THE COMPETITIVENESS OF HUNGARIAN MICRO-ENTERPRISES IN THE PASTA MARKET

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ABy analysing the long-term competitiveness of Hungarian dry pasta making micro and small businesses, I intend to explore its strategic potential. The changes in the competitiveness of the dry pasta sector in Hungary between 1969 and 2019 were analysed with the help of contemporary periodicals from the database of the Hungarian Agricultural Museum and Library. The changes in the competitiveness of the Hungarian dry pasta market over the period 1969-2019 were analyzed according to the six aspects of diamond model: factor conditions, demand conditions, corporate strategy, structure and rivalry, relating and supporting industries, government regulations, change. Looking at future trends in the dry pasta market, the bidirectional impact on the competitiveness of the pasta market will be affected. One effect is to move towards horizontal networking as a result of globalization, making the pasta company that is able to negotiate better in the food supply chain more competitive. The other effect is the trend of local patriotism, which stimulates the development of micro-regions and originates in the initiative of the locals: innovation of flavours, innovation in raw materials, possibilities of Hungarian ethnocentrism. In addition, retail brands are expected to grow further. As retail chains do not pass on any gains from the increase of their export volume to the processors, the manufacturers' own brand is weakened. The study provides a long-term overview of the changes in the competitiveness of companies operating in the dry pasta market. There has been a tremendous change over the last eighty years with the innovative transformation of the pasta industry. At that time, almost all pasta products were made at home, and today the pasta group is competing for housewives by employing industrial designers.

KEYWORDS: entrepreneurial strategy, competitiveness, Porter's Diamond-model, pasta industry innovation

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1. INTRODUCTION

The Hungarian pasta industry is currently saturated, with high concentration and fierce competition. Viable strategic decisions for micro and small businesses in smaller regions are becoming more and more important. I was curious about the entrepreneurial spirit in the dry pasta sector today and how the long-term competitiveness of the business has been changing (PORTER, 1980). Finally, I want to help viable pasta making micro and small businesses with innovative strategic decisions.

The proportion of Hungarian micro-entrepreneurs in the production of pasta is 72.2%. Small businesses own 23.8%. Medium and large companies are 6%. (89 firms) But in 2013, large companies accounted for 63.5% of the industry's revenue (HUNGARIAN NATIONAL REGISTRY, 2019).

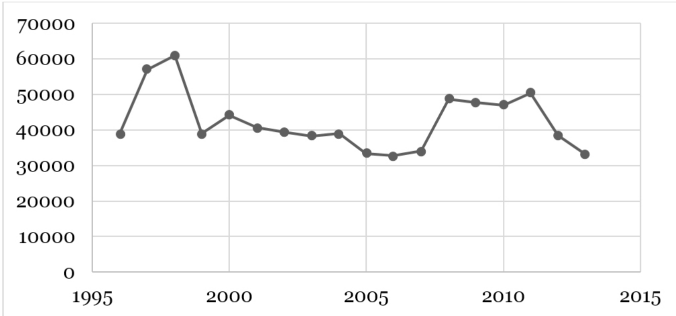

FIGURE 1

Number of Dry Pasta Companies in Hungary

Source: Author's own compilation from the Hungarian National Registry

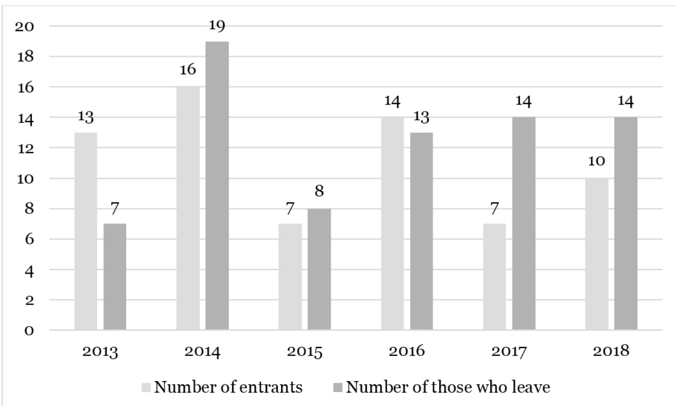

FIGURE 2

Number of Business Start-Ups and Terminations (2013-2018)

