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# The process of structural changes in Iberian Peninsula agriculture

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#### Abstract

Portuguese and Spanish integration with the EU was a constructive step on the road to modern, well-developed economy. Last 30 years can be described as a success in changing structure of agriculture, but primary sector is still a crucial one in mention above countries and it's modernization seems to be a top priority for them. Especially in time of the current Global Financial Crisis. Poland and other member states from Central and Eastern Europe can learn much from the case of Spain and Portugal because their situation today is comparable to these countries situation 30 years ago. Similarly, Poland and it's neighbours has a huge amount of unsolved problems in primary sector and try to solve them with community structural aid. Large part of lands located in studied area is characterized by a low level of development and dependence ofproduction in the first sector. The rapid pace of growth limits a traditional employment structure in which agriculture plays a very important role. The results of investigation are presenting that last thirty years have brought positive changes manifested in evolution of employment and participation structure in Mediterranean countries. In spite of substantial dynamics of positive changes and the three decades passage during integration of the countries analysed, the situation is still complicated. The low level of economic development, structural problems, dramatic situation ofpublic finances and the labour market, resulting from the global financial crisis, cause that those countries, without the help of EU would face on edge of a precipice.

Keywords: agriculture, European Union, Portugal, regions, Spain

JEL Classification: R11, Q10, Q14

#### 1. Introduction

The article presents evolution of employment structure and production in Portuguese and Spanish agriculture for the last three decades. The countries with symbol 'NTS 1' in nomenclature of the European Union were analysed. Transformations in agriculture of the Mediterranean Sea region are interesting especially, because in those countries the integration process and development of the EU within the common market began with the structural metamorphosis in the first sector, which are being experienced by Poland currently. Those changes indicates the possible direction that will await the Polish agriculture during the next years.

The issues undertaken in the presented research from a global perspective is new. Earlier authors understood it from different perspectives, for example by using a reallocation model of economic labor resources between agriculture, manufacturing and services in Portugal (Restuccia 2006). On the basis of strategic concepts the role of agricultural production in developing economies was depicted (Vogel 1994). Also the problem of capital transfer was studied from agriculture to other Spanish economy sectors (Prados De La Escosura 2007).

countries, joined the group in the XXI century. In Poland, with special interest the changes which took place in this field are analysed in Mediterranean countries of Spain and Portugal. Investigating the situation of first 15 EU member states, it can be concluded that experiences of those countries can be used as a base for new Member States. The similarities arise not only from analogous agricultural problems of the Mediterranean countries in the first period, after the integration with EU during 80s of last century and

### 1 The research methodology

The changes occurring in the employment structure and value added participation of agriculture in the European Union Member States economy, evoke considerable interest among the

ours nowadays. It has a deeper character, which raises presumption that changes taking place in that area may provide for us a field of reflection. Mentioned similarities, next to the situation of agriculture, also apply to the specific conditions of post-war development, moving away from dictatorship and transition to democratic system, or close economic problems. The costs that those countries bore on the way to adapt requirements of the common market and the benefits achieved during the last three decades are considered. Analysis of changes taking place in the member states of group is important especially today, at time of the biggest economic recession. Dramatic economic and social situation in which are countries of the Iberian Peninsula, suggests that structural reforms undertaken in recent years had only temporary character and did not prevent effects of the economic crisis.

The aim of article is to present an aspect of the structural changes that have taken place in Spain and Portugal during the past three decades - the evolution of employment and the share of agriculture in national product.

The study is based on the national publications and reports of the European Commission. In this paper the statistical data from Eurostat, the Spanish and the Portuguese Institute of Statistics (INE), the OECD and the ILO were used. Chronological range covers the years 1981-2013.

#### 3. Results and Discussion

One of the important information resource about the changes that take place over the years in agriculture is analysis of the employment evolution structure and primary sector participation in the product value produced in country. The development of domestic employment and production structure is an important source of information about both the socio - economic situation as well as the dynamics and direction in which country follows. In the 70s, before the integration of three analysed countries with the EU has shown a tendency of changes in employment level with various sectors of the economy, as well as their importance in the overall economy. This process has accelerated rapidly in order to the necessity of adapting those economies to increasing competition on a global scale, the conditions of common market functioning or obtaining structural funds.

