an integrated management of crises and risks of unexpected events, enforcement of a sustainable environment (climate change), economic regards (viable enterprises), and social regards (transparency, consumers' interests).

In the new approach of CAP, one of the cardinal points is the interpretation of European public goods. When transforming European agricultural policy, it is necessary to define those special or general measures which contribute to the production of common goods expected by European society; for the remuneration of common goods produced by agriculture will be emphasized in future.

The changes emerging from the above aspects will be influenced by the future of Community financing. Because of the challenges of sustainability and the probable change in the Community financing, it seems sure the system of agricultural and rural development aids will change essentially. With the new challenges appearing and with the goals of CAP transforming, the time came to reform the Common Agricultural Policy, in a close relationship with the establishment of a new budget framework. As regards the orientation of the reform of the Common Agricultural Policy, the first official statement of the Commission was made on 18th November 2010. The document allows an important margin in main questions of aid policies, giving possibilities to reconcile the different standpoints of Member States. According to the proposal of the Commission, the CAP after 2013 should be more effective, more innovative, simpler, and greener, to be able to manage efficiently such challenges as climate change, a growing demand on food and the creation of jobs.

The statement summarizes the main challenges concerning the agriculture of the EU. However, it suggests only moderate changes in the transformation of CAP so far; redistribution of payments

among Member States, a new green element in the system of direct aids, an establishment of means of risk management inside the second pillar. Though the document does not contain quantitative suggestions, it seems certain that the cornerstone of CAP after 2013 would remain the system of direct payments.

13. The situation of Hungarian agriculture as a function of the expected transformation of CAP.

Basically, Hungary is interested in a strong and competitive European agricultural and food economy. So it supports the operation of an effective and common policy also after 2013. This policy focuses on food security, food safety, the protection of high quality foods, the preservation of biodiversity, and the maintenance of agricultural capacity, the establishment of a viable and liveable countryside. With this in view were systematized the factors defining basically Hungarian agriculture as from 2013 (Table 3).

Table 3 Analysis SWOT of Hungarian agricultural economy in relation with the CAP after 2013 (in an alphabetical order)

Hungarian agricultural economy as an internal factor	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Good state of animal health • Biological bases (genetic resources, races) • High degree of biodiversity • Arable production • Traditional products • Soil and ecological endowments 	<ul style="list-style-type: none"> • Low level of innovation • Situation of animal sector • Conditions and situation of operators of food economy • Weak knowledge of entrepreneurs in management and enterprising • Financial environment of agricultural enterprises • Low level of technological developments • Vertical integration of production and processing • Low level of rural employment • Situation of the sectors fruits and vegetables
CAP as an external factor	Opportunities	Threats
	<ul style="list-style-type: none"> • Transformation of marketing channels, enforcement of producers' interests • Encouragement of domestic products and local sales • Encouragement of marketing • Agricultural water management, irrigation • Preservation of market measures • Enhancement of production and sales cooperation • Rural development resources 	<ul style="list-style-type: none"> • Maintenance of producers' income • Effective and viable system of risk management • Implementation of requirements in environmental protection and animal health • Alteration in support system • Additional requirements by WTO after the Doha Round

Source: own compilation

All these aspects must be aligned while maintaining the international competitiveness of the European model of agriculture and food industry. In spite of its deficiencies, CAP is a main policy of the establishment of the European integration. A Hungarian priority is that such measures of support policy are necessary that guarantee an equitable standard of living for the producers and the rural population, promote the development of the rural economy, contribute to the social, economic and environmental sustainability of rural areas, and enforce a full-scale food security and food safety as expected. In the structure of the new CAP, Hungary is interested in the improvement of the local processing of products, direct marketing, diversification, the establishment of jobs in rural areas, promotion of young farmers to start, stabilization of the situation of small and medium enterprises, and the development of rural infrastructure.

14. The prospects of agricultural policy as a function of the Multiannual Financial Framework of 2014-2020

The strategic plans concerning the future of the CAP reform are in a close relation with the scheduled alterations of the financial prospects between 2014 and 2020. It must be seen the resources of CAP are not necessarily allocated upon professional aspects, but upon the financial possibilities of the Community. Nevertheless, it is important to set up a professional system of aspects to indicate the priorities of the goals of CAP during financial negotiations. The future of CAP will depend on that.

