Trends in the Development of Bread Industry

Magdalena D. Damyanova-Bakardzhieva¹*, Valentina L. Nikolova-Alexieva ²

¹PhD student at the Department of Industrial Business and Entrepreneurship, Faculty of Economics, University of Food Technologies, Plovdiv, Bulgaria

²Associate professor at the Department of Industrial Business and Entrepreneurship, Faculty of Economics, University of Food Technologies, Plovdiv, Bulgaria

*Corresponding author: Magdalena D. Damyanova-Bakardzhieva, PhD student, Department of Industrial Business and Entrepreneurship, Faculty of Economics, University of Food Technologies, 26 Maritza Blvd. BG-4002 Plovdiv, Bulgaria, tel.: +359 885 260 869; e-mail: magidamyanova@gmail.com

Abstract
Bread industry is one of the industries that, in today’s market relations, develops and grows very fast, both in Europe and in the world. In Bulgaria, bread production is one of the largest in the food sector owing to the fact that it has always been part of Bulgarian traditions and not just a staple food. The aim of this paper is to identify and analyze the dynamics in the development of bread industry first on a global, then on an European and last but not least, on a local level. Along with that, its task is to outline the problems and to predict the trends for the industry’s future development. A great number of methods such as analysis and synthesis, induction, analogy of comparison, quantitative methods, statistical processing of SPSS, etc. were used in order to achieve the aforementioned goals.

Practical applications
The research makes important strides towards comprehensively identifying the foundational conceptual issues of bread market development and supplementing incomplete and missing aspects of the construct. The result of these efforts is an opportunity for an interesting future study. We can identify a number of potential new research streams that arise from a more comprehensive understanding of the main problems in bread market development. These streams could contribute to the prediction of the bread market development as a theoretical construct. The results of this study can also be used for the improvement of the entrepreneur management practices and the development of the organizational competitive advantages in the Bulgarian bread industry.

Keywords: bread industry, market analysis and forecasting, development trends
Introduction

Bread industry is one of the industries that, in today’s market relations, develops and grows very fast, both in Europe and in the world. The global bread market is highly fragmented, with large number of domestic and multinational players competing for market share. Companies are focusing on new product launches, with healthier ingredients and this is their key marketing strategy. Increased private label brands are posing tough competition to the existing players. Global bread and baked food market is expected to be positively impacted by growing food demand over the period of 2018-2023. Increasing population, particularly in the developing regions is presumed to further aid the market in the near future. Hectic lifestyle particularly in developed regions has resulted in a shift in consumer preference towards bread and baked convenience foods. Rapid urbanization in developing regions had a similar effect on the consumer palette and has spurred demand in these regions. Growing health awareness and easy affordability are key factors that are projected to assist the global market. Increasing disposable income in the developing regions such as Asia Pacific, Central & South America and Middle East & Africa is presumed to play a key role in prompting consumer preference for baked foods.

In Bulgaria bread industry is traditionally a well-developed industry with a significant contribution to the economy. What is more, bread is not just a staple food that constitutes major part of daily diet but it is part of Bulgarian traditions. The global trends for healthy food are valid here, too but the fact that there is a great percentage of people who prefer the traditional white bread should also be mentioned. Bulgarian producers work in an unfavorable macro environment, underdeveloped infrastructure and under conditions of intense competition. They must make efforts to adapt to the changing market environment (Toskov G., Bichurova I., 2015).

There are other problems such as the difficulty in the search of workforce and the big part of the grey economy in the sector which need to be dealt with. The aim of this article is to analyze the dynamics of the bread market, to identify the main problems and to draw the trends for its future development. The main task is to measure global trends in bread and bakery products market developments and the expected technological and organizational changes for the period 2018-2023.

The research supports the main research hypothesis, namely by identifying the global tendencies for the development of bread industry in the conditions of strong competition and determining the place of the Bulgarian bread industry in the European economy.

The following methods were used in the present study: analysis and synthesis; induction; analogy of comparison; quantitative methods; statistical processing of SPSS (one-dimensional, two-dimensional, distribution, X-square, and correlation coefficient). Data and information from the NSI, EUROSTAT, reports of the European Commission were analyzed and synthesized.

