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CURRENT STATE AND PROSPECTS OF THE FOOD PROCESSING INDUSTRY IN BULGARIA

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Abstract

Food processing industry is the biggest manufacturing industry in Bulgaria with the longest lived traditions. The EU accession of Bulgaria has boosted the competitiveness of the industry that had to comply with strict regulations, faced tough competition but also new investment and trade opportunities. The aim of the paper is to present the current status of the Bulgarian food processing industry in terms of output, investment, employment, foreign trade performance and its prospects for future development. During the last decade the Bulgarian food processing industry has been growing, using its national competitive advantages such as good access to raw materials and low labour costs.

Keywords: *food industry, manufacturing, Bulgaria, competitiveness*

Introduction

The EU accession of Bulgaria in 2007 put food processing in a completely new environment. Bulgarian firms faced challenges related to both much stricter food safety regulations and lack of competitiveness on the Single European market. Many of them couldn't deal with the new situation and had to close. However those operators which invested in modern technologies and marketing found new lucrative possibilities on the European and third countries market. New ones emerged utilizing the existing comparative advantages of Bulgaria in the sector. Public support has also played a role in raising the interest in food processing among entrepreneurs. The Programme "Rural Development 2014-2020" funded by the EU has a budget of 2.9 billion EUR and provides grants for modernization and intensification of existing enterprises or establishment of new ones (including farmers who want to complete the production chains).[1] Under the first objective of improved competitiveness and balanced development of the country's agri-food and forestry sectors, about 3 500 agriculture holdings and about 120 companies active in the

[1] National Rural Development Programme, http://www.prsr.bg/documents/Програма-за-развитие-на-селските-райони-2014-—-2020-г./6/0/index.html

forestry sector are expected to receive investment support in the period 2014-2020. € 841 million are allocated for Measure 4: Investments in physical assets, that provides grants to enterprises for technological modernization.

The food industry is considered by the Bulgarian institutions as a priority industry. It is supported by the Invest Bulgaria Agency as an industry with high potential to attract FDI. The Bulgarian Small and Medium Enterprises Promotion Agency has elaborated an export strategy for the manufacture of food products.[2] The “Innovation strategy for smart specialization of the Republic of Bulgaria 2014-2020” has specified food industry within technological field “Industry for a healthy life and bio-technology” as a potential sphere for intensive innovation development (specialization).

Given the high importance of the food industry for the Bulgarian economy we are interested to analyze the trends of its development in recent years and to infer prospects for future development. To that end we are using various indicators on output, turnover, investment, employment, exports, imports, etc. and their dynamics over the last decade.

Overview of the food processing industry in Bulgaria

Food processing is a traditional industry of the Bulgarian economy with a very high importance determined by its share in the production value, foreign trade and employment, as well as its interdependence with other key sectors in the country – agriculture, machine building, tourism, transport and logistics.[3]

Food products (including beverages and tobacco) have invariably surpassed 1/5 of the manufacturing turnover in the recent years (Table 1). Besides 2009 and 2014 the food products output has been growing continuously and reached 5.7 billion EUR in 2016 or 20.2% of the total in the Bulgarian manufacturing. The value added of the industry exceeded 1 billion EUR in 2015. With 326 million EUR in 2016 it accounts for 18.2% of the gross investment in tangible goods of the manufacturing industry.

Table 1. Main indicators of Bulgarian food industry (NACE rev.2 codes C10, C11, C12)

	2008	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***
Turnover (million EUR)	5 209	4 939	5 080	5 311	5 348	5 755	5 764	6 077	6 328
Share in manufacturing (%)	20.3	25.0	23.0	20.9	20.2	21.1	20.6	20.9	21.5
Production (million EUR)	4 821	4 568	4 666	4 832	5 055	5 340	5 300	5 549	5 706
Share in manufacturing (%)	19.7	24.0	22.0	19.7	19.8	20.4	19.8	20.0	20.2
Value added (million EUR)	862	824	924	890	949	937	972	1 059	..
Share in manufacturing (%)	20.2	21.2	22.4	19.2	20.3	19.6	18.3	17.0	..
Gross investment in tangible goods (million EUR)	471	329	283	296	288	327	350	347	326

[2] BSMEPA (2012) Export Strategy – Manufacture of Food Products, Bulgarian Small and Medium Enterprises Promotion Agency