Source: Author's own compilation from the Hungarian National Registry

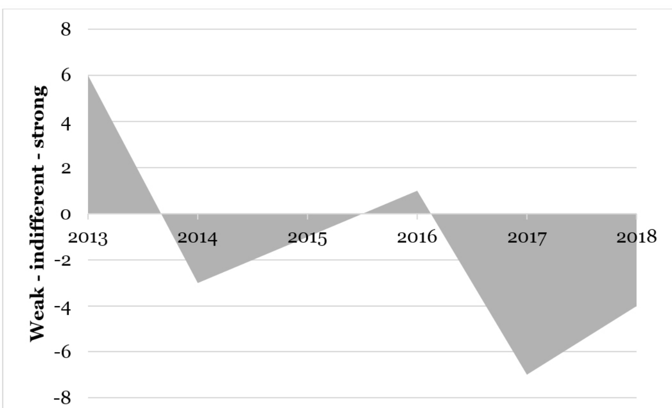

FIGURE 3

Entrepreneurial Trends in the Pasta Sector (2013-2018)

Source: Author's own compilation from the Hungarian National Registry

Figure 1 shows that the number of pasta entrepreneurs in the Hungarian dry pasta market has been decreasing between 2013 and 2019; in addition, the number of new entrants has been decreasing since 2014 and the number of exiting enterprises has been increasing *(Figure 2)*. The motivation of entrepreneurs is reduced *(Figure 3)*.

The third figure shows the volatility of weak, indifferent and strong entrepreneurship (entrepreneurial motivation). The decline in the entrepreneurial spirit of dry pasta is due to the fact that pasta production is one of the concentrated sectors in Hungary. In 2013, there were 151 companies in the industry, the first five companies accounting for 70.3% of the industry's revenue. In the same year, the top 10 companies accounted for 80.9% of sales in 2013. According to the Agriculture Report, this value in 2016 is CR5 68-72% and CR 10 80-82% (DORFMANN, 2018).

2. Material and Method

Innovation opportunities that are so important for strategic decisions are considered in the long term from manual technology to future trends. The changes in the competitiveness of the dry pasta sector in Hungary between 1950 and 2019 were analysed with the help of contemporary periodicals from the database of the Hungarian Agricultural Museum and Library. In the first phase, I observed quantitative changes in pasta products in the socialist deficit economy (1950-1989). In the second part I noticed the differentiation of dry pasta varieties (1970-1989) (LEHOTA, 2001). In the third phase, the pasta market became saturated (1990-2006), competition intensified, and the black and grey economy appeared. In the last phase (2008-2019), the market share of the noodle brands of the retail chains increased, and this phenomenon was first called “brand cannibalism” in the report on the Hungarian agricultural economy.

Competitiveness became the subject of analysis around 1980, when economic competition between national economies intensified (LEHOTA, 2010). Several models have been described at the micro, meso, and macro levels, and this study explores the decades-long process of competition in the pasta industry. For its presentation, the diamond model (PORTER, 1998) is considered to be the most appropriate, which presents competitiveness as the five components of regional competitiveness: resources, demand conditions, industry structure, strategy, related industries, role of economic governance, and incidental events are taken into account. I supplemented the methodological analysis of sources (Hungarian Agricultural Library) with relevant articles of the Food and Trade Magazines. These articles are subjective reports and therefore the source cannot be considered as a classic scientific background.

3. Results

3.1. Factor Conditions

The resources of the pasta sector have been changing from time to time from natural, physical, human and research and development aspects (LUKOVICS, 2008).

In the age of planned economy (1950-1969) the dough was made in households, in addition to the purchase of automatic production lines from the French company Demaco, but also hand kneading technology is present in large industrial companies. The number of people employed in the food industry fell from 52% to 28% in ten years. During the “merry barrack” period. (1970-1989) a high degree of automation started, and in addition, more and more cooperatives were processing their own raw material (KAPALYAG, 1970). During the change of the regime period (1990-2006) the concentration of the food industry is high. Companies in the pasta sector had serious management problems (MOHÁCSI, 1994). Big companies spend high sums on development (CSODÓ, 1998). In the fourth period (2007-2019), investments in the pasta industry are aimed at capacity building and higher sales. The big companies are setting up their own quality management system (SZÉKELYHIDI, 2016:168) and Gyermely Zrt., which is building a new plant, stands out to be the most efficient pasta factory in Central Europe.

3.2. Demand Conditions

I was curious about how pasta market demand and consumer income had changed. In the age of planned economy (1950-1969) consumers' income increased by 6 percent till 1969. Demand for dry pasta has increased rapidly. The export of dry pasta was conducted by four companies with government approval (TANÁCS, 1965). Local border trade is significant, where dry pasta is a significant import product. In the era of the merry barracks (1970-1989) over 12 years the consumption of dry pasta increased significantly, and the range of dry pasta rose by more than 60 percent. Supply improved. Foreign trade is still characterized by small-scale trade in goods across borders. The Hungarian-Yugoslavian and Hungarian-Romanian border trade is expanding, and the import of pasta is significant. In the Hungarian - Soviet trade, dry pasta is already an export item.

