

Comparative Analysis of the Export Competitiveness of Greece and Bulgaria in Trade with Yogurt

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Abstract

A great number of studies emphasize the various health benefits of yogurt and the bacterial cultures used in its production. Greek and Bulgarian yogurt are among the most widely known varieties of this dairy product, and the two neighboring countries have a long tradition in producing it. The aim of this paper is to examine the trends in the competitive performance of both countries' foreign trade with yogurt over the period 2006-2015 and to identify existing problems and potential opportunities for expansion of the exports. To that end various trade indicators are used presenting the exports dynamics, the terms of trade and the comparative advantages.

Keywords: dairy products, Greece, Bulgaria, competitiveness, revealed comparative advantage

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1. Introduction

Bulgarian and Greek yogurt, despite their similarities, are unique in nature. The Greek yogurt has been strained to remove liquid and lactose, which results in a thicker consistency, less sugar, fewer carbohydrates, and a lot more protein compared to regular yogurt, while in the same time its unique sour taste is preserved. The Bulgarian kind, on the other hand, has a tangy flavor and is creamier than the Greek one. For a yogurt to be considered of the Bulgarian variety, it should be made with two specific starter bacteria, namely *Lactobacillus bulgaricus* and *Streptococcus thermophilus*. The uniqueness of the so called in Bulgaria "kiselo mlyako" is due to the peculiarities of the climate in the region and the specific traditional way in which it is prepared. The recognition of Bulgarian yogurt on the world market is evident from the fact that Bulgaria has long-term licensing agreements for the production of traditional Bulgarian yogurt with more than 20 countries around the world, with the first such agreement dating back to the 70s.

Greece is a major exporter of yogurt, taking the 4th place in the world, with a share of 6.8% in 2015, while Bulgaria took the 38th place with 0.3 % share. Both countries were net exporters of yogurt in the past two decades and the two varieties of the product are highly valued all around the world for their unique taste and various

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health benefits. Due to the export potential of yogurt there are a lot of opportunities to be seized but there are also a lot of potential problems.

2. Dynamics of the Exports of yogurt of Greece and Bulgaria in the period 2006-2015

Table 1: Exports of Greek yogurt, value and growth rate (%)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Value*	59064	81432	81930	62927	67139	75349	82338	109196	148683	155039
Growth in value (%)	30	38	1	-23	7	12	9	33	36	4

Source: Trade Map *Unit: US Dollar thousand

Graph 1: Exports of Greek yogurt, value and growth rate (%)



Source: Trade Map

The graph depicts the value and growth rate of exports of Greek yogurt in the period 2006-2015. As the graph shows, the growth rate reached a peak in 2007, however in the following years the trend was downward and the exports reached an all-time low in 2009. There are two reasons for that – the inevitable effects of the global financial crisis, but also the fact that the major importer of Greek yogurt – the United States – switched to importing the good from Canada due to the fact that the European Union imposed some standards and regulations, which caused difficulties in customs procedures and made the conditions of importing Greek yogurt less favorable. The outcome was the first and last negative growth rate observed in the whole period, of -23%. However, in the following years the exports recovered well. Even when the Greek recession hit the hardest between 2010 and 2012 the growth rate of exports remained positive. When the outlook of the Greek economy improved from 2013 onwards the highest values in the period were observed and the growth rates

