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## **STRUCTURAL DEVELOPMENT OF THE AGRICULTURAL SECTOR IN GREECE IN XXI CENTURY**

*PRZEMIANY STRUKTURALNE W ROLNICTWIE GRECJI W XXI WIEKU*

**Key words: European Union, Greece, agriculture, global financial crisis, European integration**

*Słowa kluczowe: Unia Europejska, Grecja, rolnictwo, globalny kryzys finansowy, integracja europejska*

**Abstract.** 30 years after the accession to European Union, and despite all the funding and efforts which have been undertaken during the recent years, Greek agriculture is still based on small – sized family-owned farms with low economic efficiency.

The position of this country is underprivileged due to its peripherality as well as topographic restrictions, which cause integration problems with the common market. In the whole country, small-scale and low-tech agriculture still prevails and suffers from a lack of many natural resources. The dominant traditional economy is not adapted to market conditions.

Currently Greek situation is even more critical due to problems with global financial crisis. Greek GDP per capita equals only about two-thirds of the most important euro-zone economies. Greek budget deficit exceeded 13.5% of national GDP and public debt has grown during the recent years, exceeding 115% of GDP in 2009 and is one of the highest in euro-zone.

During the last years, we have witnessed a spectacular decrease in the contribution of the agricultural sector to the Greek total employment and to total value added of the whole economy.

### **Introduction**

After the last two enlargements, in 2004 and 2007, over a half of the European Community population live in rural areas. Almost 90% of the EC territory is covered by this kind of area. This data shows that rural development is still important, and it highlights the significance of the Common Agriculture Policy aims set by the European Commission [Rural Development... 2009]. Agriculture still not only plays an important role for rural communities' standard of living, but it is also responsible for ties of cooperation between members of local communities. Important role of Agriculture can be still observed in Mediterranean region, which makes up a distinct area within the European Community. Majority of countries located in this area can be described as less developed economies with strong dependence on agricultural production. The position of those countries is somehow underprivileged due to their peripherality as well as topographic restrictions, which cause integration problems with the common market. In many of these areas, small-scale and low-tech agriculture still prevails and suffers from a lack of many natural resources. The dominant traditional economy is not adapted to market conditions.

The above description exactly matches also the Greek economic situation, which currently is critical. Greek GDP per capita equals only about two-thirds of the most important euro-zone economies. Almost since the accession, Greece has been one of the main beneficiaries of EU funds. But nowadays new accession countries receive the major part of structural aid. Between the year 2000 and 2007, Greek economy experienced high level of economic development. Average real GDP grew by more than 4.2% per year, partly due to investments related to European funds, and to infrastructural spending connected with the Olympic Games, and partly due to an increased availability of credit, which has sustained record levels of consumer spending. But the growth dropped to 2.0% in the year 2008.

The economy went into recession in 2009 and contracted by 2.0%, as a result of the global financial crisis. Due to the financial crisis, Greek government faced tightening credit conditions and growing budget deficit, generated by falling state revenues and increasing government expenditures. Greek budget deficit exceeded 13.5% of national GDP and thus violated the EU's Growth and Stability Pact budget deficit criteria, with set the upper limit of 3% GDP. Public debt, inflation, and

unemployment are also above the euro-zone average. Public debt has grown during the recent years, exceeding 115% of GDP in 2009 and is one of the highest in euro-zone [Provision of deficit... 2010].

Erosion of public finances in Greece determined rating agencies to downgrade Greece's international debt rating. New ratings have again led to increased financial instability. At the moment this Mediterranean country is under pressure from EU institutions to implement structural reforms, which should include: cutting the government spending, privatization of the public sector, reforming the labor market and pension systems. Parallel to this debate about economic strategy, Greece officially asked euro-zone countries and the International Monetary Fund for financial help, which is expected to be worth more than 45 bln EUR.

The current situation in Greek economy is strictly connected with condition of agriculture. After 30 years of accession and against all funds and efforts which have been undertaken during the recent years, Greek agriculture is still based on small-sized family-owned farms, characterized by low economic efficiency. As already mentioned, landform features cause the Greek agricultural sector to suffer from a deficit of natural resources. More than a half of the land cannot be cultivated because of poor quality soil or because it is covered by forests. In 2008 agricultural production accounted for 3.7 percent of GVA in current prices<sup>1</sup>. While agriculture is not a prosperous or profitable sector, Greece is still one of the most important producers in the European Community of some agricultural products such as tobacco or olives and olive oil.