Exposure

Bread market has always been attractive because of its dynamics, implying a rapid return on capital. In 2017 the bread market in a global aspect was valued at USD 201 billion with sale surpassing 83,000 million kg and the tendency for stable growth is expected to continue in 2018-2023. The primary factors which affect the market are the consumers and their choice. Recent data show that healthier products gain in popularity. What is more, there is a great demand for the so called ‘functional ingredients’ owing to their nutritional benefits. To understand this tendency better we should examine the commonly accepted definition by several organisations for ‘functional foods’: ‘foods or ingredients of foods that provide an additional physiological benefit beyond their basic nutrition’ (International Food Information Council, 2006; International Life Sciences Institute, 1999). The market growth has been triggered by low-carb, high-fiber, multigrain, and fortified bread that appeal to consumers whose choice is defined by the health benefits of the product. This tendency is connected with another demand – the incorporation of natural ingredients (enzymes, antioxidants and natural preservatives). In order to sustain market competition companies have focused on organic and natural products. About 56% of the global consumers are looking for ‘no artificial preservatives or additives’ products. Companies are targeting to replace shortenings and fat with Omega-9, Omega-3, which improve the fatty acid profile and support performance. Cholesterol reduction, weight management, high protein, and sugar control are the key consumer trends. New products’ focus on millet grains, exotic grains, and functional grains, such as quinoa and oats, in bread have achieved great success in recent years.
While we are discussing this topic it would be interesting to mention an innovation published in the *New Food* magazine in August, 2018; ‘One UK company has developed an innovative alternative to wheat-free flour that meets the increasing demand for ‘free from’ and protein-rich foods. (The ‘free from’ market in the UK is fast approaching a value of £1 billion). The company uses yellow pea which thrives in East Anglia. It is versatile, naturally gluten-free and contains high levels of protein, vitamins and minerals. The yellow pea is used as a truly innovative flour for the production of bread, pizza and cakes.

Discussion

Consumer demand for new varieties of bread and rolls from different regions and cultures is accelerating the bread market growth. European bread and roll market accounts for over 45% of the global consumption, by volume. However, the market is expected to decline over the forecast period, due to consumer shift to healthier alternatives. Spain is the largest market, which surpassed a volume consumption of 4,463 million kg in 2015; this is expected to reach 4,495 million kg by 2023. Organic, natural, and health claims on bread are the key trends in the region. Increased aging population that is seeking for healthier bakery products has supported the market growth. Rising consumer preference for value-added, ethnic, fresh, and artisanal bread is the primary factor driving the sales. Bread with olives, nuts, seeds, and exotic ingredients is on high demand, owing to health-conscious consumers. Increased competition from artisanal, food service offering varieties of fresh bread has affected the packaged bread sale. Artisanal baked goods are more popular in Italy and France, compared to other European countries. Bread loaves hold the dominant share in the market, with a volume share of 20%, followed by rolls and sandwich slices. Loaves have observed a slow growth rate in Europe, due to high calorie content. However, loaves are the biggest category, which observed a downfall from the past five years and continues to decline in Italy and the United Kingdom. According to the UK Federation of bakers, there are three principal sectors that make up the UK baking industry. The larger (plant) baking companies produce around 80% of bread sold in the UK. In-store bakeries (ISBs) within supermarkets produce about 17% and high street retail (craft) bakers produce the rest.

Asia-Pacific is the fastest-growing market driven by changing lifestyles and increased consumer taste for nutritional bread. (See Fig. 1)

There is a demand not only for healthy but also for convenience food. The demand for convenience food, i.e. food that has been commercially pre-prepared and so requires minimum further preparation by the consumer, is growing. The definition of convenience food may suggest that most bakery products have always been convenience food, since they are baked in shops or plants and ready to be eaten as soon as they are bought by the consumers. In this case, convenience food refers to ready-meals that use bakery products, such as sandwiches. This means for the bakery industry a need to produce a growing number of small portion products. Several factors explain this growing demand.