At the time of the change of regime (1990-2006), inflation was galloping, production fell, unemployment and booming trade (black economy) rose (LAKATOS, 1992). The annual domestic pasta consumption increased from 2-3 kg / person / year to 6-7 kg, and the long-forgotten raw materials, millet, corn, brown rice were replacing dry pasta.

By the end of the eighties, as a result of rising energy, water and sewage charges, 40 percent of the population was no longer able to pay the cost of housing (T. Á. 1992). Competition in the saturated pasta market was intensifying as large quantities of pasta come from the EU (MOLNÁR, 2005). In the fourth period (2007-2019) pasta was one of the most popular Hungarian dishes. 87 percent of those surveyed are particularly happy to consume it (CZAUNER and SOMOGYI, 2008). Energy and food prices are high, but inflation is slowly declining, but we still had to pay 24.2 percent more for dry pasta than last year.

Until the 1970s, the manufacturer's industrial brands dominated the consumer market. With the concentration of retail chains, the retailers' own brands, which were initially of lower quality, entered the pasta market. However, the third, fourth generation, due to the higher quality assurance system, is of similar quality and cheaper than the manufacturers' brands. Nowadays, brand has become a symbol that is a tool for competition in the retail industry gaining more and more significance. The dry pasta market is further differentiated by the fact that the retail brand makes a higher profit than the manufacturers' brand because the retail network does not return the extra profit from the sale to the manufacturer (SZÉKELYHIDI, 2016:152).

3.3. Corporate Strategy, Structure and Rivalry

Examining the dough industry by its structure, concentration, capacity, entry barriers, corporate strategies, and brand change, half of the pasta production was in Budapest. ABONYINÉ (1988) in the planned industry phase (1950-1969), with the structure of the industry dominated by great canning cereal trusts and smaller cooperatives. The range of dry pasta is expanding at 14 factories in the Canned Food Trust.

At the time of the "merry barrack" (1970-1989), the use of eggs in the additional branch of the cooperative provided an idea for the preparation of dry pasta, (CSERKUTI, 1986), and in addition, council companies also appeared. A pasta factory was built in Dunakeszi and Békéscsaba (K. I. 1971). The pasta industry had sixteen sites at that time (ISTÓKNÉ, 1981). During the change of the regime (1990-2006) the structure of the dry pasta industry was monopolized, many people lost their jobs in the early 1990s, and many began producing dry pasta (BOGNÁR, 2000). In the fourth period (2007-2019) the concentration of the pasta industry in Hungary was further strengthened (CR5 68-72%, CR 10 80-82% (R/8386 REPORT, 2016). Four-egg pasta dominates the market (38%) and the demand for pasta is also constantly increasing (CZAUNER and SOMOGYI, 2008).

3.4. Relating and Supporting Industries

The Bánkút wheat variety served as the basis for suppliers, which was used for the production of dry pasta during the planned economy period (1950-1969). During the "merry barrack" era

(1970-1989), the Minaret and Basa varieties of winter wheat were grown (NAGY, 1985). The Hungarian pasta industry did not require durum wheat at that time (BEDŐ, 1979).

A decade later, durum flour appeared as a new ingredient (MOHÁCSI, 1988). During the change of the regime (1990-2006) the dry pasta made from wholemeal flour became popular, and the colourful pasta enriched with vegetables also became popular. In the fourth period (2007-2019) the popularity of carb-light products increased. The most popular are organic food, followed by reduced allergen dry pasta, and gluten-free pasta (BARTELME, 2019).

3.5. Government Regulations

In the era of planned economy (1950-1969), the economic development programmes of five-year plans regulated the entire national economy, including the pasta industry. The selling price (official price) was fixed, the production price was also fixed together with the average wage. During the "merry barracks" (1970-1989) period, free prices were introduced in addition to official prices, which proved to be a major barrier to innovative (e.g. diabetic dietary) product development (BÚZÁSI, 1972). The most characteristic feature was scarcity of products, which resulted in poor quality: eggshells and wood shavings were found in the dough (K. I., 1971).

At the time of the change of the regime (1990-2006), the food book, which tightened quality control and modernized the laboratory background, was being translate (V. I., 1992). In the fourth period (2007-2019), government decisions take into account climate changes, changes in market demands, and the fact that the sector is undergoing a generation change (NAGY, 2019).