### Methods and References

In this article, we will analyze the situation in Greece, one of Mediterranean countries. This country has been a part of the European Community for almost thirty years, but even today Greek economy cannot be described as a well developed one, and agriculture is still a crucial sector thereof. In this country, modernization of the primary sector is the highest priority.

The objective of the research is to present the current situation in Greek agriculture. Accession to the European Community, along with structural funds influx, have been the most important factors which determined positive changes in Greek agriculture over the last thirty years. European aid resulted in a considerable reduction of employment in the primary sector and created new jobs outside agriculture.

From the perspective of Central European countries, changes which took place are important, because the necessity of structural changes lies ahead of us. This paper focuses on changes at national level. Research is based on the analysis of reports prepared by the European Commission. The data we analyze here was collected or estimated by the National Statistics Institutes of Greece and Directorate-General for Agriculture. EUROSTAT and AMECO (annual macro-economic database of the European Commission's Directorate General for Economic and Financial Affairs) have also been used. Due to the different coverage of the national statistical studies, the total number of farms is not comparable between various European countries. This is why the following study focuses on holdings of at least one European Size Unit (ESU)<sup>2</sup>.

### Agricultural sector in Greece in XXI century

30 years after the accession, and despite all the funding and efforts which have been undertaken during the recent years, Greek agriculture is still based on small-sized family-owned farms, characterized by low economic efficiency.

Problems mentioned above are strictly connected to natural disadvantages. According to the report titled „Mountain areas in Europe. Analysis of mountain areas in EU member states, acceding and other European countries”, 78% of Greek territory can be defined as mountain area. The percentage of area covered by mountains is much higher than the percentage of the population living there. This situation highlights the fact that, even where mountains cover a large proportion of the country's territory, metropolitan centers are usually located in valleys, but still half of the Greek population inhabit the mountainous areas [Mountain areas... 2004].

<sup>1</sup> AMECO is the annual macro-economic database of the European Commission's Directorate General for Economic and Financial Affairs.

<sup>2</sup> For each activity on a farm a standard gross margin (SGM) is estimated, based on the area (or the number of heads) and a regional coefficient. The sum of such margins in a farm is its economic size, expressed in European Size Units (ESU). 1 ESU is a 1200-euro standard gross margin.

**Table 1. Employment by sectors in Greece in year 2000 and 2007**

	Employment in Greece			
	2000		2009	
	1000 persons	% of total employment	1000 persons	% of total employment
Agriculture, hunting, forestry and fishing	708.8	16.6	544.7	11.8
Total industry (excluding construction)	541.5	12.7	507.8	11.0
Construction	308.2	7.2	352.2	7.7
Transport, trade, hotels and restaurants services	1363.4	31.9	1503.2	32.7
Financial services	321.5	7.5	405.8	8.8
Government, health, education	1035.3	24.2	1286.8	28.0
Total	4278.7	100.0	4600.6	100.0

Source: Eurostat 2009, 2010 and own study.

**Table 2. Value added by activity in Greece (as percentage of total value added, 1981-2009)**

	Value added by activity in Greece [%]							
	1981	1986	1990	1995	2000	2005	2006	2007
Agriculture, hunting, forestry and fishing	11.0	10.1	9.0	8.9	6.6	5.1	4.1	3.8
Industry, including Energy	20.1	20.2	18.1	15.4	13.9	13.4	13.7	13.3
Construction	7.4	6.7	7.1	6.0	7.0	7.0	7.3	7.0
Transport, trade, hotels and restaurants	27.4	27.8	26.5	27.8	30.1	31.9	31.8	32.6
Financial services	15.2	14.2	16.7	20.3	20.6	19.0	19.3	19.4
Government, health, education, etc.	16.1	17.8	20.2	21.3	21.7	23.6	23.9	23.9

Source: Factbook 2009.