First, there is a generation effect on the demand of conveniences food: the younger the consumer, the higher the probability of consuming convenient food (Brunner, et al., 2010). This could be explained by the fact that, current older generations, when they grew up, did not have as much access to convenient food as they do now, and are more used to conventional cooking. Then, the change in lifestyle, due to a growing proportion of people living in cities, tends to limit bread buying occasions to the weekends, favouring packaged/industrial bread which tends to stay fresh longer.

Growing demand for convenience and healthy products does not compromise the one for good taste and often related authenticity. Actually, some consumers even alternate moments in which they consume indulgent products with moments when they eat more healthy products. In the Puratos survey, more than 90% of the consumers think taste is the most important purchase driver for bread (Puratos 2010 European Bakery Trends). The bakery products are associated with tradition in most of the European countries, due to their importance in the culinary culture. Traditional bakery products are thought to be the tastier. This is why tradition and authenticity are a very strong position in the bakery industry.

Before we continue with the bread market on a local level, i.e. in Bulgaria we should analyze the export and import in the bread industry in a global aspect. Most of the demand for bread is covered by domestic suppliers. In 2016, exports accounted for only 9% of the global bread and bakery product output, with an increase by +3 percentage points from 2007. The relatively low trade intensity can be explained by the
fact that due to the specific nature of bread and bakery items and the requirement for product freshness, the demand for bread and bakery products is largely met by local production. On the other hand, in a number of countries, especially in Europe, a significant proportion of product items are sent for export; this refers largely to dried items and is supported by technological advances in terms of packaging and storage.

If we interpret the data below we could conclude that exports post moderate gains, i.e. in 2016, the volume of global exports of bread and bakery products totalled 11,248,000 tonnes, which equated to $31,120 million. In physical terms, the volume of global exports posted robust gains, increasing steadily at an average annual rate of +5.2% from 2007-2016. In value terms, the trend pattern also remained positive, but it was subject to somewhat noticeable fluctuations over the last three years, reflecting the unstable raw material prices, mainly the prices for cereals. Germany (1,336,000 tonnes), France (701,000 tonnes), Belgium (659,000 tonnes), the U.S. (654,000 tonnes), the Netherlands (602,000 tonnes), Canada (599,000 tonnes) and Mexico (555,000 tonnes) were the main global suppliers of bread and bakery products, with a combined share of 45% of global exports. From 2007 to 2016, Mexico (+11.4% per year), the Netherlands (+7.3% per year) and the U.S. (+6.0% per year) were the fastest growing suppliers amongst the major exporters. Despite this, the share of Mexico in terms of global exports increased only from 3% in 2007, to 5% in 2016; the shares of the other countries remained relatively stable over the same period.

Now we must refer to the import data. The volume of global imports totalled 10,921,000 tonnes, which equated $30,382M in 2016. The import dynamic was generally in line with exports - these trade flows globally complement each other. In 2016, the U.S. (1,420,000 tonnes), the UK (917,000 tonnes), France (799,000 tonnes) and Germany (743,000 tonnes) constituted the main destinations for bread and bakery product imports, together making up 36% of the total volume. Amongst the major importing countries, the U.S. (+6.2% per year) indicated the highest annual rates of growth from 2007 to 2016. It was followed by France (+4.5% per year), the UK (+4.4% per year) and Germany (+4.4% per year); the majority of the other importing countries also indicated an increase in their bread and bakery imports. Given a moderate increase in all the major countries, their shares in terms of total imports remained relatively stable throughout the analyzed period. It can be concluded that the U.S., the UK, France and Germany remain largest bread and bakery importers.