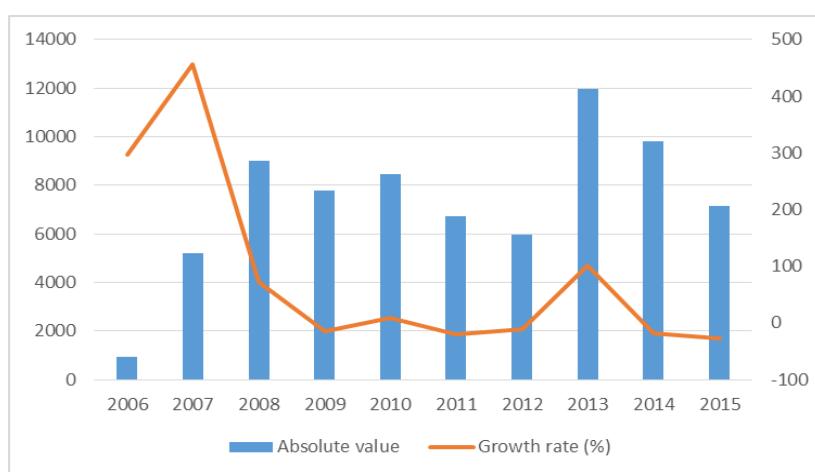
were significant – more than 30% in 2013 and 2014. Despite that in 2015 the growth slowed down, the highest value in the period was recorded.

Table 2: Exports of Bulgarian yogurt, value and growth rate (%)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Value*	938	5211	9005	7773	8445	6743	5977	11987	9810	7152
Growth rate (%)	296	456	73	-14	9	-20	-11	101	-18	-27

Source: Trade Map *Unit: US Dollar thousand

Graph 2: Exports of Bulgarian yogurt, value and growth rate (%)



Source: Trade Map

Graph 2 shows the value and growth rate of exports of Bulgarian yogurt in the period 2006-2015. As it can be clearly seen, at the beginning of the period exports rose sharply by 296%, however the absolute value was low – only 938. In 2007, the year in which Bulgaria acceded to the European Union, the exports grew even more – the value increased by 456% to 5211. From that year on, Greece was the top country to which Bulgaria exported the good – on average 83% of Bulgarian yogurt were exported to the country, which means that the values on the graph are mainly influenced by the economic conditions in Bulgaria's neighboring country. The worsened economic conditions during the global crisis resulted in a negative growth in 2009 of -14%. There was an increase of 9% in the following year, followed by a sharp decline of -20% in 2011 and -11% in 2012. This was due not only to the effects of the global financial crisis but also to the worsening of the Greek recession. In 2012 two EU programmes on information provision and promotion measures for traditional dairy products started – “EU Dairy Daily” and “Promotion of milk products in Third countries”. This, in addition to the improved economic outlook of the Greek economy made the exports grow dramatically by 101% in 2013. Despite the fact, that in 2014 and 2015 the growth rate was on a downward trend with negative growth rates, the values were significant and among the highest observed in the whole period.

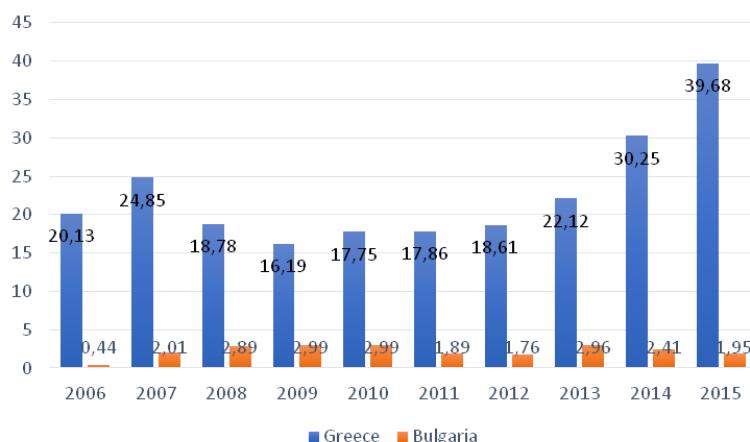
3. Comparative advantage of the Greek and Bulgarian yogurt

Table 3: Comparative Advantage of the Greek and Bulgarian yogurt (Balassa index)

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Greece	20.13	24.85	18.78	16.19	17.75	17.86	18.61	22.12	30.25	39.68
Bulgaria	0.44	2.01	2.89	2.99	2.99	1.89	1.76	2.96	2.41	1.95

Source: Trade Map

Graph 3: Comparative Advantage of the Greek and Bulgarian yogurt (Balassa index)



Source: Trade Map

The graph illustrates the Revealed Comparative Advantage of Bulgaria and Greece in their trade with yogurt, as measured by the Balassa index. As it is illustrated by the graph, Greece had a relative advantage in yogurt in all of the years in the 10-year period, signified by the high values of the index, which were ranging from 16.19 in 2009 to 39.68 in 2015. This is largely due to the position of Greece as one of the top yogurt exporters in the world. From the beginning to the end of the period Greece increased its comparative advantage by nearly half.