4. New and novel scientific results

1. Comprehensive evaluation and new systematization of the national consequences of the CAP adaptation.

In my theses, I analyze and quantify the consequences of expectations and real effects and their frameworks in those sectors important for the Hungarian agriculture. My sectoral analyses point out that there was not performed any effective intervention which could have prevented the consequences emerging from the Single Market and the changed agricultural policy, and to avoid the negative effects of accession, even in the sectors in the worst situation. It is also demonstrated explicitly the application of direct aids had a great influence on the decisions of producers, and had a strong impact on the market and production positions of the different sectors.

2. The structural distortions evolving in agricultural trade between Hungary and the EU.

I have demonstrated that, besides the actual positive balance of agricultural foreign trade, the structure of foreign trade worsened. Low value added basic products and mass products dominate in exports, while finished products of high value added and products of primary processing are in excess in imports. Because of the changed position of exports and imports, we can state the international competitiveness of Hungarian agriculture is affected adversely by the EU accession.

3. The adaptation of aids had paradoxical effects: growing incomes and decreasing competitiveness.

Considering the period of six years, the payments allocated to agriculture resulted in a support of seven and a half times greater than before accession. This resulted in a nearly twofold growth of incomes, but the growing incomes did not affect the level of investments and the sustainable development of agriculture. We can state that the growth of income in the sector and the supplementary resources altogether did not increase the competitiveness of agriculture as compared to the other Member States.

4. A comprehensive systematization of agricultural aspects of connections resulting from the common budget.

As a consequence of the EU membership, the amount of budget increased strongly for national economy and for agriculture, too. It can be explicitly demonstrated the amount of nominal aids grew practically as an effect of the Community resources, while the share of national aids radically decreased at the same time. The decreased national margin and its probable fixation at a low level provide only a very limited margin for managing national demands and specificities.

5. Evaluation of the situation of the Hungarian agriculture as expected as a function of the next reform of CAP.

The demand to meet social challenges is explicit. With this in view, new and newly defined goals emerge as regards market measures, agricultural aids and rural development. We can state that, as a result of the decrease in its reserves, the Hungarian agriculture has a relatively low capacity for the adaptation of CAP reform, and has difficulties in managing even slighter changes in the direction of the reform. Meanwhile, the capacities for adaptation are various. Alterations concerning the whole agriculture are completed with crises of geographical or local level, and those of certain segments, emerging as results of natural disasters or market problems or animal and plant health risks. A significant enhancement of the adaptation capacity of the Hungarian agriculture would both enforce competitiveness and make the adaptation of future reform options much easier.

5. Consequences and proposals

CAP adaptation with double effect

The impact of accession is explicitly positive, but in some special fields, significant negative effects are explored. We can state that both CAP and the whole EU adaptation involved lots of advantages while some sectors and segments went over unfavourable changes. Agricultural economy could manage the actual and emerging structural and other problems only partially. The evaluation of the CAP reform shows that despite all its efforts, the Hungarian agriculture was not matured and prepared for accessing. Some sectors, regulated slightly in the market regulation system of CAP, were hit by significant negative impacts. However, the other important segments influenced by CAP achieved a significant stabilization or even an enhancement of position.

Aid system cannot manage the problems of agriculture by itself

Hungarian adaptation of aid system was basically influenced by the fact that the growth of aids realized only gradually. Meanwhile, we cannot demonstrate explicitly that additional resources could have been utilized more efficiently. As a compensation of the aid amounts growing gradually, the application of a simplified implementation system (SAPS) and national co-financing (top up) were available. However, it was justified that aid system could not manage the problems of agriculture by itself. It must be considered a success that despite the preliminary difficulties, institutional adaptation was realized effectively and without a significant hitch; but the situation is much more nuanced as regards impacts. Although the financial transfer allocated to agriculture is growing each year, the lag in competitiveness did not decrease significantly, and restructuring did not take place, and even the volume of investments decreased. The main cause of these problems is that due to the lack of state resources, Community aids were complemented with only small amounts instead of the level approved. The possibilities of top up were not exploited as we paid a rate gradually decreasing to producers.

It was also established that despite the huge amounts of agricultural and rural development aids, the number of people employed in agriculture continued decreasing after accession and the income aids (direct payments) for producers were rather used to compensate for losses. Inside arable production, the position of cereals sector improved, but the processing industry that could realize added value is missing.

The potentials of foreign trade were not explored in full

As regards the changes in foreign trade, besides a significant change in circulation and structure, we can find unexplored opportunities and unexploited market possibilities.

