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Analysis of the food and beverage industry in Greece (2009-2017)

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Abstract

The Greek domestic food industry plays a fundamental role in the Greek processing industry and the Greek economy in general. The food industry steadily is one of the most important sectors of the primary sector of the Greek economy, and one of the driving forces behind Greek processing; in fact, developments in it affect, to a significant extent, Greek production as a whole. The present paper examines the course and position of the food industry in the decade 2009-2017. The study of this particular decade presents particular interest, considering that it encompasses the period of economic crisis. Other findings and conclusions that will be drawn reveal the behaviour of the above sector, its potential and any weaknesses or opportunities. The comparative analysis to the respective sector in the European Union shows that there is no significant difference. The vital role of the sector of food processing and its contribution to the European economy is obvious. The food industry is one of the biggest segments of the processing sector in the European Union, steadily emerging as one of the top sectors compared to other important sectors of the European economy, such as the automotive industry, chemicals, industrial machinery and metal products. The data of sub-sector classification suggest that the Greek food sector consists mainly of traditional sectors, which, basically, do not contribute to an increase in production added value or to the much needed - for Greek economy - extroversion. This paper shows that there is room for further improvement in the competitiveness of the food sector. Improving Greek food sector competitiveness will stem from supporting its human resources and their qualifications, knowledge, experience and skills, as well as the nature and degree of their specialisation. Furthermore, more efficient coordination and wider cooperation between sector representatives can contribute towards improved effectiveness and efficiency in the efforts to promote Greek products, as well as towards appropriate choices of strategies and stability in the

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implementation of long-term strategic planning. Generation of added value and increased extroversion rely, to a great extent, on the promotion of Greek products through appropriate, well-planned channels, quality. differentiation, and support of the standard of Greek / Mediterranean cuisine. The sector is lagging far behind in terms of the above, this being mainly due to the implementation of isolated decisions-moves, which are not part of a wider, long-term plan. Finally, the analysis of the figures examined shows that the Greek food industry - despite its structural weaknesses - is a dynamic, competitive and extrovert sector, with important investments and business activity, in Greece, the Balkans and all around Europe. The food industry has maintained, in all these years, even during the prolonged economic recession in Greece, its key role, having proven that it meets the conditions for remaining a basic engine of development. The key issues as regards the role of the Greek domestic food industry are related to extroversion, the Greek quality of the products, the Greek brand name and an organised promotion of Greek products.

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Keywords: Agricultural Markets and Marketing, Agricultural Trade, Food Trade, Market Structure, International Trade.

1 Introduction

The Greek domestic food and beverage industry plays a fundamental role in the Greek processing industry and the Greek economy in general. The food and beverage industry steadily is one of the most important sectors of the primary sector of the Greek economy, and one of the driving forces behind Greek processing; in fact, developments in it affect, to a significant extent, Greek production as a whole. The present paper examines the course and position of the food and beverage industry in the decade 2009-2017. The study of this particular decade presents particular interest, considering that it encompasses the period of economic crisis. Other findings and conclusions that will be drawn reveal the behaviour of the above sector, its potential and any weaknesses or opportunities.

The following main structural figures will be analysed in this paper: number of businesses, number of workers, production value, turnover and trade balance formation. Eurostat is the source of this data.

All studies conclude that, in the period of the economic crisis, Greek businesses utilised the dynamic course of international trade. However, the results are not uniform for all products. Food is categorised as "highly competitive", which strengthens its position in the Greek economy and creates conditions for further growth.

Overview

The Food and Beverage industry is one of the most important sectors of the Greek economy. More than one in five Greek industries are involved in the production of food and beverages. The industry is literally the driving force of Greek processing, while developments within the sector determine, to a great extent, the image and the course of Greek industry as a whole.

The Food and Beverages Industry - within the European Union - is divided in nine main product sub-sectors. They are the following:

- Meat and meat products
- Processed and preserved fish and fish products
- Processed and preserved fruits and vegetables
- Animal and vegetable oils and fats
- Dairy products
- Flour-mill products (cereals)
- Processed fodder
- Bakery products, snacks, sweetmeats, pasta
- Beverages

Four of the above sectors stand out in terms of economic importance. They are the following:

- Bakery products, snacks, sweetmeats, pasta
- Meat and meat products
- Beverages
- Dairy products

The above sub-sectors account, in total, for approximately 77% of total sales and 84% of the total number of employees in the European Food and Beverage industry.

The Food and Beverage sector in Greece covers the primary and vital needs of consumers, while, at the same time, it directly supports the traditional Greek production sectors of agriculture, stockbreeding, tourism and trade. The production of the Greek Food and Beverage sector follows the trends of the respective European industry, as it is influenced by all the parameters that are decisive for the European industry, such as labelling, consumer education, environmental protection and safety awareness, as well as by increases in the price of basic raw material.