Bulgaria, on the other hand, started the period with a comparative disadvantage, with a value of the index of 0.44 in 2006. This was mainly due to the small quantity that Bulgaria exported at the time – only 948 tons. However, in the following years the values were always greater than one, implying relative advantage of the Bulgarian yogurt. By the end of the period Bulgaria increased its comparative advantage by more than 4 times.

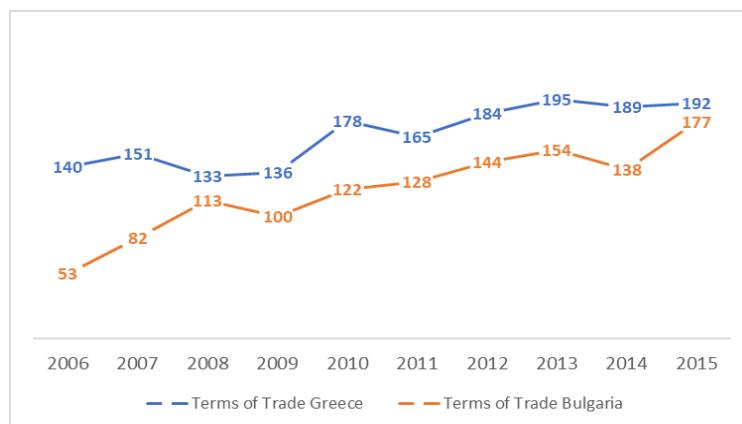
4. Terms of Trade of the Greek and Bulgarian yogurt

Table 4: Terms of Trade of the Greek and Bulgarian yogurt

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Greece	140	151	133	136	178	165	184	195	189	192
Bulgaria	53	82	113	100	122	128	144	154	138	177

Source: Trade Map

Graph 4: Terms of Trade of the Greek and Bulgarian yogurt



Source: Trade Map

The graph shows the Terms of Trade of the Greek and Bulgarian yogurt in the period 2006-2015. As the graph illustrates, the Terms of Trade of Greece are higher than those of Bulgaria during the whole period. What is also evident from the data is that generally the Terms of Trade of both countries are improving and the highest values were observed in the end of the period. From 2006 to 2015 Greece had always recorded ToT of more than 100%, meaning that the country had accumulated more money from the exports of yogurt, than it had spent. Bulgaria, on the other hand, started the period with ToT of 53 and 83, but in the following years the values increased significantly and were always greater than 100%. Bulgaria had recorded its highest value in 2015, and Greece the second highest one after 2013.

5. Geographical distribution and partner concentration

5.1 Top 5 countries to which Greece exports yogurt

Table 5: Top 5 countries to which Greece exports yogurt

	2006		2009		2015	
	Importer	Share	Importer	Share	Importer	Share
1	United Kingdom	28.4	Italy	37.2	United Kingdom	23.5
2	United States of America	27.1	United Kingdom	27.6	Italy	17.7
3	Italy	11.9	Norway	6.1	Germany	10.5
4	Denmark	8.7	Austria	5.1	Denmark	10
5	Germany	8.4	Germany	5	Cyprus	9.6

Source: Trade Map

Currently Greece is not only the 3rd largest exporter of yogurt in the world but it is also among the fastest growing ones. However, its trade with the product is not well diversified. As may be seen in the table, around 80% of the total exports of yogurt of Greece go to its top 5 importers of the product. Despite that, the main countries to

which Greece exports are not geographically concentrated in neighboring countries, as in the case of Bulgaria – among its top 5 trading partners, Italy is the only country that is relatively close to Greece. In the 10-year period Greece exported yogurt mainly to Italy, the United Kingdom and Germany, which are also among the top yogurt importers in the world, taking the first, second and sixth place respectively.

