

STRUCTURE OF BULGARIAN AGRICULTURE 10 YEARS AFTER THE ACCESSION TO THE EU

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Abstract

After the Accession to the European Union the Common agricultural policy become an important factor for the development of Bulgarian agriculture. Despite the positive changes in the sector, the agrarian production in the country is characterized by low competitiveness and efficiency. The aim of the study is based on the analyses of the structural changes in Bulgarian agriculture to formulate conclusions for the effect of the ten years membership on the sector. The paper outlines the transformations in agricultural production, farm structure and trends in trade with agricultural products. The study indicates that there are significant problems related to productivity and value added over the past 10 years. The main challenges are associated with structural and sectorial imbalances, uneven distribution of financial support, polarization and overconcentration in the sector.

Key words: Common Agricultural Policy, patterns of specialization, structural changes, transformation

INTRODUCTION

Bulgarian agriculture is an important sector in national economy. After the accession to the EU, agricultural sector changed significantly. The implementation of Common Agricultural Policy (CAP) caused serious transformations in patterns of specialization and concentration. Bulgarian farms are modernized, the average size of holdings increased but there are substantial problems associated with polarization and production imbalances. Through the new opportunities that the EU fund granted, the share of the non-cultivated area is reduced and there is positive trade balance in Bulgarian agriculture. Despite the positive trends there are a lot of issues and challenges that have to be considered.

The 10 years EU membership gives good opportunity to analyse and highlight the main changes, trends and challenges for Bulgarian agriculture. This topic is widely discussed [2,8] and extends to debate about the impact of CAP on the development of agricultural sector.

The aim of the study is based on the analyses of the structural changes in Bulgarian agriculture to formulate conclusions for the impact of the ten years membership on the

sector. For this purpose, the structural changes in Bulgarian agricultural sector are represented in three main dimensions:

- Changes in the importance of agriculture for national economy
- Changes in patterns of agricultural specialization
- Changes in concentration and economic size of farms.

MATERIALS AND METHODS

The survey covers the period 2007- 2016 that marks important stage of Bulgarian economic development – the accession to the EU.

Methodological approach includes various methods of research. Analysis, synthesis, deduction and induction are used in the study. Comparative, monographic, logical, tabular and graphical methods of analysis are applied. The data is provided by Eurostat, National Statistical Institute, Farm Structure Survey 2003-2013 in order to present information for structural transformation of Bulgarian agricultural sector. The changes in economic size and concentration are conducted by using the Eurostat classification of farms. “By economic size based on standard output in EUR they form five groups: Very small

farms: < EUR 2,000; Small farms: EUR 2,000 – < EUR 8,000; Medium-sized farms; EUR 8,000 – < EUR 25,000; Large farms: EUR 25,000 – < EUR 100,000; Very large farms: ≥ EUR 100,000” [4].

RESULTS AND DISCUSSIONS

Role of agriculture for Bulgarian economy

Number of significant variation and structural changes in all sectors of economics occurred during the transition period [3]. The transformations in agriculture led to a lot of issues and negative trends. The measures that government applied to support the sector were

not consistent. Therefore, after the accession of Bulgaria to the EU in the agriculture sector remain serious unresolved issues. Some of the disadvantageous processes and restructuring are leading to decrease of the role and importance of the agriculture for the national economy. Figure 1 illustrates the share of Bulgarian agriculture in the gross value added, in the number of employees and in the export of products for the period 2007 – 2016. The share of agriculture in the gross value added is gradually declining after the accession to the EU.