- As a result of accession, the efficiency of the Hungarian agriculture improved, but its international competitiveness did not.
- Hungarian institution system necessary for the operation of CAP became more reasonable
- As a consequence of Hungarian and Community aids, the incitements and inclinations for enterprising are encouraged
- The alteration of aid system is necessary. Payments have to be more effective, regulation and liquidity conditions have to be guaranteed, administration has to be simplified.
- As a whole, Hungary is a winner of accession. As a Member State, it is a net beneficiary of CAP. The question is whether it can preserve this position in the period after 2013. Another question is whether we can make profit on our experiences. Will we be able to manage new challenges and unexpected events?
- Financing is insufficient, taxation system is problematic, agricultural technology is poor, the age structure of agricultural employment is unfavourable.

The improvement of economic performance of food industry is essential, as the Hungarian agriculture needs stable relations to food processing. The excessive influence of distribution sector caused important distortions in the share of incomes inside food product chain. Moreover, the strong presence of multinational commercial chains distorted the purchase and supply of agricultural products. Therefore, in the system of CAP after 2013, it is reasonable to consider the changes in global food trade. Besides, in the new adaptation of the CAP reform, agricultural producers, and especially small enterprises have to be supported tendentiously. Finally, the position of producers within food supply chain also has to be stabilized.

In order to improve the situation of food industry, our task is to stop the decline in agricultural production; to enhance the national and export market positions with the improvement of competitiveness; and to restore the profitability of farming. By those means, the conditions of farming for Hungarian producers may be improved, and their market stability may be enhanced. As regards international competitiveness and sustainability, the development of the obsolete logistic background and the conversion to the production and exportation of high value added products would be great advantage.

The partial exploitation of top up caused an alternative loss; it did not reduce the lag of competitiveness of producers; and did not contribute as much as possible to the improvement of the position of agriculture.

Proposals

As regards the stabilization of Hungarian agricultural economy and the improvement of its positions, several proposals, also realizable in practice, are established. Some of them are able to utilize synergic effects to promote a significant correction.

1. The transformation of direct aids, i.e. the conversion from SAPS to SPS was an important political decision as regards the long term interests of agriculture, and the last one made in national competence. A basic new element would have been the payment entitlement which can be marketed freely but is only partially negotiable. The entitlement would have been coupled to producer; and together with further regulations, it would have an effect for a significant, inevitable and overdue correction and adjustment. In the following Financial Framework (2014-2020), this will not have importance, as the basis of the direct aids will be the area supported by SAPS and SPS in 2008. That means that SPS do not have to be introduced to market the payment entitlements.
2. As regards CAP adaptation, a negative effect pronounced widely is that, despite previous expectations, CAP was not predictable. Anyway, the implemented changes hit some Hungarian operators unprepared, resulting in an adaptation shock and a lag in competitiveness. It is necessary to avoid such situations and to prepare for events not expected and calculated.
 - a. In this process, we must accept as a basis that CAP remains to be dynamic and changing continuously. We must also consider it as a function of the multiannual financial periods.
 - b. Nevertheless, support elements and the wide means of agricultural policy should be spent to managing environmental and climatic problems, economic and market instabilities and unexpected events. Besides, the revision of the traditional bases of CAP will be enforced by the revision of traditional principles of agricultural policy, the rearrangement of economic conditions and the change in priorities of the EU. This revision and the application of flexible means aiming at actual problems will enable to reach long term goals of competitiveness and sustainability.
 - c. With a view to promoting continuous change and development, it is necessary to inform sectoral operators, to moderate administrative measures, and to follow a

reasonable and consistent sectoral strategy. In a wider sense, the simplification of the administrative mechanisms, and the enhancement of their efficiency are in line also with new goals of CAP.

3. Besides the direct improvement of the conditions of producers, it is inevitable to improve and develop market positions. When analyzing the effects of accession we could see that, in several cases, the share of processed products in exports declined, while the share of low value added products increased. To alter these shares and to reverse this process is of high importance. The benefits of the single market were exploited at a much lower level than expected. This had several reasons concerning markets, market knowledge, product structure, processing, etc., which appear only as a result of long term and thorough changes. Nevertheless, the following tasks are inevitable:
 - a. The concentration and development of producing and market capacities, the enhancement of the share of marketable products are inevitable to achieve a considerable and basic advance.
 - b. Besides, through the encouragement of enterprises in food industry, some further social and economic benefits (employment, taxes) can be quantified.
 - c. Local cooperation and market possibilities afforded by geographical endowments should be exploited. The role of our neighbours and the countries in the region (states of Visegrad Group, Romania, Serbia, Croatia and Ukraine) should be enhanced significantly. With the exploitation of regional synergies and potential market possibilities, new export markets and sectoral cooperation forms can be established.
 - d. With a view to establishing local and regional markets, and to promoting their market accession, small farms should be afforded a special support in the reform of CAP after 2013. This targeted support may be important also as regards the development of their competitiveness.