Tablet: The sectoral structure of S	panish GDP during t	he 1981 - 2013 years (%)

Specification	1981	1986	1990	1995	2000	2005	2010	2013
Agriculture, hunting, forestry, fishing	6,3	5,9	5,5	4,5	4,4	3,2	2,7	2,6
Services	57,9	59,8	61,4	66,1	66,4	67,1	71,6	72,1
Industry	28,5	27,8	24,4	21,9	20,9	18,2	16,6	17,5
Construction	7,3	6,4	8,6	7,5	8,3	11,5	10,1	7,8

1) As a percentage of gross value added, generated in the economy

Source: OECD, OECD Factbook 2008: Economic, Environmental and Social Statistics, OECD Publishing, 2008 Paris, OECD, OECD Factbook 2015-2016: Economic, Environmental and Social Statistics, OECD Publishing, 2016 Paris, International Labour Organization, ILOSTAT, EUROSTAT, European Commission, Directorate

General for Economic and Financial Affairs, Statistical Annex of European Economy, Autumn 2015, European Commission's DG ECFIN database AMECO, Eurostat, own calculations.

Back in 1981, the part of primary sector in produced national income of Spain was high at over 6%. This agriculture share degree in the manufactured income differs from levels seen in the rest of group. As a result of dynamic changes occurring in Spanish economy such as the growing competitiveness and investment attractiveness the meaning of agricultural production steadily decreased (OECD 2009). Finally, by 2013 the share of the first sector decreased by half to 2.6%. Not only agriculture has undergone structural changes of pressure. The second sector which did not avoid the necessity of restructuring and in the effect decline in GDP, was industry. The share of this sector in generated product has decreased over the last twenty years by almost half, reaching 17.5% in 2013 (Table 1).

It should be noted that a crack of speculative bubble in a property market which is the direct cause of the economic recession in the country reduced the construction share level in the manufactured product of Spain, which since the middle of the first twenty-first decade century functioned as flywheel of the Spanish economy.

Parallel to decrease in part of agriculture and industry in generated product of Spain, the importance of the services sector was growing. This trend, which is characteristic for fastgrowing countries confirms the positive changes that have taken place in the economy of Spain since the middle 80s.

Table 2: The sectoral structure of employment in Spain during the 1981 - 2013 years (%)

Specification	1981	1986	1990	1995	2000	2005	2010	2013
Agriculture, hunting, forestry, fishing	18,8	18,2	11,7	9,2	6,6	5,3	4,3	4,3
Services	46,0	50,3	55,1	60,7	62,4	62,3	72,6	75,9
Industry + construction	35.2	31.5	33.1	30.0	31.0	28.5	23.1	19.8

Source: OECD, OECD Factbook 2008: Economic, Environmental and Social Statistics, OECD Publishing, 2008 Paris, OECD, OECD Factbook 2015-2016: Economic, Environmental and Social Statistics, OECD Publishing, 2016 Paris, International Labour Organization, ILOSTAT, EUROSTAT, European Commission, Directorate General for Economic and Financial Affairs, Statistical Annex of European Economy, Autumn 2015, European Commission's DG ECFIN database AMECO, Eurostat, International Labour Organization, KILM 9th Edition, 2015, own calculations.

Three decades of functioning within the European economy brought significant changes in employment structure. Spain, acceding to the European Union in the mid-80s was marked by the traditional economic structure, typical for countries with a low level of development. During the last years, the amount of employment in individual sectors of economy came to a degree which can be observed in developed countries (Table 2). Along with a smaller share of the first sector in produced country's GDP, increasing labour productivity and technological advancement, the working interest has reduced rapidly (employment decreased from 18.8% in 1981 to 4.3% of the total working population in 2013). Similar changes were made also in the number of people working in industry and construction (from 35% to 19.8% of the workforce). However, according to the trends observed in most developed countries the employment in Spanish service sector has increased meaningfully, from 46% in 1986 to almost 76% in 2013. (Institututo Nacional de Estadistica 2009).

About dynamics of changes in the Portuguese economy, it is evidenced by the evolution of the sectoral structure of GDP last quarter-century (Table 3). Undoubtedly, the sector in which changes were the biggest was agriculture. At the beginning of eighties the part of first sector in national income has represented more than 16%, while to 2013 it decreased more than fivefold to 2.4% for the whole economy. Also important changes occurred in the service sector. Its share in GDP, produced in Portugal, has increased over the last thirty years by 15.5 percentage points, reaching in 2013 the value of 74.4%. On the other hand the changes taking place in different two sectors - industry and construction - were, as in other developing countries much milder.