After we examined closely bread industry on a global and European level it is time to scrutinize the industry on a local level. Bread industry is very important for the economy of the country because bread is invariably present in our menu. Statistics show that around 360,000 tons of bread are produced every year, about 60-65,000 tons of fresh bakery and confectionery products and 12-13,000 tons of crunchy bread and rusks. Over 99% of domestic bread consumption is satisfied by local production and the variety of products offered to the market is continuously expanding. Bread exports have grown from just over a thousand tons in 2011 to 4,7 thousand tons in 2015. With a relative share of 5% of the country's total agricultural exports for 2015, bakery, pastry and confectionery products are generally at one of the leading positions in the export of agricultural products after wheat, sunflower, sunflower oil, and tobacco products. The present study attempts to make some market analysis using data from NSI and 'Regal' Magazine.

Bread industry is characterized by extremely high competition. Players in this market are both industrial manufacturers and small bakeries. What is typical for the sector is high production costs and minimum margins of over 10%. The level of fixed costs is about 80% of the product's consumer price and the variable costs are approximately 10%. The industry is highly sensitive to fuel prices, agricultural production and political and economic factors.

Consumer demand is "super-elastic" - an increase in the price from 2% to 5% can lead to a decline in sales with up to 10%. The sector is tempting in financial value, which has grown progressively over the last decade.

The comparison of official market volume statistics over the past 10 years shows a steady trend in value increase. This is due to the increase in the average price per kilogram of bread with almost 100%.

The technical analysis of market volume in kilograms shows a permanent regression of -37%. Market decline is a steady trend that develops smoothly. This is an indicator of a change in habits of customers and mostly in the demand.

The analysis of the price growth per kilogram of production shows that the increased volume of the bread market in value is due to rising prices. At the same time, the market volume in kilograms is.
declining, which leads to the assumption that the high price is due to rising price of the raw materials used in production. The declining volume in kg and at the same time the rising prices leads to competitive activity in the direction of decline margins in the profit margins.

Consumption of bread and bakery products is steadily decreasing. The decline in consumption is with 37% in 2013 compared to 2001. In general, the consumption of bread is declining due to a change in nutritional habits of Bulgarians. There has been an increase in demand for new types of bread with healthier ingredients such as full grain bread. The group has an average market volume of 5 kg per household on an annual basis, the price rising to 3-4 lv. per kilogram. (See Fig. 2).

Over the past 10 years, this group has an increase in consumption in kg, with over 100% but as a share of total consumption it remains minimal at a ratio of 5 kg to 208 kg.

Market trends largely correlate with changes in consumer demand, which can be differentiated into two groups. Consumers from the first group are looking for new, healthier types of bread. The market trend here is towards a growing assortment of whole grain and multigrain bread. The second group covers consumers who prefer classic types of bread. The trend in this group is reduction of the quality and standard weight of the bread. There has been a drop in the accepted standard for weight of the bread from 1 kg to 700 g or less since 2006.

Consumer analysis plays a key role, as consumers determine market trends and their stability. According to a study of the International Association of Industrial Bakery for 2013, updated in January 2015, Bulgaria is the largest consumer of bread in Europe (95 kilograms a year per person) and is ranked first in the market share of industrial bakeries (87%). The survey, which includes 12 EU countries plus Turkey, Russia and Ukraine, shows that the average bread consumption of Europeans is 59 kilograms per person a year.

Only Turks consume more bread than Bulgarians - an average of 104 kg per person a year. According to the aforementioned research Turkey is the largest producer of bread - 8.3 million tonnes in 2013, while Bulgaria produced 689 000 tonnes for the same year. Bulgarians buy bread according to two criteria - softness and volume. But as it was mentioned above there is already a tendency for paying much attention to the label, i.e. the product content. Thus the desire for quality and healthy life becomes the engine for special and healthy breads, craft bread and bread with grains. They are rich in vitamins, minerals, fiber and are good for the health.

According to Stamenka Damyanova, Executive Director of ‘Hleboproizvodstvo & Sladkarstvo’ LTD, Troyan the tendencies in bread market are connected to what is modern in Europe and also to the types of bread Bulgarians used to consume in the past but have now forgotten such as bread from spelt which will be modern in the following 7, 8 years. Trends are mainly for smaller bread enriched with more fiber – made from whole grains or rye, resembling the so called ‘superfoods’ – their aim is to give all the necessary vitamins and minerals with one slice. People prefer healthy bread with less white flour and more seeds and grains (millet, oats, sesame, sunflower, flax, etc.) which give a specific flavor and aroma to the bread. Last but not least in the tendencies comes the fermented bread which is extremely healthy, it has no GMO and improvers.