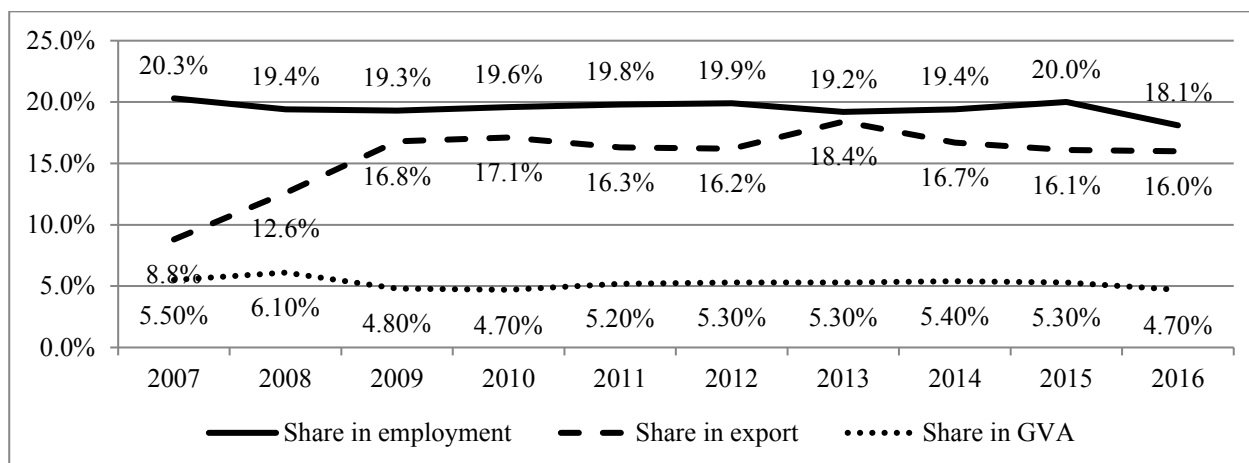


Fig. 1. Role of agriculture in national economy (%)

Source: National statistical institute, FAO, Ministry of Agriculture, food and forestry [7,11,12,13,14,15].

These trends in Bulgaria are similar to the ongoing processes in all other Member States of the Union. The negligible share of agriculture in the economy is a positive phenomenon only when is accompanied with increasing quantity and quality of the agricultural production. This does not apply to Bulgaria and the decreased importance of the sector is the result of negative trends in its development. In the country, there is a reduction in production and a number of issues related to the competitiveness and efficiency. Therefore, the trends in the share of gross value added are signal for structural problems in the sector.

The share of agriculture in employment does not show significant variation. However, the modernization of Bulgarian agriculture associated with new technologies and innovation lead to reduction of number of

employees. There is a downward trend in the number of labor force in agriculture after the accession to the EU.

According to Eurostat, in EU-27 between 2000 and 2010 the share of EU agriculture workers is declined by 25%. In the EU-15, the decrease is 17%, while in the EU-12 the reduction is 31%. The lowest decline is registered in Greece (only 3%); while in Estonia the decrease is nearly 55%. With the decline by 48% for the period 2000 – 2010 Bulgaria ranks second [5]. However, the issues in Bulgarian agriculture are related not only to the number employees, but also with highly degraded educational and age structure. The lack of young and skilled workers in agriculture has negative impact on the sector, leads to low motivation and limits the opportunities for development and innovation in agriculture [16].

The share of agriculture in Bulgarian export shows more substantial changes and dynamics than the other two indicators. After the accession to the EU, Bulgarian domestic market became part of the Common market. Therefore 2007 is critical for Bulgarian export. This is the first year with negative trade balance in agriculture. The share of agricultural exports is less than 9%. In the next few years there are positive changes. The share of agricultural export is raising and the data indicates stabilization of Bulgarian agriculture in the international trade. However, significant changes in structure of export are observed. There is substantial growth in export of cereals and oilseed. By contrast, in the sector of vegetables and fruits, where Bulgaria was traditional exporter in the recent past, the country became net importer [9]. There is a decline in export of milk and crisis in meat sector. Bulgarian agricultural sector has an export-oriented strategy. This strategy, however, is related to increased export of extensive production, which leads to serious structural problems and a reduction of livestock production. A considerable part of domestic consumption of basic livestock products is ensured by imports [1].

Structural changes in Bulgarian agriculture

After the Accession to the EU there is major transformation in the structure of Bulgarian agriculture presented in Table 1.

Based on the indicated data, some important conclusion could be drawn:

First, the role of cereals is arising after EU Membership. The main reasons are related to the direct payments that benefits mainly extensive crop producers. Structural transformations are observed in the sector of industrial crops as well. Their share in gross production is increased by nearly 16%. The main factor for this trend is the substantial change in the direction of specialization. Leading crops are sunflower and rapeseed. There are favorable trade conditions for these oilseeds and they are intended mainly for export. The relative share of forage crops is very low and is decreasing in the last few years. The main reasons are related to the problems in livestock production.

Second, there is serious negative trend in the sectors of fruits and vegetables. Despite the favorable natural conditions, the relative share of fruit and vegetables is substantially reduced. In the sector of vegetables, the decline is more noticeable. In 2016 the share of vegetables is 4 times lower compare to 2007.

Table 1. Structure of Bulgarian agriculture 2007-2016 (%)

Sectors	2007	2010	2013	2016
Cereals	15.9	26.0	32.7	32.7
Industrial crops	11.2	23.1	22.6	26.9
Forage plants	3.2	6.0	4.9	2.2
Vegetables	15.5	5.7	3.6	4.8
Potatoes	1.8	1.9	1.6	0.7
Fruit	7.7	3.8	4.1	5.0
Cattles and bulls	5.8	3.7	3.4	4.4
Pigs	5.8	3.7	4.2	4.1
Sheep and goats	5.6	3.8	3.0	2.9
Poultry	6.3	5.8	4.7	4.0
Other animals	0.7	0.7	0.1	0.1
Milk	15.6	11.6	11.5	9.1
Eggs	3.9	3.7	2.7	2.1
Other animal products	1.1	0.8	0.9	0.9

Source: Own calculation based on National statistical institute [17].