[3] See Sterev, N. (2014). Competitive changes of food production in Bulgaria. *Acta Scientiarum Polonorum. Oeconomia*, *13*(1); Sterev, N., Blagoev, D., & Gatovski, I. (2014). Dynamics Of Food Production Before And After The Economic Crisis. Economic Alternatives Journal, 1, 19-32.; Netherlands Enterprise Agency (2016) Food Processing in Bulgaria, Inteliagro, Den Haag

Share in manufacturing (%)	19.3	21.5	25.1	23.3	17.4	15.5	16.4	16.4	18.2

Source: Eurostat, Structural business statistics, *accessed on 01.07.2018*

In 2016 the turnover of the food industry exceeded 6.3 billion EUR which is a 40% increase over 2008. The largest share in the food industry turnover is occupied by C101-Processing and preserving of meat and production of meat products – 18.6% in 2016. Meat processing turnover has grown by over 31% from 2008 to 2016 reaching a value of almost 1.2 billion EUR. Local producers use some unique recipes for salami, flat sausage (sudzhuk) and other meat products. At present, the country holds protected geographical indication for 6 authentic meat products.

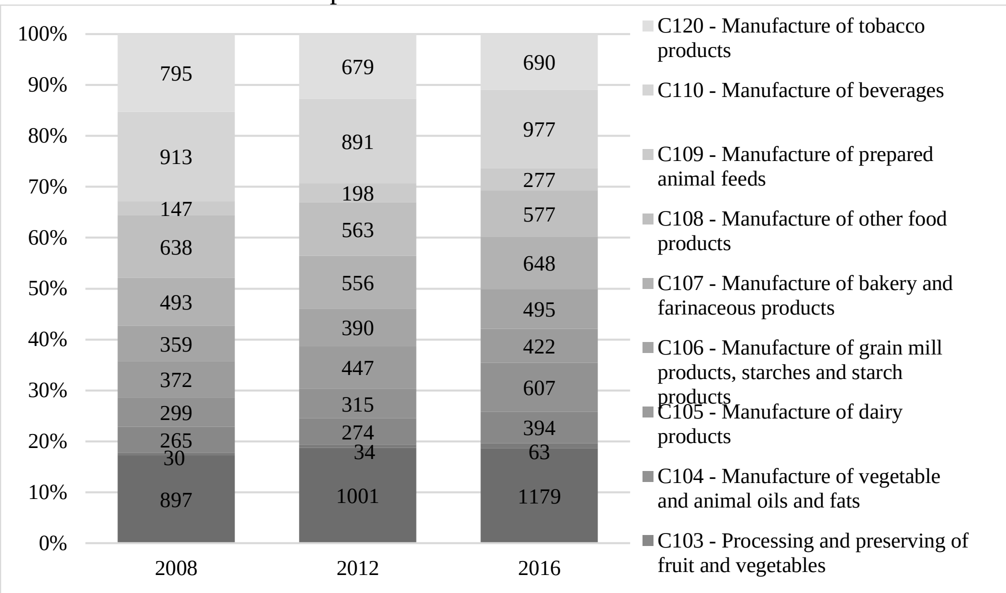

Figure. 1 Food industry turnover structure in Bulgaria (2008, 2012 and 2016, million EUR)

Source: Eurostat, Structural business statistics, accessed on 01.07.2018

Manufacture of beverages (C110) has the second largest share in the food processing industry turnover – 15.4% in 2016. Next comes C107 - Manufacture of bakery and farinaceous products with a share of 10.2%. While C102 - Processing and preserving of fish, crustaceans and molluscs has a share of just 1% in the food products turnover, it is the most dynamic food product group with almost 112% turnover growth in 2016 over 2008.

The only two food industry product groups that have registered decline in their turnover in 2016 compared to 2008 are C120 - Manufacture of tobacco products (-13.3%) and C108 - Manufacture of other food products (-9.6%) – consisting of manufacture of sugar, cocoa, chocolate and sugar confectionery, tea and coffee, condiments and seasonings, prepared meals and dishes. This is to a large extent due to a growing trend of consumers becoming health conscious (looking for products with no sugar and no preservatives).

Since 2008 there has been a continuous trend of increasing the number of enterprises operating in the Bulgarian food industry. 5 101 enterprises operated in 2008 and in 2016 their number is already 6 309 (Table 2). The only subsector that experienced consolidation is the manufacture of tobacco products (30 enterprises operated in 2008 and just 14 in 2016).