6. Publication List

Academic book, book detail

Published in Hungarian

1. Baksa Adrienn – Vida Adrienn: A világ élelmiszerválsága, hatása az Európai Unióban, Magyarországon in Globális kihívások, Millenniumi Fejlesztési Célok és Magyarország, (Szerk.: Gömbös Ervin), ENSZ Akadémia 2008, Magyar ENSZ Társaság, Budapest, 2008., 201-218 pp., ISBN 978-963-86322-9-6

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1. Miklós Vásáry, Adrienn Baksa, Mahesh Kumar Singh, Peter Bielik (2011): Analysis of agricultural trade between Hungary and the Visegrad Countries. Annals of the Polish Association of Agricultural and Agribusiness Economists Vol. XIII. No6. pp. 237-243 Warszawa, Poznan, Szczecin ISSN 1508-3535
2. Adrienn Baksa, Adrienn Vida (2008): The 24th hour of agricultural research, (Szerk.: Mézes Miklós), Bulletin of the Szent István University, 2008., 320-329 pp., ISSN 1586-4502
3. Adrienn Baksa, László Vajda (2008): Major changes in the Hungarian agricultural economy as a result of EU-membership. Gazdálkodás, Scientific Journal on Agricultural Economics English Special Edition, 2008 52. évfolyam 22. számú különkiadás 65-77 pp., ISSN 0046-5518

Published in Hungarian

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2. Vida Adrienn, Baksa Adrienn (2009): A bio-üzemanyagok használatával járó várható földhasználati változások Magyarországon, Gazdálkodás, agrárökonómiai tudományos folyóirat, 2009. 53. évfolyam 1. szám 65-77 pp. ISSN 0046-5518

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2. Adrienn Baksa, László Vajda, Éva Hrustinszki (2005): EU financial perspective 2007-2013, consequences on CAP and Rural Development. International Conference, The impact of European Integration on the national economy, October 28-29, 2005, Cluj-Napoca, Romania (ed.: Kinga Kerekes), Babes-Bolyai Egyetem 261-268 pp., ISBN 973-751-081-X
3. Adrienn Baksa (2003): The role of the communications instruments in the preparation of Hungarian agricultural sector for the EU-accession. Erdei Ferenc II. Tudományos

Published in Hungarian

1. Baksa Adrienn (2005): Az agrárköltségvetésben várható változások 2007-2013 között, különös tekintettel a mezőgazdasági termelőkre, Pécsi Tudományegyetem Közgazdaságtudományi Kara Regionális Politika és Gazdaságtan Doktori Iskola Évkönyv 2004-2005, (szerk.: Glück Róbert, Lux Gábor) 203-209 pp. ISSN 1588-5348
2. Baksa Adrienn (2004): A magyar agrárnépesség EU felkészülése (Kérdőíves vizsgálat alapján) IX. Nemzetközi Agrárökonómiai Tudományos Napok „A mezőgazdasági termelés és termék előállítás jövőképe”, Agrárközgazdasági Szekció, Károly Róbert Főiskola, Gyöngyös 2004. március 25-26., CD – 6 oldal (szerk.: Lakatos Márk, Rajna Renáta), ISBN 963 214 313 2
3. Baksa Adrienn (2003): Marketing eszközök alkalmazása az agrártermelők Közös Agrárpolitika rendszerébe való bekapcsolódására. „Marketing a bővülő Európában” MOKKA –Marketing Oktatók Klubjának Konferenciája, Debreceni Egyetem Agrártudományi Centrum Agrárgazdasági és Vidékfejlesztési Kar, Debrecen 2003. szeptember 4-5. (szerk.: Dr. Kárpáti László), CD – 8 oldal, ISBN 963 9274 453
4. Baksa Adrienn (2003): A magyar mezőgazdasági termelők EU ismeretei (empirikus kutatások alapján). AVA – Agrárgazdaság, vidékfejlesztés és agrárinformatika az évezred küszöbén, nemzetközi konferencia, Debreceni Egyetem Agrártudományi Centrum Agrárgazdasági és Vidékfejlesztési Kar, Debrecen 2003. április 1-2. (szerk.: Dr. Nábrádi András – Dr. Lazányi János), CD – 8 oldal, ISBN 963 472 721 2