Number of businesses

Analysis of the data in Table 1 shows that, since 2017, the domestic Food Industry has been covering 26.4% <u>of total businesses</u> of the Greek processing sector, ranking first among the other processing sectors, followed by metal products (14.3%) and apparel (7.2%). It is also observed that during the decade considered, the businesses in the sector presented a decrease of 6.20 in the case of Food and 12.90 in the case of beverages. When it comes to food, seeing as it includes essentials, income elasticity of demand is more inelastic compared to beverages, which consumers perceive more as luxury products. Finally, the Food & Beverages sector is more resistant than the whole of the Processing sector, which presents 32% decrease.

Table 1: Number of businesses

	2009	2009	2017	2017	Change
Food Industry	15,769	18.51%	14,595	25.04%	-7.44%
Beverage industry	879	1.03%	765	1.31%	-12.90%
Total of processing sector	**85,189**	**100%**	**58,283**	**100%**	**-32%**

Important information is drawn from the analysis of the structure of the food industry, as presented in Table 2 below. According to Table 2, most businesses fall under the "Bakery products" sub-sector and represented 65.81% in year 2017 (9.605 enterprises). Moreover, the number of businesses in this specific sub-sector has decreased by 4.1% (411 enterprises), a percentage lower than that of the total sector (-7.44%). A typical feature of the industry is the existence of many small, family-run businesses. The industry owes its resilience to the small size and employment of family capital, as well as to the fact that it produces essential goods. "Vegetable-animal fats" is an important sub-sector, in which significant decrease (28%) is noted. The industry consists of medium-sized companies with intense competition both between them and by foreign companies. The only sub-sectors that shows increase are “Dairy products” and “Processed fodder”, which increased by 1.3% and 3.7%, respectively.

Table 2: Number of businesses per sub-sector of the food industry

	2009	2009	2017	2017	Change
Meat	523	3.31%	465	3.18%	-11.0%
Fish	84	0.53%	80	0.54%	-5.0%
Fruit - Vegetables	669	4.24%	605	4.14%	-9.6%
Vegetable - animal fats	2,022	12.82%	1,456	9.97%	-28%
Dairy products	863	5.47%	874	5.98%	+1.3%
Floor mill products	332	2.10%	306	2.09%	-7.8%
Processed fodder	215	1.36%	223	1.52%	+3.7%
Bakery products, etc.	10,016	63.51%	9,605	65.81%	-4.1%
Other nutrition products	1,045	6.62%	981	6.72%	-6.1%
Total	**15,769**	**100%**	**14,595**	**100%**	**-7.44%**

Number of workers

The Food and Beverage sector is the biggest employer in Greek domestic processing, as it employs 36.3% of all employees, compared to 6.1% in the Metal products and 5.9% in the Apparel sector. During the decade considered, the total Processing sector in Greece presented 36.3% decrease in the number of employees, while the Food sector showed an increase of 8.25%. The Beverage sector was also resistant the downward trend in the number of employees, compared to the country total (-22.6%). The increased export orientation of Greek food processing businesses played an important role in the increase of employment in the Food sector.

Table 3: Number of workers (000)

Branch	2009		2017		Change
Food	108.6	19.9%	117.1	33.5%	+7.77%
Beverages	11.5	2.1%	8.9	2.5%	-22.60%
Processing	548.0	100%	349.0	100%	-36.30%

Considering the development of employment per sub-sector, presented in Table 4, we find that the largest number of employees is employed in the sub-sector "Bakery products", followed by "Fruits - Vegetables", "Dairy products" and "Other nutrition products". The highest increase in employment is observed in the sub-sectors "Fish", "Fruits - Vegetables" and "Flour-mill products". Increase is due to the intense export activity in these particular sectors, but also to the limited competition by imported products.

Table 4: Evolution of employment per sub-sector of the food industry (000)

	2009	**2017**	**Change**
Meat	6,752	7,183	6.3%
Fish	1,029	4,959	381.9%
Fruit - Vegetables	8,799	16,022	82.1%
Vegetable - animal fats	4,849	4,055	-16.4%
Dairy products	14,576	11,335	-22.2%
Floor mill products	2,759	3,601	30.5%
Processed fodder	2,610	2,565	-1.7%
Bakery products, etc.	51,651	56,901	10.2%
Other nutrition products	15,648	10,498	-32.9%
Total	108,673	117,119	7.77%

Production value

The presence of the sector is also of fundamental importance in purely economic terms, since it ranks among the top branches of processing, with the production value reaching 26.7% of the total of the processing sector. Analysing Table 5, below, it is observed that the Food sector is resilient, as opposed to the significant decrease by 22.9 and 24.5 noted in the sectors of Beverages and total processing, respectively.