Greece and the United Kingdom traditionally maintain excellent bilateral relationship. Furthermore, the UK is among the top trading partners of Greece. This, in addition to the place the country takes as a top yogurt importer, explains the position it occupies as a top export destination for Greek yogurt. Furthermore, Greek yogurt is highly valued in the UK as of the exports of the good to the country between 2011 and 2014 made up 90%.

Greek yogurt gained huge popularity in Italy as well. Over the last couple of years Greek yogurt exports to the country have been registering double digit growth rates which made the biggest Greek dairy companies strike partnerships with Italian enterprises, either for the distribution of their brands or for the production of private-label products for Italian supermarket chains. It can be clearly seen that the exports that went to the country grew rapidly – from 11.9% and the 3rd place in 2006 to 37.2% and the 1st place in 2015.

It is noticeable that the USA, which was the second country to which Greece exported in 2006, is nowhere to be seen in the following years. The United States used to import around 80% of yogurt from Greece, however this share dropped to nearly zero. The reason for that, as mentioned earlier, were the standards and regulations that the European Union imposed, which caused difficulties in customs procedures and high additional costs for both countries. And thus, the US switched to importing the good from Canada.

5.2 Top 5 countries to which Bulgaria exports yogurt

Table 6: Top 5 countries to which Bulgaria exports yogurt

	2006		2009		2015	
	Importer	Share	Importer	Share	Importer	Share
1	Macedonia	47.8	Greece	68.6	Greece	91.8
2	Romania	37.1	Romania	16.3	Romania	5.8
3	Serbia	5.4	United Kingdom	8.5	Macedonia	2.1
4	Antigua and Barbuda	1.5	Cyprus	3.5	Afghanistan	0.1
5	Bosnia and Herzegovina	1.4	Spain	0.9	Antigua and Barbuda	0

Source: Trade Map

From the data it can be clearly seen, that the top 5 countries to which Bulgaria exports yogurt take up more than 90% of the country's total exports of the good.

In 2007, when Bulgaria acceded to the EU, the trade barriers between Bulgaria and Greece disappeared, and the Greek share in the total value of exports of Bulgarian yogurt increased from only 0.9% in 2006 to 85% in 2007. From that year on Greece was always the top destination for Bulgarian yogurt taking around 80% on average of the total value Bulgaria exported.

In the table, it can be seen that Macedonia's share, which was the highest in 2006, declined progressively reaching 0% in 2010. There are two reasons for that. The first one is that from 2006 on, the Bulgarian-Macedonian relationship worsened, and the second – the much more favorable trade conditions with EU member states such as Greece, after Bulgaria's accession to the European Union. However, the quantity exported to Macedonia was not that significant in the first place – in 2006 Bulgaria exported only 365 tons to the country.

It is also worth mentioning, that in the top 5 countries to which Bulgaria exported yogurt the largest shares were held by neighboring countries like Greece, Romania, Macedonia and Serbia. This indicates that the market for Bulgarian yogurt is not only concentrated in the top 5 export destinations for the product, but also geographically concentrated in nearby countries. This may be due to the fact that geographical proximity significantly facilitates the trade between countries, not only through the lower transportation costs, but also due to the already well-established economic relations between the countries. However, this poses a threat to Bulgarian producers, since if one of those countries, and especially Greece, changes its policy towards Bulgarian products, they will incur huge losses.