During the last years, we have witnessed a spectacular decrease in the contribution of the agricultural sector to the total employment (Tab. 1). In the year 2000 almost 17% of labour force was employed in the primary sector. By the year 2009, the share of employment in agriculture in the total employment in Greece has decreased by five percentage points, down to 11.8% of labour force.

The contributions of primary, secondary and tertiary activities to the total value added in Greece have changed very much over recent two decades (Tab. 2).

Especially the share of agriculture, fishing and forestry in total value added of the whole economy has decreased sharply, and yet in 2007, it still remained relatively large in comparison with most other European Community countries, and it accounted for nearly 4%. The share of manufacturing has also fallen, while services now account for well over 70% of total gross value added in this country.

In the year 2007, more than 860 150 thousand agricultural holdings were recorded in Greece. The number of holdings has increased compared with the year 2000 by 5.2% and in the year 2007 more than 82% had an economic size of at least 1 ESU (711 th.). All agricultural holdings in Greece occupied little less than 4.1 mln ha (ha) of utilized agricultural area (UAA), while holdings with economic size of 1 ESU or more occupied almost 4 mln ha of UAA (11.5% growth compared to the year 2000). Average physical farm size in Greece amounted to 4.7 ha (compared to 4.4 ha in the year 2000). In 2007, 76% farms had less than 5 ha and only 0,8% had more than 50 ha [Rural Development... 2006].

Again in 2007, Greek holdings with the economic size of 1 ESU, employed approximately 550 000 AWU (all holdings employed 568 710 AWU)<sup>3</sup>. More than 70% made use of less than one annual work unit, 22% made use of between 1 and 2, while only 7% made use of 2 and more AWUs. They had 2,61 mln livestock units<sup>4</sup> [Martins, Spendlingwimmer 2009].

<sup>3</sup> AWU (Annual Work Unit) corresponds to the work performed by one person employed on a full-time basis for one year within an agricultural holding. In Greece it is 2200 hours (275 working days of 8 working hours per day).

<sup>4</sup> Livestock unit (LSU) means a standard measurement unit that allows the aggregation of the various categories of livestock in order to enable them to be compared. A livestock unit is equivalent to a dairy cow. The number of animals is converted into LSU using a set of coefficients reflecting the feed requirements of the different animal categories.

Amongst all holdings with the economic size of 1 or more ESU, in the year 2007, only 2% produced for own consumption while 26% produced mainly for direct sales. Approximately 30% of all holdings specialized in the production of olives, 13% of farms focused on general field cropping, and 12% on mixed cropping. Each 10% farms produced various crops and livestock combined, as well as cereals, oil seed and protein crops.

Family labour force in Greece in 2007 accounted for 82% of the total labour force. Only 30% of sole workers were women. As in other European countries, the majority of workers are of advanced age. Just about 55% of them were 55 years of age or past it, and only 7.8% of all workers were younger than 35.

As previously mentioned, a great part of Greek territory can be described as a less favorable area due to the natural barriers. It also means that more than 78% of the agricultural area is situated within this kind of land. Low effectiveness of production in less favorable areas forces 23% of all farmers to look for another gainful activity [Rural development... 2009].

In 2007 the UAA in Greece accounted for 30.5% of the total land area; in addition, wooded areas on farm holdings accounted for a further 0.4% of the total land area. Arable land made up half of the UAA and permanent grassland one fifth, while land for permanent crops accounted for around 27% of the UAA. Among the arable crops, cereals occupied the biggest area (55%). The shares of industrial plants, forage plants and fallow land was significant [Europe in figures 2009].

There was a noticeable increase in the area used for barley (40%), which went from 2.7% of the UAA in 2000 to 3.8% in 2007. Also oats cultivation increased significantly in recent years. On the other hand, the area sown with durum wheat fell by 14%. The area used for durum wheat diminished from 16.4% (2000) to 12.5% (2007) of the total UAA of Greece. Industrial plants decreased by 25%, in particular tobacco plantations fell by 66%.

The total organic area in Greece (the fully converted area and area under conversion) continues to show an upward trend. The increase in area between 2007 and 2008 was 13.6% but between 2005 to 2007, the total organic area as a percentage of the total UAA in Greece recorded a slight decrease. The average area of organic holdings in 2007 was 7.1 ha [Rohner-Thielen 2010].