Table 3: The sectoral structure of Portuguese GDP during the years 1981 - 2013 years (%)

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Specification		1981	1986	1990	1995	2000	2005	2010	2013
Agriculture, l forestry, fishing	hunting,	16,0	14,1	8,3	5,5	3,6	2,5	2,4	2,4
Services		59,1	59,6	65,4	65,7	69,2	73,1	74,6	74,4
Industry		21,3	22,6	21,4	22,4	19,5	18,0	17,0	18,9
Construction	C	6,4	5,0	5,5	6,5	7,8	6,5	6,0	4,3

1) As a percentage of gross value added, generated in the economy

Source: INE, Anuario Estatistica de Portugal, Lisboa 1982, 1988, 1992, 1997, 2003, INE, Estatisticas do Emprego 2008, Lisboa, 4§ trimestre de 2008, OECD, OECD Factbook 2010: Economic, Environmental and Social Statistics, OECD Publishing 2010, OECD, OECD Factbook 2015-2016: Economic, Environmental and Social Statistics, OECD Publishing 2016, INE, Anuario Estatistica de Portugal, Lisboa 1982, 1988, 1992, 1997, 2003, INE, Estatisticas do Emprego 2008, Lisboa, 4§ trimestre de 2008, own calculations.

Along with changes in the sectoral structure of the Portuguese economy, the significant changes in employment structure have been shown for last few years. It should be added that despite more than 25 years of functioning within the common market, the sectoral structure of employment in Portugal is deviating from levels that can be observed in Western Europe. It is true that the employment in agricultural sector had been reduced with over 26% in 1981 to 10.2% of the total working population in 2013 (Table 4). However, it exceeds the analogous ratios observed in most euro area countries. Portugal in spite of nearly three decades in the EU is still poorly developed country. As a result of limited structural reforms, peripherial location and the considerable role that play there traditional industry, Portugal with Greece is the least developed country among of first 15 EU members.

Table 4: The sectoral structure of employment in Portugal, during the 1981 - 2013 years (%)

Specification Specification	1981	1986	1990	1995	2000	2005	2010	2013
Agriculture, hunting, forestry, fishing	26,1	21,9	17,8	12,2	12,9	11,6	10,9	10,2
Services	37,4	44	47,2	56,5	53	57,8	61,4	63,1
Industry + construction	36.5	34 1	34 9	31.3	34.1	30.5	27.7	23.7

Source: INE, Anuario Estatistica de Portugal, Lisboa 1982, 1988, 1992, 1997, 2003, INE, Estatisticas do Emprego 2008, Lisboa, 4§ trimestre de 2008, OECD, OECD Factbook 2010: Economic, Environmental and Social Statistics, OECD Publishing 2010, OECD, OECD Factbook 2015-2016: Economic, Environmental and Social Statistics, OECD Publishing 2016, INE, Anuario Estatistica de Portugal, Lisboa 1982, 1988, 1992, 1997, 2003, INE, Estatisticas do Emprego 2008, Lisboa, 4§ trimestre de 2008, International Labour Organization, KILM 9th Edition, 2015, own calculations.

Between 1981 and 2013 the number of people working in industry and construction were decreased relevantly (with 36.5% to 23.7% of the workforce). According to trends observed in those countries that are moving towards with reduction of the development gaps separating them from the economies of Western Europe, the employment increased in the service sector to the greatest extent. It can be said that this growth was impressive because it was 24 percentage points (from 37.4% in 1986 to 63.1% in 2013). However, the level of employment achieved in 2013 of the services sector, forming above 63% was considerably lower than the degree seen in most European Union countries. Nevertheless, it is expected that next years will bring a further increase of employment in services, especially towards fact that traditional sectors of economy, which for years were forming the basis of the Portuguese economy are against the fierce competition of products from Asian countries today and pressure connected with the global financial crisis. Growing competition will lead to a reduction of employment in footwear and textile industries. People, losing the employment, will most likely find work in developing services.

#### 4. Conclusions

The integration of Spain and Portugal with the EU structures in 1986 forced the need to adapt the economies of these countries to operating in a much more competitive environment. The presence at the common market and financial assistance under the Common Agricultural Policy and structural policies, has allowed those countries go through this process painlessly. Financial support accelerated economic development of Spain and Portugal. The need of adaptation economy to a highly competitive single market has led to structural changes in local agriculture. However, despite the huge influx of funds, a large part of lands located near Mediterranean Sea is characterized by a low level of development and dependence of production in the first sector. The rapid pace of growth limits a traditional employment structure in which agriculture plays a very important role. The dramatic consequences of current financial crisis cause that in analyzed countries, employment in agriculture is actually increasing during recent years. People losing the jobs in other sectors return again to rural areas, trying to find work in agricultural production.