The decrease in fruits is also significant and marks the serious structural imbalances in Bulgarian agriculture. The sectors with high value added are experiencing severe problems after the accession to the EU. The payments under Pillar 1 cover only 4-5% of their costs therefore do not contribute for the increase of efficiency and competitiveness in these sectors. The land owned by small farmers is highly fragmented therefore producers have some difficulties applying for support.

Third, the share of all livestock sectors and products in gross agricultural production decreases. The sheep and goats' production is very low and is in crisis. The comparative advantages of the mountainous and semi-mountainous areas related to pastures failed to compensate for the degraded material and technical infrastructure. The financial support in these sectors is limited because of size of farms. In the sectors of cattle, poultry and pigs the relative share in gross production remains stable but is much lower comparing to the

extensive sectors. The most substantial decline is observed in the milk production.

The negative trends in livestock that started during period of transition are continuing after the accession to the EU. Despite the opportunities of CAP funds in several directions, these sectors face significant challenges in meeting EU requirements for production quality. The unfavorable changes and transformations in all livestock sectors have negative impact on Bulgarian agriculture and are limiting the opportunities for rational production structure and optimal concentration. The share of the main agricultural subsectors in gross production is illustrated on Figure 2.

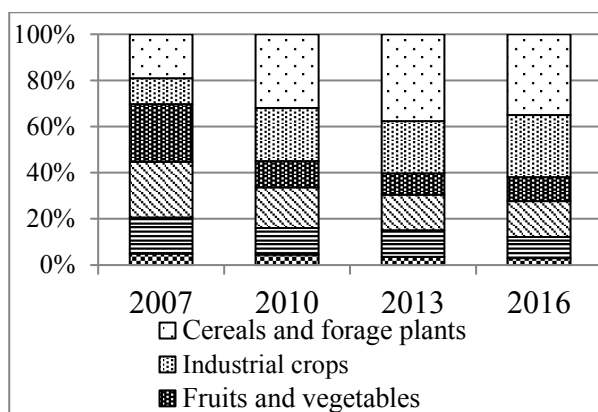


Fig. 2. Share of the main agricultural subsectors in gross production (2007-2016)
 Source: National statistical institute [17]

The predominant development of crop specialization after the accession to the Community could be explained by the opportunities for these holdings provided by the direct payments support. Furthermore, the major share of funds under the Rural Development Program (RDP) is going to big grain producers and increasing significantly their competitiveness. On the other hand, livestock farms have weak access to the financial support. Therefore they could not compete with the others highly subsidized EU breeders. The problems in livestock are more serious than in crops sectors. As a result, these structural changes caused imbalance in agriculture and there is overconcentration and arising role of extensive sectors.

Concentration and economic size

The changes in structure of agricultural holdings are presented in table 2. The main

trends are outlined by analyzing two important indicators- number of farms and standard output. Farms are divided into five groups according to the EUROSTAT methodology [4]. Based on the analysis of the Farm structure survey (FSS) some important conclusions could be drawn.

First, the data indicate that after the accession to the EU in Bulgaria is established highly dualistic agricultural structure - 75% of the holdings are very small and generated less than 9% of the standard output. By contrast, only 3% of the farms (the biggest grain producers in the country) accumulated nearly 75% of the standard output. The polarization and overconcentration in Bulgarian farm structure that began in the accession period is increasing significantly after 2007.

According to the latest FSS in 2013, almost 4.5 million holdings in the Community are with economic size less than 2,000 EUR and around 3 million farms have standard output between 2,000-8,000 EUR. These two major groups represent more than 69 % of all agricultural holdings in the EU. In Bulgaria the relative share of these very small farms is nearly 75%, which is higher than EU-average. By contrast, 680,000 farms in the Community are with economic size more than EUR 100,000. These agricultural structures represent more than 6% of holdings in 2013. In Bulgaria the share of these farms is considerably lower (around 3%). The comparison with EU-28 shows that Bulgarian agricultural structure is more concentrated and misbalanced than EU-average.

In the EU there are serious differences among Member-States associated with the economic size of the agricultural households in 2013. In Belgium, Luxemburg and Netherlands around 50% of the agricultural holdings accumulate standard output more than EUR 100,000. On the other side, in 9 Member-States farms with economic size less than 2,000 EUR are the most common structures. The highest share of these households is located in Romania (68.7%) and Hungary (67.6%). In Bulgaria the data shows that this group presents more than half of all farms.