According to Mariana Kukusheva, Chairman of the Branch Chamber of Industrial Bread Producers and Confectioners in Bulgaria, the three types of bread which are most sold are the breads by an approved standard – traditional white bread, whole wheat bread and ‘Dobrudzha’.

When we refer to sales in the industry it could be said that most traders are oriented to offering freshly baked bread, primarily in small size. Almost half of bread purchases are made in independent supermarkets and grocery stores. The big commercial chains come in the second place with 25 %, followed by specialized shops and the craftsmen who produce and sell on the spot.

There are 1099 companies, producers of bread and bakery products registered in the Branch Chamber of Industrial Bread Producers and Confectioners in Bulgaria. A large number of them are small producers with insignificant production and without significant influence on the local market. Employees in the industry are about 13,000 - 7,000 in the industrial production and 6,000 as free lancers.

Sales of bread and bakery products are distributed between craft and industrial bread production in a ratio of 25% to 75%.

If we want to understand how the price of bread is formed we should examine some data. According to information from producers and independent market analysts, flour represents approximately 49% of the unit cost. Electricity costs account for 11% of the price, wages and insurance - around 16%, logistics and distribution - 10%, and 4% - other costs. That is, approximately 90% of the product's price is an intermediate consumption of resources.
Bread and bakery products market is extremely prone to changes in the price levels of raw materials and energy resources, which determine the overall intermediate consumption of production resources. There is a tendency for a rise in the price of bread from the beginning of 2018 not only because of the rise of the employees’ insurance, the price of electricity and fuel but mainly because of the bad harvest as grain as a basic raw material for the bread and bakery sector. The quality is law but at a high price which requires an import.

This tendency is typical not only for Bulgaria, according to the International Grains Council the global grain harvest in 2018/2019 is 721 million tons which is 16 million less than the previous season – 2017/2018.

Another important factor in the bread and bakery products market is the informal sector. Manufacturers and representatives of branch organizations claim that price-determining factors are the firms which operate in the so called ‘gray economy’.

Bread is a commodity of high public and political interest - key to low-income groups and attractive to politicians who have repeatedly put pressure on producers in times of rising prices of raw materials. This makes the sector unstable at political turmoil.

The price of the bread absorbs and compensates for the sharp movements in the price of the main raw material. That is, whenever the price of wheat rapidly grows, there is an increase in the price of bread but it is moderate. In a sharp decline of the price of wheat, the price of bread also goes down, but slower and to a lesser extent due to the stock accumulated at the previous period. The energy resources such as electricity and fuel have similar impact – when their price goes up, the profit margin compensates for the rise in the prices as opposed to profitability.

Given the market trends and the weight of intermediate consumption in the total value of the price, the precision of the preliminary evaluation, the sizing of the market and the compliance with the production plan are extremely important for manufacturers.

Even minimal discrepancies between production and its realization can lead to production below the critical point of sales, i.e. to an operating loss. There are some other important requirements for manufacturers. Quality bread must meet the food safety standards to ensure that the consumer is assured of its consumption. In order to be competitive on the market, companies have to comply with certain conditions in the bread industry, according to modern standards that meet the requirements of food safety, to have developed self-control systems - HACCP (Food Safety System) and have ISO 9001: 2000 (Quality Management System).

**Problems on a global and a local level**

Consumers’ health awareness continues to grow (Kearney, J., 2010). Health concerns regarding gluten and carbohydrate consumption has shifted consumer preference away from bread and baked consumption. Dieting trends and competition from other dynamic & healthier substitutes are anticipated to negatively impact the global bread and baked food industry over the forecast period (2018-2023).

Though certain bakery products have witnessed demand growth in the recent years, they are still plagued by high sugar and fat content, which is projected to negatively impact the industry. Increasing awareness regarding negative health effects is a key factor expected to subdue the market in the near future.