It should be emphasized that in all investigated countries the last thirty years have brought positive changes manifested in evolution of employment and participation structure. Since the early 80s of the last century in Spain and Portugal the employment in agriculture has reduced markedly, while it increased in

the services sector. The decline in first sector is accompanied by an increase in efficiency of agricultural production.

In spite of substantial dynamics of positive changes and the three decades passage during integration of the countries analyzed, the situation is still complicated. The low level of economic development, structural problems, dramatic situation of public finances and the labour market, resulting from the global financial crisis, cause that those countries, without the help of EU would face on edge of a precipice. Meanwhile, the last three of EU enlargements to the countries of Central and Eastern Europe brought shift in focus on supporting the development of the new Member States. Studied in the article states are still heavily dependent on agricultural production. Long distance from the most important economic markets creates enormous barriers for use of endogenous potential situated in local communities.

Before the way Spain and Portugal had gone through in the 80s and 90s, stands today the Central European agriculture. Likewise, as analyzed in the article countries, the states in this part of Europe joined the EU with a number of first sector unresolved problems.

Furthermore they hit on period of the greatest economic crisis, which in recent decades affected the Western world. The next few years should answer the question whether the structural changes in agriculture will bring those countries a dynamic economic growth, despite the global perturbations that make these changes even more complicated.

## References

- [1] Anuario Estatistica de Portugal. (1982, 1988, 1992, 1997, 2003). MA: Institute Nacional de Estatistica.
- [2] European Commission. (2007). *The Importance and Contribution of the Agri-Food Sector to the Sustainable Development of Rural Areas* (No. TV D(2007) (DEV-RU) 27295). Directorate-General For Agriculture And Rural Development Brussels 2007:

  Author. Retrieved from <a href="http://ec.europa.eu/agriculture/rural-area-economics/more-reports/pdf/agri-food-sector\_en.pdf">http://ec.europa.eu/agriculture/rural-area-economics/more-reports/pdf/agri-food-sector\_en.pdf</a>
- [3] European Commission. (2011). *Europe in figures, Eurostat yearbook 2011* (No. KS-CD-11-001-EN-C). Publications Office of the European Union: Author. Retrieved from http://ec.europa.eu/eurostat/documents/32174
- [4] 94/5729317/KS-CD-11-001-EN.PDF/2b62ee78-6f91-4341-9098-1f815ff42536?version=1.0
- [5] European Commission. (2015). Statistical Annex of European Economy. Directorate General for Economic and Financial Affairs: Author. Retrieved from http://ec.europa.eu/economy\_finance/publications/eeip/pdf/statistical\_
- [6] annex\_ip011\_en.pdf
- [7] INE. (2008). Estatisticas do Emprego (No. 4§ trimestre de 2008). Institute Nacional de Estatistica: Author.

  Retrieved from http://www.inr.pt/download.php?filename=Estat%26iacute%3Bstica+do+Emprego%2C+4%26or
- [8] dm%3B+trimestre+2008&file=%2Fuploads%2Fdocs%2Finfestatistica%2FEstatisticasEmprego.pdf
- [9] INE. (2009). Anuario estadistico de Espaha (No. 126-10-100-0). Institututo Nacional de Estadistica: Author. Retrieved from http://www.mterior.gob.es/documents/642317/1204854/Anuario+estad%C3%ADstico+del+Mini
- [10] sterio+del+Interior+de+2009.pdf/fbec9f09-165a-4836-8c53-aec26c3eea23
- [11] Key Indicators of the Labour Market (9th ed.). (2015). MA: International Labour Organization.
- [12] OECD. (2009). *The Role of Agriculture and Farm Household Diversification in the Rural Economy of Spain*. OECD Trade And Agriculture Directorate: Author. Retrieved from http://www.oecd.org/agriculture/agricultural-policies/43245602.pdf
- [13] OECD. (2010). *OECD Factbook 2010: Economic, Environmental and Social Statistics* (No. 10.1787/factbook-2010-en). OECD Publishing: Author. Retrieved from http://www.oecd-ilibrary.org/economics/oecd-factbook-2010 factbook-2010-en
- [14] OECD. (2011). *OECD Factbook 2011-2012: Economic, Environmental and Social Statistics* (No. 10.1787/factbook-2011-en). OECD Publishing: Author. Retrieved from http://www.oecd-ilibrary.org/economics/oecd-factbook-2011-2012\_factbook-2011-en
- [15] OECD. (2016). *OECD Factbook 2015-2016: Economic, Environmental and Social Statistics* (No. 10.1787/factbook-2015-en). OECD Publishing: Author. Retrieved from http://www.oecd-ilibrary.org/economics/oecd-factbook\_18147364