Table 5: Production value

	2009	2017	Change
Food	10,156	10,283	1.25%
Beverages	2,101	1,620	-22.90%
Processing	57,547	43,463	-24.50%

The evolution of production value per sub-sector of the Food Industry is analysed below. Table 6 lists the Production Value Data of each sub-sector, for the 10-year period considered.

Table 6: Production value per sub-sector of the food industry

	2009	2017	Change
Meat	972	1,352	39.10%
Fish	147	145	-1.4%
Fruit - Vegetables	1,395	1,464	5.0%
Vegetable - animal fats	760	629	-17.2%
Dairy products	2,495	1,928	-22.7%
Floor mill products	558	609	9.1%
Processed fodder	407	505	24.1%
Bakery products, etc.	2,090	2,069	-1.0%
Other nutrition products	1,262	1,389	10.0%

In detail, as regards the Food Industry, it is the “Meat” sector that presents the highest increase in Production Value; it includes meat processing and preservation, and manufacture of meat products, which increased by 39.10% , followed by the "Processed fodder" sector which increased by 24.10%. Increase in Production Value in 2017, compared to 2009, is also observed in the sectors “Flour mill products” by 9.10%, “Other nutrition products” by 10.00%, and “Fruits - Vegetables”, which includes the processing and preservation of fruits and vegetables, by 5.00%. On the other hand, Production Value decreased by 22.70% in the sector of “Dairy products”, and by 17.20% in the sector of "Vegetable - animal fats". Furthermore, marginal decrease is noted in the “Fish” sector, which includes processing and preservation of fish, crustaceans and molluscs, which decreased by 1.40%, and the “Bakery products” sector which decreased by 1.00%.

It is obvious that, in the 2009-2017 period, in the midst of economic crisis in Greece, Production Value in the Processing sector decreased by approximately 24.50% compared to its share prior to 2009, which shows that it is greatly affected by the overall climate in economy. However, although the Food Industry seems to be affected by the crisis as well, at the end of 2017 it was able to improve its Production Value, though marginally, demonstrating its potential. More specifically, this increase is significantly driven by the Meat and Fodder sub-sectors. On the contrary, in the Beverage Industry, though Production Value has been affected more by the economic crisis, it still showed some signs of recovery in 2017.

Turnover

The sector ranks first in terms of turnover (almost 25.2%, followed by Coke and refinery products with 24.8%).

Table 7: Turnover - Turnover Cycle Index

	2009	2017	Change
Greece			
Food industry	103.4	90.1	-12.8%
Total of processing sector	93.5	84.7	-9.4%
Europe			
Food industry	95.8	116.4	21.5%
Total of processing sector	90.8	113	24.4%

Table 8: Turnover - Average annual turnover index change rate

	2000-2008	2009-2017
Food Industry	5.3%	-2.2%
Beverage industry	4.4%	-3.9%
Total of processing sector	5.2%	-3.7%

Trade Balance

A structural feature of the agricultural sector in Greece is the negative trade balance, which though positive in 1981 (a year considered a landmark, as it was the year of full accession of Greece to the European Economic Community) it then turned into negative and kept deteriorating. This deterioration ceased at the time of the economic crisis. Of course, the unfavourable change in the trade balance of agricultural products is due to many factors. The main factor is that the agricultural economy of Greece was basically founded on support policies in favour of agricultural income and agricultural product prices. This lead to a neutralisation of those forces, which would have, otherwise, contributed to the adaptation of agricultural production to market demands (new products, new varieties, new cultivation methods, etc.). The second important factor is the structural characteristics-problems that the Greek agricultural sector presents. The most important of them are: the small average area (5 hectares) of farms, the fragmentation of farms, the advanced age of farmers, and the low educational level of farmers. All these structural characteristics-problems hinder mobilisation, especially of the productive factors in the agricultural sector. This leads to high production costs and low competitiveness of agricultural production. Moreover, the effects of structural problems also function, to a great extent, as an obstacle to their limitation. Finally, a third important factor is the lack of a specific and clear national program for the agricultural sector, with the active, substantial and disinterested participation of all stakeholders (State, producers, cooperatives, scientists).

It has been observed that intensification of the competition due to the free importation of agricultural products from member-states of the European Community (EC) to the Greek market, after the integration, combined to the lack of investment and the continuous weakening of modernization efforts, during the 1980s, led to stagnation in agricultural production. Of course, one would expect that the liberalization of trade between Greece and the European Community (EC) could potentially prove to be more beneficial for Greece, at least as far as agricultural products are concerned. (Maravegias 1992).