Industry participants have taken ardent steps and invested heavily to produce innovative products and novel baking ingredients. Constantly changing consumer preferences have encouraged companies to continuously develop different products to cater to the growing demand.

R&D initiatives to develop healthier food products promise ample growth opportunities for industry participants. Technological advancements that increase efficiency and reduce operational costs promise abundant opportunities for industry participants over the forecast period.

Different regions are characterized by different dietary habits and preferences. Regions such as North America and Europe are dominant bread consumers. However, the market in these regions has been under pressure over the recent past. Consumer preference shifting away from industrially produced eatables due to health and hygiene concerns has resulted in lower demand.

Such a trend has resulted in artisan bakeries as well as alternative baked foods witnessing a brisk growth in the recent past and is presumed to continue over the forecast period. Health concerns have resulted in declining demand for white bread and other processed baked foods in North America. This trend coupled with increasing raw material prices for wheat and sugar is anticipated to put a downward pressure on the regional market.
After discussing the problems related to the industry on a global level it is important to outline the problems on a local level.

One of the main problems in Bulgarian bread industry is the lack of qualified workforce and the fluidity of labour. There are enough markets, a lot of opportunities for application for EU projects and all the necessary professional equipment but when there aren’t people willing to work and improve their skills, this is a serious problem for the industry.

Another big problem is the informal sector and the unfair competition.

According to information from the National Statistical Institute, the consumption of bread for a year has decreased from 22.2 kg to 21.9. The explanation for this is that the NSI works with official data submitted by the manufacturing companies. In fact, it consumption is not reduced, but the gray sector is growing. Incorrect firms declare less than they have actually produced. The National Branch Union of Bakers and Confectioners claim that the situation will change within a year with the adoption of the new Food Law, which will regulate the market. The new Food Law sets out the criteria which an entity from the food sector has to meet. The measures in the law will be in favor of health and good consumer awareness.

Conclusion
Different regions are characterized by different dietary habits and preferences but as a whole, bread is a product which will always be present in our diet. In Bulgaria it has a special symbolic meaning and it is not surprising that Bulgaria is the second largest consumer of bread in Europe in spite of the problems related to the industry.

The bread and baked food market has witnessed several acquisitions and divestitures in the recent past. Companies are taking such strategic initiatives with an aim to increase their production capacity, develop their network and enhance their product portfolio. They are striving hard to introduce novel products in the market and gain a strong foothold in the developing markets. Their innovations are connected to the creation of healthy products as this is the preference of customers and as well as the future tendency.

Acknowledgments
Throughout the entire research process, we were fortunate to receive the support of many people. Without their backing and encouragement, this work would not have been possible. We would like to acknowledge and thank prof. Bozhidar Hadzhiev for his unwavering support over the last several months. Since we first began working together he has been instrumental in our research and professional development. The authors also would like to thank the company “Hleboproizvodstvo & sladkarstvo” LTD - Troyan, and personally Stamenka Damyanova - Executive Director for the extremely useful, up-to-date information and the opportunity of conducting the research in industrial conditions.

References

International Food Information Council, 2006; International Life Sciences Institute, 1999.


New Food, Russell Publishing LtD, Court Lodge, 2018, pp. 30-32.


Average household consumption of main food products. http://www.ksi.bg/

Bread industry Analysis, Published January 2017.
https://www.regal.bg/novini/proizvoditel/2017/01/25/2906573_prodaibite_na_hliab_i_hlebni_izdelia_sa_narasnali_do/

Bread Market report, Published 2007.
http://www.bread-industrial.org/market.html

Europe Bakery Products Market Size, Share, Growth, Trends and Forecasts (2018-2023), Published August 2018.
https://www.mordorintelligence.com/industry-reports/europe-bakery-products-market
Fig. 1 Global Bread Market, 2017
Source: Report on Bread Market by Mordor Intelligence, published August, 2018 & personal calculations

Fig. 2 Average cost per kilogram (in levs)
Source: NSI & personal calculations