Table 2. Number of enterprises operating in the Bulgarian food industry (2008-2016)

NACE_R2/Year	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Food industry	5 101	5 445	5 522	5 613	5 685	5 852	5 981	6 199	6 309
C10 - Manufacture of food products	4 421	4 684	4 714	4 816	4 840	4 958	5 094	5 285	5 383
C11 - Manufacture of beverages	650	735	781	776	826	876	869	897	912
C12 - Manufacture of tobacco products	30	26	27	21	19	18	18	17	14

Source: Eurostat, Structural business statistics, *accessed on 06.07.2018*

The list with the biggest manufacturers in the Bulgarian food industry is dominated by TNCs such as Coca-Cola, Nestle, Heineken (Zagorka AD), Molson Coors (Kamenitza AD), Carlsberg. Three of the top 15 enterprises according to revenues produce beer, another three produce tobacco products and two (including the top performer Oliva AD) produce sunflower oil.

Table 3. Top 15 food manufacturers in Bulgaria according to their revenues in 2016

Company	Head Office	Revenues ('000 BGN)	Employees	Subsector
Oliva AD	Knezha, Pleven region	563 504	342	C104
Amylum EAD	Razgrad	507 267	271	C106
Coca-Cola Hellenik Bottling Company Bulgaria AD	Sofia	358 615	989	C110
Nestle Bulgaria AD	Sofia	340 146	1 435	C108
Blagoevgrad-BT AD	Blagoevgrad	333 596	591	C120
Pilko EOOD	Razgrad	232 999	890	C101
Chipita Bulgaria AD	Kazichene, Sofia region	185 837	849	C107
Zagorka AD	Stara Zagora	164 391	484	C110
Kamenitza AD	Plovdiv	155 313	701	C110
Sokotab EOOD	Radinovo, Plovdiv region	147 508	589	C120
Mesokombinat – Lovech AD	Lovech	139 184	667	C101
VP Brands International AD	Plovdiv	138 465	837	C110
Carlsberg Bulgaria AD	Sofia	131 348	492	C110
Rosa AD	Popovo, Targovishte region	110 055	244	C104
KT International EAD	Plovdiv	93 049	460	C120

Source: Kapi database, *accessed on 06.07.2018*

While the number of food manufacturers has been growing in the recent years this was accompanied with a decrease in the number of people employed reflecting the adoption of technologies and organizational practices that reduce labor force dependence. Notwithstanding this the food industry still creates around 18% of the manufacturing jobs.

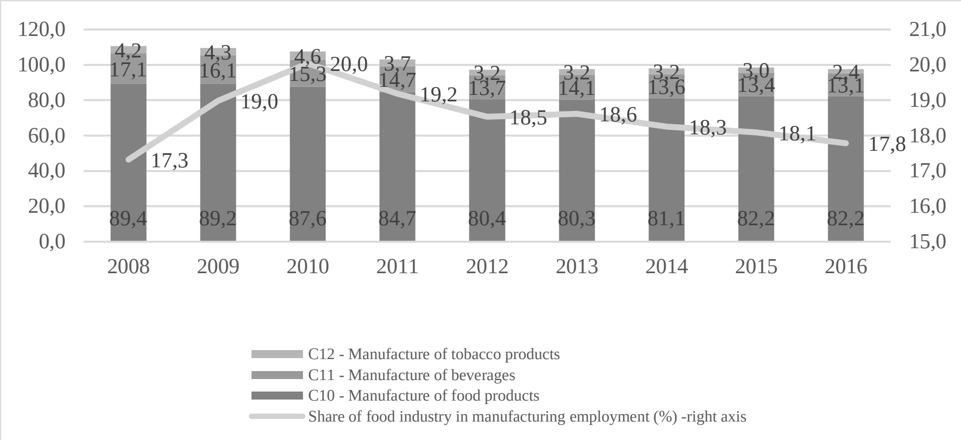

Figure. 2. Number of persons employed in Bulgarian food industry (in thousands, 2008-2016)

Source: Eurostat, Structural business statistics, accessed on 06.07.2018

Personnel expenditures in the Bulgarian food industry tend to increase permanently and the average costs per employee have doubled since 2007. However in comparison to the EU average level they remain couple of times lower and that outweighs the lagging in apparent labour productivity (except for manufacture of tobacco). In 2015 the wage adjusted labour productivity in the manufacture of food products (C10) was by 65 percentage points higher in Bulgaria than in the EU-28 (Table 4).