6. Identification of new potential markets

Table 7: Matrix of potential markets for Bulgaria and Greece

Indicator/ Country	Biggest Import Market of yogurt	Fastest growing Export Market of yogurt	Leading Importer of yogurt from:		Fastest growing Importer of yogurt from:		No Trade Barriers	Distance	Total	
			Greece	Bulgaria	Greece	Bulgaria			Greece	Bulgaria
			5	4	4	3	4	5	5	25
Belgium	5	4	4	3	4	5	5	3	25	25
Poland	4	5	3	4	5	4	5	3	25	25
China	3	3	2	1	1	1	1	1	11	10
Japan	1	1	2	1	1	1	2	1	8	7

* 5 - highest value; 1 - lowest value

Since both countries are heavily dependent on their top 5 export destinations for yogurt, it would be good to consider diversification of their export markets for the product, in order to mitigate potential negative impact of unfavorable economic and political conditions in the importing countries. There are good prospects for the increase of exports of Greece and Bulgaria towards Belgium, Poland, China and Japan.

For both countries it would be most profitable to increase exports to Belgium and Poland. Both are in the European Union, which significantly facilitates the trade of Greece and Bulgaria with them. A drawback of exporting to the aforementioned countries are the transportation costs. However, the benefits of entering those markets would outweigh the costs.

Belgium is the fourth largest importer of yogurt in the world, as well as one of the fastest growing ones. It is also among the first 15 importers of the good from Bulgaria and Greece. It can be seen that the share of yogurt that Belgium imports from the countries is also growing at a fast pace, which means that the demand for the Greek and Bulgarian varieties in the country is increasing.

As mentioned above, there are also good prospects for the diversification of exports of Greece and Bulgaria towards Poland. The country is also among the largest importers of the good in the world, however lagging behind Belgium. On the other hand, Poland's growth rate of imports of yogurt from the world is higher than that of Belgium – in 2015, it had increased its imports by 33%. The country is among the top 10 importers of Bulgarian yogurt, and the 21st importer of the good from Greece. Yet, this share is increasing rapidly.

Despite the fact, that the trade of yogurt of both Greece and Bulgaria with China and Japan is currently not well developed, there is an opportunity to expand exports of the good to these countries. The reason for that is that the Greek and Bulgarian varieties are highly valued in both Japan and China for their unique taste and health benefits. Furthermore, Bulgaria has long-term licensing agreements for traditional Bulgarian yogurt with both countries, with the first such agreement signed in 1972 with Meiji Dairies Corporation of Japan. Starting virtually from scratch, since in the 70s the product was completely unknown for the Japanese consumer, Meiji managed to turn Bulgarian yogurt into one of the most popular brands in the country's food industry. The Greek yogurt also gained huge popularity under the brands Partheno, Aeon and Oikos. In China the most popular yogurt is also Bulgarian – the brand "Momtchilovtsi", took the first place in terms of sales in 2015, followed by the "Ambrosial Greek Yogurt".

Thus, despite the distance of the countries and the existence of trade barriers, there is an opportunity for a successful launch of the Bulgarian and Greek products on the Chinese and Japanese markets. Additionally, Japan and the European Union are currently negotiating a free trade agreement, aimed at removing many of the existing trade barriers, which would further facilitate the exportation of yogurt to the country.

Conclusion

Bulgarians and Greeks have a long tradition in the production of yogurt. Moreover, the two varieties are well known and highly valued all around the world for their unique taste and health benefits. Due to the export potential of yogurt, there are a lot of opportunities to be seized, but there are a lot of potential problems. It can be seen that the prospects in the trade with yogurt for both countries are improving. Both countries ran trade surpluses with the good, yet the quantity that Greece exported is

much higher than that of Bulgaria in the whole period. The Balassa index shows that both countries have a revealed advantage of the good, however, the values of the index for the Greek yogurt are much higher than those of Bulgaria, largely due to the fact that Greece is a top exporter of yogurt. The Terms of Trade of both countries are also generally improving, and the highest values were recorded in 2015, here again the values of Greece are higher, but the difference is not so significant. Thus, Bulgaria should revise its policies and make an effort to increase the competitiveness of its yogurt on the world market. A potential problem for both Greece and Bulgaria is that a large proportion of the exports of yogurt goes to the top five importers of the good from the countries, which makes milk-processing companies heavily dependent on the political, social and economic conditions in a limited number of markets, thus, in order to mitigate potential negative impact both countries should consider diversification.

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