### **Rural Development Plan for Greece in current programming period 2007-2013**

Currently running European Union programming period 2007-2013 is the best opportunity to change the difficult situation of Greek agriculture. European funds provide a great opportunity for making progress in Greek agricultural competitiveness, for improving quality of the natural environment, and for developing the country's rural areas through financing support within the framework of the European Agricultural Fund for Rural Development (EARFD) [National Strategic... 2007]<sup>5</sup>.

The main objectives of Greek Rural Development Plan entirely correspond to the profile of the analyzed Mediterranean country, and focus on three crucial intervention objectives, aiming at:

- strengthening the competitiveness of the primary and food industry sector by improving the infrastructure and the conditions in which the enterprises operate as well as the promotion of entrepreneurship, solving the structural difficulties and restructuring the agricultural primary and secondary sectors will be of priority in this context,
- protection of the environment and enhancing biodiversity, sustainable use of natural resources and landscape conservation,
- improving the quality of life of the rural population and encouraging diversification of the rural economy mainly in the mountainous and less favored areas.

The overall funding of the 2007-2013 RDP will amount to 5.3 bln EUR and the share of the European Agricultural Fund for Rural Development in public expenditure will account for 73%.

<sup>5</sup> The National Strategic Rural Development Plan (NSRDP) 2007-2013 determines the priorities of Greece for the period 2007-2013. The essential rules governing rural development policy for the period 2007 to 2013, as well as the policy measures available to Member States and regions, are set out in the Council Regulation (EC) No. 1698/2005, which rules that the national strategy for rural development will be applied through the Rural Development Programme 2007-2013.

## Conclusions

Greek agricultural sector, despite the 30 years of EU membership, provides work for approximately 12% of total employment. The share of the primary sector in total value added of the whole economy has sharply decreased, but still remains relatively large in comparison with other euro-zone countries. The majority of agricultural land is situated in mountainous and disadvantaged regions, which makes costs of agricultural production very high. Moreover, landform features cause the agricultural sector in Greece to suffer from a lack of many natural resources. More than half of the land cannot be cultivated because of poor quality soil or because it is covered by forests. Even though for years Greece has been one of the biggest beneficiaries of European funds, and despite the efforts which have been undertaken during the recent years, these negative factors influence the current negative situation in the primary sector. And yet agriculture in this Mediterranean country is still based on small-sized family-owned farms, with their typical low economic efficiency. Even more surprisingly, the number of holdings in Greece has actually increased during the recent years.

From the Polish point of view, the influence of structural changes in Greek agriculture and the impact of the current financial crisis on trade in agricultural product between Poland and Greece is significant. There has been a deficit in agricultural balance of trade between Poland and Greece during the three year period before the crisis began (2005-2007), but since 2007 the first signs of trade surplus have appeared, and in 2008 the deficit changed into surplus.

In 2006, stable increase of exports and noticeable rise of imports led to 37% growth of trade deficit. Almost half of this change was due to a large increase of cereals import. Then, in 2007, the trade deficit was considerably reduced in size – it fell by 86%, due to an explosive rise of agricultural exports (which grew by 92%), as compared to only 10% increase of imports. The situation deteriorated further in 2008, when the trade deficit changed into surplus, in the major part due to the reduction in the import of tobacco products.

Poland is an important partner in Greek agricultural exports, and according to the latest data, our country stands as the fifteenth trade partner in the market of these commodities. In particular, the agricultural exports were 43% of Greek total exports in 2005, 39.5% in 2006, 34.6% in 2007 and 36.8% in 2008.

In terms of total trade with Greece, the balance has recently appeared to be positive and this trade surplus has a constant tendency to further increase. This positive development of the total trade balance is results from the increasing trend in exports over the last two years.

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## Streszczenie

*W artykule przedstawiono analizę przemian strukturalnych w rolnictwie Grecji w okresie członkostwa w Unii Europejskiej. Zwrócono uwagę na malejący udział tego sektora w greckiej ekonomii. Omówiono także kwestie związane z globalnym kryzysem finansowym.*

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