Table 4. Personnel costs and productivity of the food industry in Bulgaria and the EU for 2012 and 2015

Indicator/NACE code/Year		**C10**		**C11**		**C12**	
		2012	***2015***	***2012***	***2015***	***2012***	***2015***
Apparent labour productivity (thousand EUR)	**BG**	8.0	9.5	14.3	14.5	32.9	28.4
	EU	42	46	..	..	175	177
Average personnel costs (thousand EUR)	**BG**	4.1	4.7	6.3	7.7	12.6	11.6
	EU	27.0	29.3	40.0	..	52.1	53.3
Wage adjusted labour productivity (%)	**BG**	195	203	227	188	260	244
	EU	154	158	220	..	337	332

Source: Eurostat, Structural business statistics, accessed on 06.07.2018

Bulgarian food products export has been permanently growing up during the past 10 years reaching 1.38 billion EUR in 2017 which is a twofold increase compared to 2008. The growth of food exports was not interrupted even during the Great Recession. In 2008 food products accounted for 4.6% of Bulgaria's total exports while 10 years later they have increased their share by 0.6 percentage points to 5.2%.

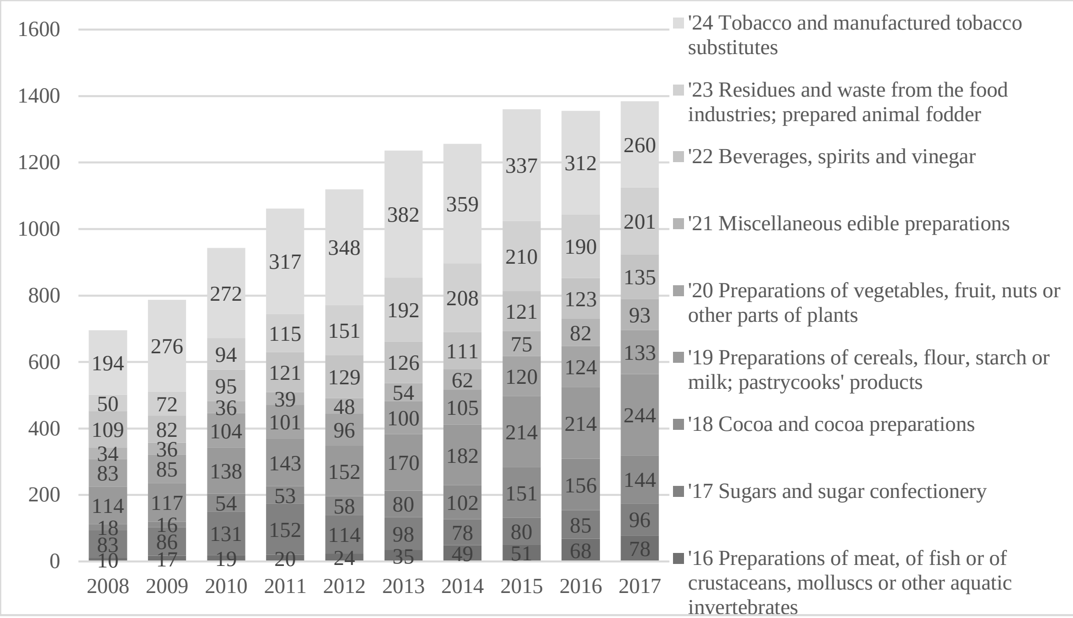

Figure. 3. Exports of food products from Bulgaria (2008-2017, million euro)

Source: International Trade Center (ITC), Market Analysis Tools, Trade Statistics, accessed on 06.07.2018

The export of food products is relatively well diversified. In 2017 around 19% of its value comes from tobacco and tobacco products, another 17.6% from preparations of cereals, flour, starch or milk, 14.5% from residues and animal fodder, 10.4% from cocoa preparations, 9.7% form beverages and spirits, 9.6% form preparations of vegetables, fruit, nuts. All food categories exhibited an increase in their exports but the most intensive over the period 2008-2017 was the growth of the cocoa preparations (7.9 times) and preparations of meat or fish (7.6 times).