The deterioration of the negative trade balance continued even after the European Union expanded in 2004 and 2007.

A large part of the agricultural products of the new members-states -added in 2004 and 2007 - such as cereals, industrial products (tobacco, cotton), livestock, are in competition with Greek products This displaced part of the respective Greek products from both the markets of Europe and the domestic market (Petropoulos 2012).

There are, of course, agricultural product sectors that show a positive trade balance, with a strong export orientation. The negative point is that these sectors were not placed within a development framework that would increase their potential.

Table 9: Trade balance in current prices (EUR 000)

	2009	2017	Change
Meat	-1,047,168	-1,256,257	19.9%
Fish	18,709	98,074	444.4%
Fruit - Vegetables	558,053	695,883	24.5%
Vegetable - animal fats	38,588	42,951	10.5%
Dairy products	-533,119	-404,597	-24.2%
Floor mill products	-4,486	-4,643	3.5%
Processed fodder	-354,825	-249,276	-29.6%
Bakery products, etc.			
Other nutrition products	-219,448	-154,964	-29.6%
TOTAL OF AGRICULTURAL PRODUCTS	**-3,043,506**	**-2,019,000**	**-33.6%**
TOTAL OF PRODUCTS	**-43,335,790**	**-17,774,000**	**-59.0%**

The above Table presents the trade balance per food industry category examined in this paper. The negative trade balance of all agricultural products shrunk significantly, by 33.6%. Two qualitative points can be drawn from the data in the Table. First, that the negative trade balance was limited in all sectors except "Meat", and, second, that all sectors showing a positive trade balance in 2009, not only remained positive in 2017, but also showed significant trade balance increase. The sectors which presented significant increase in the positive trade balance, but also a strong export orientation, are "Fish” and "Fruit - Vegetables".

2 Conclusions

The Food Industry in Greece is the largest employer in Processing, as it employs 33,6% of Processing employed in 2017, in fact showing an increase in the 2009-2017 period. It also had the largest number of businesses of all domestic Processing, with a share of 25% of total, in 2017, with most businesses falling within the "Bakery and Flour products". As expected, the evolution of the Food industry has a significant impact on the Greek Industry as a whole, as well as on the economy as whole. As regards the Beverage Industry, in 2017 it barely accounted for 1,3% of all businesses, while also declining as regards the number of businesses, in the midst of the crisis; it employs 8,9% of all employees in Processing. The analysis of the main indexes of the Food and Beverage Industry, presented this paper, is equally important. The contribution of the Food Industry to shaping the trade balance of Greece is also important. While the general characteristic of the trade balance of Greece is negative, with a continuing downward trend, the paper shows that the Food Industry contributes to curbing this deterioration. At the same time there are sub-sectors showing strong competitiveness and export penetration.

Considering the rapid developments and major changes occurring either on the occasion of, or as a result of, the economic crisis that is plaguing all of Europe, the Food Industry is called upon to take action and respond to a number of challenges. These challenges are divided into two groups. The first group includes challenges affecting the Food industry on a European Union level, and the second group includes challenges that Greek food businesses are faced with. The first set of challenges consists of changes in consumer income, changes in social and demographic phenomena and changes in consumer preferences. The intense introduction of the private labels of large supermarket chains, and, at the same time, the innovative applications they introduced in both food production and packaging and in marketing, have also had a significant impact on food trade and gave rise to new challenges. The Chinese market, which has begun to produce high-quality and highly competitive food products, will have a significant impact - which will become more apparent in the five years to come. The second set of challenges stems from the specificities and weaknesses of the Greek economy and only affects Greek food businesses. These challenges are related to the high cost of agricultural production, which is passed on to the final food product. High taxation and high insurance contributions are also a challenge for food production businesses. At the same time, the absence of a national Brand Name is yet another problem food businesses are constantly faced with.

Considering all of the above, the Food Industry shows resilience to the economic crisis, demonstrating its dynamics against the other branches of Processing. It is no surprise that the new conditions prevailing in the Greek economy since 2009 have affected the Food & Beverage sector. However, the Food Industry still ranks first in all of the Processing sector, in Greece, in terms of employment, and is constantly growing in terms of extroversion in foreign markets. Due to its strong position in Greek Processing, it is evident that any developments occurring in it affect the entire Industry and, consequently, the Greek economy. Undoubtedly, the strengthening and growth of the Food Industry is an important tool for supporting the Greek Economy in terms of growth and competitiveness, on a European and international level.

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