3.6. Change

At the time of the planned economy, the Cold War and the economic crisis also caused great problems in the pasta industry (1950-1969). During the "merry barracks" period (1970-1989), the oil crisis forced economic governance into a new direction. Hungary became indebted, which led to austerity measures that resulted in a price explosion. Even during the period of the regime change (1990-2006) the enterprises were shaken by the economic crisis. In August 1998, the Soviet-Hungarian pasta market stopped. The outstanding balance of the members of the Hungarian Pasta Manufacturers' Association in Russia exceeded one billion forints, which resulted in the stoppage of deliveries. The Russian crisis, which erupted in August, was a serious blow to the lives of about thirty larger and 80-100 smaller companies (CSODÓ, 1998). In the fourth period (2007-2019), the economic crisis of 2007 eroded the financial position of pasta companies. In addition, toxin contamination also occurred and one of the fusarium fungus toxins was found in food safety investigations.

4. CONCLUSION AND SUGGESTIONS

Table 1 summarizes the changes in the competitiveness of the Hungarian dry pasta market over the period 1960-2019 according to the six aspects of Porter's diamond model. Initially (Period 1), resources were characterized by both manual and mechanical technology and the purchase of automatic production lines. The construction of a large canning concern (Period 2) was followed by the disintegration of the food structure (Period 3). Nowadays (Period 4) the pasta technology revolution is in the field of pasta drying, and the future trend is the experimental production with 3D pasta printers.

TABLE 1

Changes in the Competitiveness of the Hungarian Dry Pasta Industry Can Be Summarised on The Basis of Porter's Diamond Model as Follows

	Planned economy 1950-1969	"Merry barracks" 1970-1989	Regime change 1990-2006	Brand cannibalism 2007-2019
1.Factor conditions	Automated and manual technology	Large-scale investments	Breaking up of concerns	Technological revolution
		Pasta trusts	Privatisation	Gyermely the most modern
				3D technology
2. Demand conditions	Bad quality	Greater scale exchange rate along the border. Better quality and range of products	Decreasing solvency	Explosion in pasta price
	Small-scale exchange trade along the border		Greater role for supplementary cereals	Higher retail trade market share over the producers' brand „Brand cannibalism"
	Scarcity of foreign exchange			
3. Corporate strategy, structure and rivalry	There is only one national canning organisation in the market with its 14 factories running	New entrants Dunakeszi, Békéscsaba,	Market share of the durum pasta increases	The market share of "healthy" pasta is increasing
		New raw materials	Revenue decreases below the profitability level	Offering innovative products with oriental orientation (rice, pasta)
		"Durica" brand appears		
4. Relating and supporting industries	Bánkút wheat becomes widespread	Autumn wheat varieties spread	Experimental production of Durum wheat	Dough industry supply chains globally
	Pasta making secondary plants utilise the egg production of cooperatives	Curcuma appears to make eggs more yellow	Application of beta carotene that makes eggs more yellow	Vertical micro-regional cooperation, locally
5. Government regulations	Forced industrialization, collectivization, and forming cooperatives	Planned economy, five-year plans, brigade competitions	Introduction of the Hungarian Food Book	EU-level food quality expectations
	Mandatory reporting	Family models with two breadwinners.	Developing a quality controlling laboratory network	Three-level quality control (mandatory, optional, recommended)
	Centrally planned economic system			
6. Change	The grave and constant scarcity of basic food also characterises the dry pasta market	Early 1970's: oil price explosion	1998 the trust in Békéscsaba disintegrates as a result of the	2009 fusarium disease
	Introduction of a new economic mechanism	1981 asking for World Bank loan to avoid the financial crash	Russian crisis	Egg price explosion as a result of the EU's cage regulation
			Pasta industry debts endanger production	2017 fipronil scandal because of the contaminated eggs

Source: Own compilation

At first (Period 1), the domestic consumer demand is characterized by a large deficit economy, the dry pasta product is of poor quality. Foreign trade is limited to small-scale barter trade. In the second period, the quality of pasta and the range of dried pasta products have increased, but small-scale barter trade continues to dominate foreign trade until the mid-1970s. After the change of regime (1990-2007), the supply side of the pasta market is depressed at prices, on the demand side the solvency of consumers decreased. At the beginning of Period 4 there was a 24% pasta price explosion. Retail brands have continued to gain market share at the expense of manufacturer brands, and future trends signal an increase in "brand cannibalism."

The pasta industry structure and entrepreneurial strategy in the first period belonged to a single canning trust, and some small cooperatives produced dry pasta. As a result of the large investments made in the seventies, more and more new entrants appeared on the pasta market, as well as the pasta brands and the supply of durum pasta. After the change of regime, the revenue of the pasta industry fell below the profitability level, and as a result, the structure of the pasta industry was reorganized. In the fourth period, the supply of the pasta industry became transparent from farm to fork. The entrepreneurial strategy focuses on 'healthy' products.