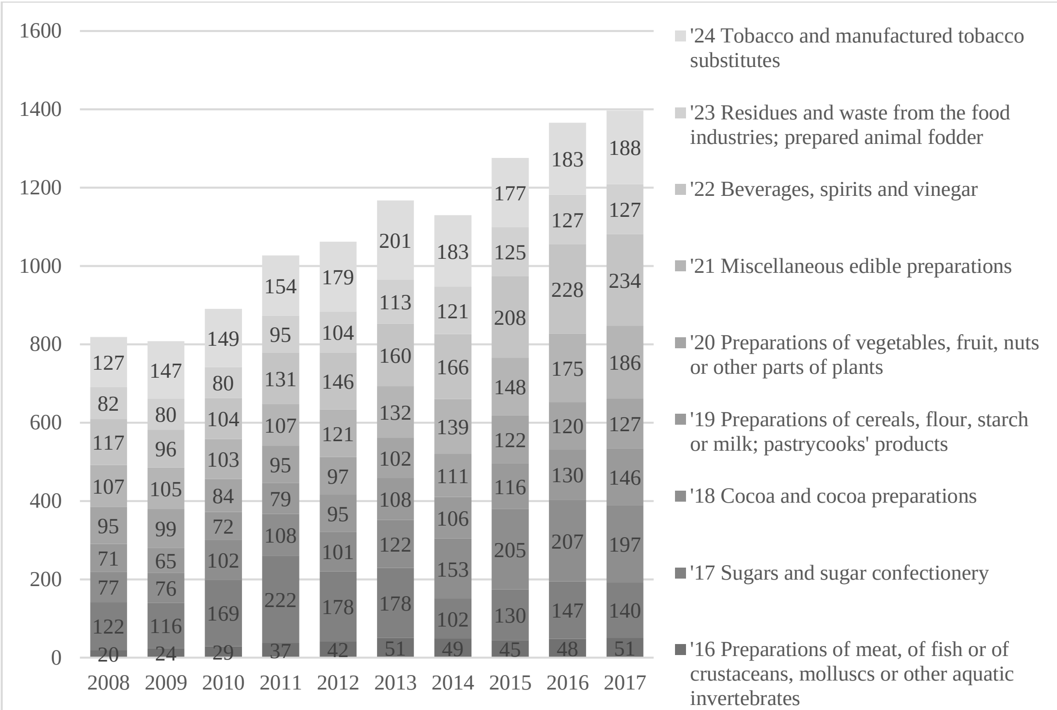

Figure. 4. Imports of food products to Bulgaria, (2008-2017, million euro)

Source: International Trade Center (ITC), Market Analysis Tools, Trade Statistics, accessed on 06.07.2018

Except for the years 2009 and 2014 the imports of food products to Bulgaria have been constantly growing. In 2017 they almost reached 1.4 billion EUR. Besides 2008 when imports were by 15% higher than exports and 2014 when exports exceeded imports by 11% Bulgaria’s foreign trade with food products is largely balanced throughout the last 10 years. All food product categories have registered a significant imports increase in the last years in comparison to 2008. The most dynamic ones are preparations of meat or fish (HS 16) with an increase of 160%, cocoa and cocoa preparations (HS 18) which have grown by 155% from 2008 to 2017 and preparations of cereals, flour, starch (HS 19) and beverages and spirits (HS 22) which registered twofold increment. The lowest is the increase of the imports of sugars and sugar confectionery (HS 17) – just 15%.

The top export markets for Bulgarian food products are mostly neighbouring countries – Romania, Greece, Turkey (Table 5). Sweden is the biggest export market for HS 16 with a share of 30.2% of Bulgarian export in that group. A non-EU country with a top position in Bulgarian food exports is the UAE which has a share of 37.2% of Bulgaria’s exports of HS 24.

Table 5. Top 5 export markets for food products supplied by Bulgaria in 2017 according to HS groups (% of Bulgaria’s food exports)

HS 16	**HS 17**	**HS 18**	**HS 19**	**HS 20**	**HS 21**	**HS 22**	**HS 23**	**HS 24**
1. Sweden (30.2%)	Greece (30.1%)	Turkey (16.1%)	Greece (14.8%)	Germany (27%)	Romania (16.4%)	Romania (20.9%)	Turkey (21.7%)	UAE (37.2%)
2. Romania	Romania (26.2%)	Romania (15%)	Romania (11.3%)	Romania (18.1%)	Greece (13%)	Greece (14.9%)	Greece (12.8%)	Belgium (9.8%)