Second, the average size of farms in Bulgaria increases after the accession to EU. While the

share of holdings with standard output in a range less than 2,000 and 8,000 EUR is decreasing, the economic size of very large farms increases substantially. Medium-sized farms are more than 5% of all holdings, but the growth in their economic size is not significant. For the period 2005-2013 the economic size of the holding in the Community expanded by almost 56%. The biggest farms are registered in the Netherlands (EUR 303,800), followed by Denmark,

Belgium, the Czech Republic, Germany and Luxembourg. On the other side, in 10 Member-States the average standard output is below EUR 15,000. Bulgaria is in this group of Member-states with average economic size -EUR 13,112. The lowest average farm size is registered in Romania (standard output of EUR 3,300). Another interesting comparison between Bulgaria and other Member states shows the misbalanced structure of Bulgarian agriculture.

Table 2. Concentration of agricultural holdings in Bulgaria

Type of holdings	Share in number of holdings (%)				Share in standard output (%)			
	2003	2007	2010	2013	2003	2007	2010	2013
Very small	92.45	89.10	84.90	75.40	33.82	18.70	15.60	8.41
Small	6.24	8.62	9.40	16.29	12.49	11.10	11.30	9.25
Medium-sized farms	0.86	1.60	2.78	5.15	8.84	9.73	12.80	10.59
Large farms	0.42	0.58	2.48	2.21	26.22	20.66	18.25	18.36
Very large	0.06	0.11	0.44	0.96	18.64	39.81	42.05	53.38

Source: Own calculations based on EUROSTAT and Ministry of Agriculture, food and forestry [6, 10, 11,12,13,14].

According to EUROSTAT, in Luxembourg, Belgium and France one fifth of standard output is produced by approximately the smallest two thirds of all farms [4]. By contrast in Slovakia 96% of all holdings are with economic size between less than 2,000 – 8,000 EUR and accumulated only 20% standard output in the country. Similar trends are registered in Hungary, Estonia, Bulgaria, the Czech Republic, Cyprus and Latvia.

A comparison between small and large farms shows that some of the biggest differences in farms distribution by economic size are registered in Hungary (2,360:1), Romania (1,286:1) and Latvia (1,007:1). In Bulgaria the ratio is 780:1.

The data and the comparison with other Member-States and EU average reveal the main structural problems in Bulgarian agriculture. The small farms in the country are the most common structures. They form higher than average for EU percentage of all agricultural households, while medium-sized farms are far from the average levels for the Community. Only the share of large farms is close to EU-28. Positive changes are observed in the average economic size, which is arising, but this trend is mainly caused by reduction in

the number of small agricultural holdings. The data shows that after EU membership the imbalances in the level of concentration are increasing. The main reasons are associated not only with the significant share of small households and increasing role of big farms, but also with the fact that medium-sized holdings are not important structures in Bulgarian agricultural sector.

CONCLUSIONS

Based on the analysis of the data the following conclusions could be drawn:

- (i) The importance of Bulgarian agriculture is decreasing after the accession to the EU
- (ii) There are two major groups of holdings, which play important role in Bulgarian agriculture – big profit optimizers (only 3% of all farms) that concentrate more than half of the standard output and small “survivors” that accumulated less than 9% of standard output, but represent more than 75% of all farms.
- (iii) Substantial differences are observed among Member-States. The survey indicates that Bulgarian agricultural sector has to overcome number of issues related to its competitiveness and efficiency.

(iv) The concept of Multi-speed Europe is very popular idea across EU, but in Bulgaria there is multi-speed agricultural structure and serious disparities among different subsectors on one side and among different farms and structures on the other side.

(v) The most important instrument of the CAP – Pillar I, which accounts for over 70% of CAP funds is ineffective not only in Bulgaria, but also in many other Member-States.

(vi) Measures under the RDP program in Bulgaria are not accessible for small farmers and causes decrease in their competitiveness. Also, some policy recommendations have been issued as presented below.

The research indicates that current CAP does not make best use of the resources and do not ensure the integration and convergences nor among Member-states, nor among agricultural holdings. In the context of the new programming period and the future of CAP after 2020 some recommendation could be made:

(1)The CAP in the new programming period needs serious revision and reforms. After 2020 direct payments should be systematically reduced. Funds should have better orientation and targeting.

(2)The CAP funds should be directed to the specific challenges as improving productivity, resource efficiency and to support farmers of providing specific environmental and other public goods.

(3)The financial support in Pillar I should have better and clear targeting.

(4) Serious increase in the redistributive effect of the payments is needed.

(5)It is highly inequitable major financial support to go to farms and farm businesses with substantial incomes and sizeable assets. The EU funds should be directed to small and medium-sized farms that need support, guidance and protection.

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