The related and supporting pasta industries were initially based on a single wheat variety and the eggs were utilised by the secondary branches of the cooperatives. In the second period, winter wheat varieties also appeared, and durum wheat production began. In the fourth period, due to globalization, the pasta industry was integrated into the food supply chain (horizontal cooperation), and in the local environment, vertical cooperation at the subregional level is increasing.

Initially, economic management was based on centrally organized plan management; in the second period, foreign trade in dry pasta was still characterized by trade to the socialist countries. In the third period, the quality control laboratory network was developed, and the Hungarian Food Book was published, which, in line with European requirements, established the mandatory requirements for the production of dry pasta. In the fourth stage, the state set the quality requirements for the pasta manufacturers in three stages, the mandatory requirements, the optional solutions, and finally the recommended one, which serves the premium quality.

A series of accidental events were caused by the economic crisis. In 1960, there was a huge shortage of products. In the early seventies, the explosion of oil prices shook the Hungarian economy, which the World Bank borrowed. In the third period, the Russian market came to a standstill as a result of the recent economic crisis, when several pasta factories closed down. The fourth era was influenced by food-related scandals, in 2009 a flour-infesting fusarium infection raised the price of raw materials, followed by an egg price surge due to EU hen animal welfare regulations, and finally the fipronil scandal raised the price of eggs on the European pasta market.

Looking at future trends in the dry pasta market, the bidirectional impact on the competitiveness of the pasta market will be affected. One effect is to move towards horizontal networking as a result of globalization, making the pasta company that is able to negotiate better in the food supply chain more competitive. The other effect is the trend of local patriotism, which stimulates the development of micro-regions and originates in the initiative of the locals (LENGYEL, 2000).

4.1. Product Innovation Strategy Recommended for Pasta Companies

Innovation of Flavours

In Germany, in November 2015, injection-based pasta entered the market, bringing new flavours such as tomato-basil pasta, chanterelle-parsley and lemon-chives (SHOUKAS, 2013). Flavour innovation stimulates the emergence of premium products and generates the needs of sophisticated tastes of consumers (WITHAM, 2016).

Innovation in Raw Materials

Innovative raw materials such as ancient cereals and gluten-free variants are gaining popularity. Research into the need for gluten-free foods and ethnic influences will also have an innovative effect on rice noodle sales (SHOUKAS, 2013).

Possibilities of Hungarian Ethnocentrism

I did primary research between 1995 and 2016 in different regions of Hungary, looking for home-made pasta products that are not in the pasta market but are made in today's households *(Table 2)* (FEHÉR, 2016).

There has been a tremendous change over the last eighty years with the innovative transformation of the pasta industry. At that time, almost all pasta products were made at home, and today the pasta group is competing for housewives by employing industrial designers.

Table 2

Innovative Pasta Forms: "Old-New" Products (The Original Hungarian Names Were Not Translated)

	gala soup pasta	everyday soup, stuffed pasta	garnish pasta	baked pasta
from kneaded dough, rolled	macskatalp, tészta-gomba, rest csiga	kötött tészta, pacsirta tészta, göcs tészta	cifragaluska, rest kö-ret csiga, süni tészta	forgácsfánk, gyűszű-fánk, sulyom tészta, rózsafánk, hólabda
from rolled dough, folded	tyúkfül, papgallér, rucatalp, gyűszűfánk,	táska tészta, batyu tészta, párnácska tészta		ugrófánk, virágfánk, rózsafánk.

Source: Own compilation

5. Summary

This study explores the decades-long process of competition in the pasta industry. I supplemented the methodological analysis of sources (Hungarian Agricultural Library) with relevant articles of the Food and Trade Magazines.

The competitiveness of the dough-making micro-enterprises will be reduced, viable businesses adapt to the market faster. The decline in the entrepreneurial spirit of dry pasta is due to the fact that pasta production is one of the concentrated sectors in Hungary. The article presents the six elements of competitiveness: resources, demand conditions, industry structure, strategy, related industries, role of economic governance, and incidental events are taken into account.

Between 1950-2019, the development of the Hungarian pasta industry is divided into four periods, planned economy (1950-1969); "merry barracks" (1970-1989); regime change (1990-2007); brand cannibalism (2007-2019). In the pastry market, there are two-way network development, vertical and horizontal. The other effect is the trend of local patriotism, which stimulates the development of micro-regions and originates in the initiative of the locals.

Product innovation strategy recommended for pasta micro-companies, innovation of flavours, innovation in raw materials, possibilities of Hungarian ethnocentrism, innovative pasta forms: "old-new" products.

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