(11.0%)								
3. France (10.4%)	Germany (7.6%)	Poland (13.5%)	Germany (8.1%)	Greece (12.6%)	Turkey (11.9%)	Poland (11.6%)	Germany (8.7%)	Greece (6.6%)
4. Korea (7.7%)	Serbia (5.6|%)	Greece (7.6%)	UK (5.9%)	Italy (5.8%)	Serbia (6.7%)	Turkey (7.1%)	Netherlands (8.6%)	USA (6.5%)
5. Greece (7.2%)	UK (3.3%)	Croatia (4.5%)	Netherlands (5.5%)	USA (4.9%)	Hong Kong (4.4%)	Italy (5.5%)	Romania (7.8%)	Russia (4.1%)

Source: International Trade Center (ITC), Market Analysis Tools, Trade Statistics, accessed on 06.07.2018

The leading food import partners of Bulgaria are Germany, Romania, Greece. Most of the top importers of food to Bulgaria are EU member states.

Table 6. Top 5 import markets for food products imported in Bulgaria in 2017 according to HS groups (% of Bulgaria's food imports)

HS 16	HS 17	HS 18	HS 19	HS 20	HS 21	HS 22	HS 23	HS 24
1. Germany (30.0%)	Romania (17.4%)	Germany (27.8%)	Romania (21.4%)	Greece (20.8%)	Germany (14.6%)	Netherlands (11.3%)	Romania (36.0%)	Greece (35.2%)
2. Poland (11.4%)	Greece (13.3%)	Netherlands (15%)	Germany (13.4%)	Romania (12.4%)	Hungary (10.3%)	Romania (9.6%)	Germany (9.1%)	Poland (13.3%)
3.Italy (10.0%)	Thailand (11.0%)	Romania (12.2%)	Poland (12.5%)	Turkey (9.2%)	Poland (10.0%)	UK (9.4%)	Hungary (7.4%)	Macedonia (9.5%)
4. Spain (7.5%)	Croatia (8.1%)	Ghana (8.8%)	Greece (9.6%)	Poland (8.8%)	Italy (7.6%)	Serbia (7.9%)	China (6.5%)	Romania (7.9%)
5. Romania (5.9%)	Serbia (7.0%)	Poland (5.4%)	Czech rep. (6.6%)	Germany (8.0%)	UK (6.2%)	Italy (7.4%)	Greece (5.6%)	Germany (6.3%)

Source: International Trade Center (ITC), Market Analysis Tools, Trade Statistics, accessed on 06.07.2018

Table 7 shows the Bulgarian food products with the highest competitiveness on the world market in 2017 according to the export specialization index – RCA. Among these HS 2306 "Oilcake and other solid residues …", HS 2206 "Cider, perry, mead …", HS 1806 "Chocolates …", HS 1803 "Cocoa paste", HS 1605 "Crustaceans, molluscs and other aquatic invertebrates…" and HS 1601 "Sausages and similar products" have switched from comparative disadvantage to comparative advantage over the recent years.

Table 7. Bulgarian food products with highest competitiveness on the world market in 2017 (Revealed comparative advantage index[4], 2008, 2013 and 2017)

HS code	2008	2013	2017
'2306 Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting ...	**0.5**	**5.0**	**8.0**
'1702 Other sugars, incl. chemically pure lactose, maltose, glucose and fructose, in solid form; ...	**6.4**	**7.7**	**6.0**
'2303 Residues of starch manufacture and similar residues, beet-pulp, bagasse and other waste of ...	**2.9**	**4.4**	**5.0**
'2302 Bran, sharps and other residues, whether or not in the form of pellets, derived from the sifting, ...	**4.2**	**7.3**	**4.4**

[4] The RCA index represents a ratio of the share of food exports in total Bulgarian exports divided to the equivalent share for the world. Values higher than 1 indicate that the country is specialized more than the world on average in the analyzed industry and therefore has a comparative advantage in it.

'1905 Bread, pastry, cakes, biscuits and other bakers' wares, whether or not containing cocoa; communion ...	**5.1**	**4.2**	**4.3**
'2206 Cider, perry, mead and other fermented beverages and mixtures of fermented beverages and non-alcoholic ...	**0.5**	**3.2**	**4.1**
'2402 Cigars, cheroots, cigarillos and cigarettes of tobacco or of tobacco substitutes	**1.9**	**6.2**	**3.4**
'2008 Fruits, nuts and other edible parts of plants, prepared or preserved, whether or not containing ...	**2.8**	**3.2**	**3.1**
'1806 Chocolate and other food preparations containing cocoa	**0.9**	**2.2**	**2.9**
'1803 Cocoa paste, whether or not defatted	**0.0**	**1.4**	**2.9**
'2207 Undenatured ethyl alcohol of an alcoholic strength of >= 80%; ethyl alcohol and other spirits, ...	**0.5**	**2.2**	**2.8**
'2001 Vegetables, fruit, nuts and other edible parts of plants, prepared or preserved by vinegar ...	**4.9**	**2.5**	**2.6**
'1605 Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved (excluding smoked)	**0.2**	**0.5**	**2.3**
'1601 Sausages and similar products, of meat, offal or blood; food preparations based on these products	**0.7**	**1.3**	**2.2**
'2005 Other vegetables prepared or preserved otherwise than by vinegar or acetic acid, not frozen ...	**3.7**	**2.3**	**2.0**

Source: own calculations, based on ITC data

The Bulgarian food industry has been very attractive for foreign investors. By the end of 2016 it has managed to receive over 1 billion EUR of FDI stock. That represents more than 19% of the FDI stock in the Bulgarian manufacturing.

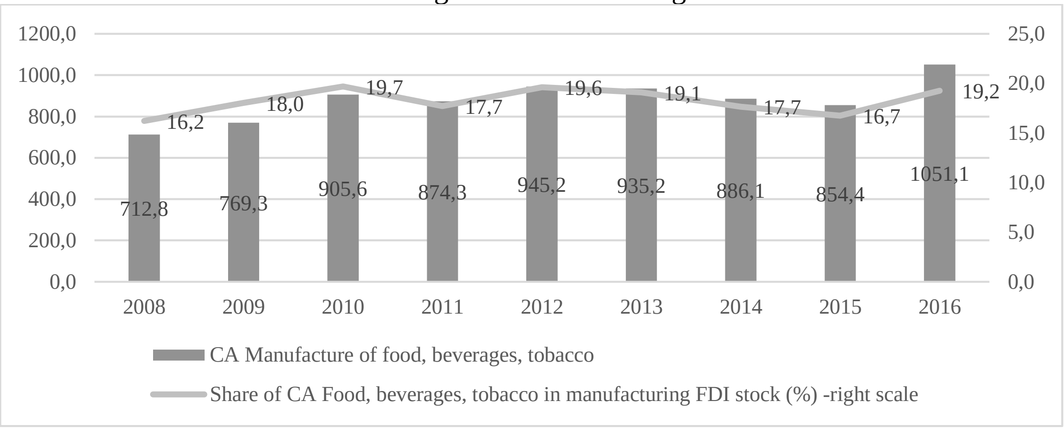

Figure. 5. Inward FDI stock in Bulgarian food processing industry (2008-2016, million EUR)

Source: National Statistical Institute of Bulgaria (NSI), Infostat, accessed on 06.07.2018

Conclusion

Food processing is one of the key manufacturing branches in Bulgaria that has increased its competitiveness after the country joined the EU. It accounts for about 1/5 of the manufacturing production and over 5% of the total national exports. More than 6 300 enterprises operate providing jobs to almost 100 000 people. The food industry has bright future perspectives taking advantage of the inherited national advantages of Bulgaria such as favourable climate, preserved nature and good quality of raw materials in combination with the created advantages like the qualified workforce and the committed public support for the branch.

The food industry was the industry among the least affected by the economic crisis in 2009. It has been on an upward trajectory in the recent years and the outlook for the coming ones is highly positive. These expectations are underpinned by the large investments and technological improvements in the industry, public support provided, intensifying exports, gradually growing income of the population and dynamically developing hotels and catering industry.

In terms of the internal food consumption there are two opposing trends. Bulgarian household income is still the lowest one in the EU and Bulgarian families still spend the highest proportion of it on food. Consequently, food demand is extremely price sensitive and the price competition between processors is intensive. Thus, a substantial part of the mass production is based on outdated technologies, lower quality raw materials and, sometimes, cheaper substitutes and supplements. At the same time despite the low income levels, they are steadily increasing in the recent years. In combination with a booming tourist industry and growing health consciousness of consumers, there is a trend of formation and development of premium quality food niche (including growing demand for fresh and organic food), mainly in the big cities and resorts. Taking advantage of this trend requires use of modern technologies and practices at every production phase, original recipes, minimum amounts of supplements and substitutes, excellent marketing, etc.

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