

From Prosperity to Obscurity 150 Years of the Hungarian Milling Industry

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Abstract: The aim of this study is to present the development of the Hungarian milling industry in the last 100 years. It examines the main factors affecting the Hungarian mill industry, the challenges facing the sector and analyses the responses to them. During this period, not only was the structure of economic production constantly changing, but the international agricultural market was also fundamentally transformed. From time to time, the market and logistics networks established in the previous decades were torn down, while new players also sought a place in world trade. The structure of this study is chronological: after a brief presentation of the 19th century boom of the Hungarian milling industry, a separate subchapter (2.) deals with the period between the two world wars, the changes in the period of socialism (3.), and finally with the specifics of the period following the 1989 regime change. It considers the directions, strengths and weaknesses of the Hungarian milling industry. The successes and failures of the responses to the different types of challenges provide many lessons for the present as well.

Key Words: Agriculture, Balance of trade, Food Industry, Mill Industry, Retail food chains, Sustainability

1. INTRODUCTION

The Hungarian milling industry gained world fame as early as the 19th century. At the end of the century, Budapest was the largest milling centre in Europe and the second largest in the world after Minneapolis. It was able to organise mass production in a way that encouraged a whole series of technical inventions, as a result of which the grinding capacity of the Hungarian milling industry far exceeded the level of domestic grain production, especially owing to the modern roller mill. With the import of grain from the Balkans and in the export of processed grain, it had become a significant factor in the European market. At the turn of the century, Hungarian flour was exported to twenty countries.

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2. THE RISE OF THE MILLING INDUSTRY

From the 1830s onwards, the food industries related to agricultural production, especially the milling industry, showed rapid development. Prosperity was also fuelled by a significant increase

in flour exports. According to statistical data collected by Károly Keleti, while the annual export volume of flour was 18,600 tonnes between 1840 and 1850, 400,000 tonnes of flour had already been exported abroad by 1869. Thanks to a stable market, the sector was able to raise significant capital as early as the 1850s, thus providing financial backing for technological developments (Kaposi, 2002).

The previously small-capacity, hydro-powered mills began to be replaced by steam mills, whose numbers and output increased tenfold between 1852 and 1862. Although new hydro-powered, wind, and animal-powered mills were put into operation even during this period, as competition intensified after 1875, they were permanently pushed out of production (Komlos, 1990).

Austria's and Germany's rapidly growing hunger for flour made it necessary for the Monarchy to secure duty-free imports of cheap Romanian grain through a trade treaty in 1875. Thereafter, flour exports to German-speaking territories increased from 47,000 tonnes to 83,000 tonnes in a single year (from 1875 to 1876). In light of the increase in demand, as early as 1878, the Hungarian mill lobby was fighting to make the grain on which the flour (meal) was based duty-free, regardless of the country of origin, and not only from Romania, if it was exported within a year. This was the so-called milling turnover, which played a major role in increasing the volume of exports to Germany to 125,400 tonnes (Szónyi, 1923).

Table 1. Changes in the number of mills

Types	1863	1873	1885	1894	1906
Steam and industrial mills	217	492	910	1843	2075
Watermills	13474	17249	12520	15417	13425
Windmills	475	854	650	712	691
Animal-powered mills	7966	6361	3197	2033	619
Motorised mills	-	-	-	-	494
Total	22132	24956	17277	20005	17304

Source: Halakovics, 1961. p. 709.

3. THE MILLING INDUSTRY IN THE DECADES AFTER THE FIRST WORLD WAR

The Treaty of Trianon led to serious disparities between raw material supply and processing capacity on the one hand, and production volumes and uptake markets on the other hand. It soon became apparent that in the absence of markets, the mill, sugar, beer, and leather industries were unable to take advantage of their capacities, which had been scaled to supply the Monarchy. While a significant portion of the raw material supply, including the most important cereal-producing areas (Dél-Bácska, Bánát, Csallóköz) was severed, the processing industrial capacity and the Budapest mills were concentrated within the remaining territory of the country.

The mills in Budapest also lost the Serbian and Romanian sources of wheat due to the cessation of milling-related trade traffic. Previously, the Budapest milling industry had obtained 50-60 percent of its raw material from the lost areas. Based on milling capacity data, half of the capacity remained in the truncated country. It is estimated that the remaining mills were able to grind 64.5 million cwt of grains, although the country's grain production only averaged 24.2 million cwt in the early 1920s. In 1913, grinding was being performed in 13 mills in Budapest, in contrast to 1921, with the other plants being out of order. The still operational mills were also working at reduced capacity. The redundancies soon resulted in the closure of the factories; the mills became warehouses and workshops (Kollega-Tarsoly, 1996).

During the war, the American milling industry completely conquered Western European markets, and in the years following World War I, only Austria

and Czechoslovakia remained viable consumer markets outside the country, but the Hungarian milling industry had to contend with competition from the French and German milling industries in these markets as well.

In the distrustful international environment between the two world wars, most states sought self-sufficiency, building and increasing their milling capacity, as a result of which the previously significant foreign consumer markets of Hungary continued to shrink. The period was characterised by the customs policy pursued by Austria and Czechoslovakia, which remained the only consumer markets from the territory of the old Monarchy until the 1920s. As a result of the reluctant customs policy of the previously most significant buyers, exports to these countries also fell sharply. These states, previously in need of significant imports, responded to the changed conditions between the two world wars with the rapid and state-subsidised development of their milling industries. Both countries provided greater discounts on grain imports than on flour imports. The autonomous agricultural duties of Austria in 1925 and of Czechoslovakia in 1926 greatly reduced Hungarian flour exports and increased grain exports. Therefore, the Hungarian mills could barely utilise 20-25% of their capacity, which also rendered their services more expensive, thus causing them to lag behind the competition with their prices. All this plunged the milling industry into a serious crisis (Eckhart, 1941).

While flour exports amounted to 256.9 million Hungarian koronas in 1913, they only amounted to 69.8 million Hungarian koronas in 1926. The milling industry used only 20 to 30 percent of its previously-available capacity, which rose to about 40 percent

by the late 1920s. The mills in the capital processed 1-7 cwt in 1920, 1.7 cwt in 1922, 2.1 cwt in 1923, 2.5

cwt in 1925, 2.2 cwt in 1926, 2.3 cwt in 1927, 2 cwt in 1928, and 5 million hundredweights in.

Table 2. Development of Hungarian flour exports to Austria and Czechoslovakia (metric hundredweight) between 1924 and 1926

Year	To Austria	To Czechoslovakia
1924	1.061.872	1.176.557
1925	637.991	908.651
1926	867.144	443.906

Source: Jacini-Müller, 1930

Yet the importance of the industry after the Treaty of Trianon is indicated by the fact that it accounted for 13-15% of the manufacturing output in the

1930s and surpassed the output of all other industries with the exception of the textile and iron and metal industries.

Table 3. Number of mills in Budapest and their flour production (1921-1933)

Year	Number of mills	Amount of ground flour (thousand cwt)	Flour produced 1921=100
1921	13	2741	100
1922	13	1655	60,4
1923	12	2104	76,7
1924	12	2235	81,5
1925	12	2518	91,9
1926	12	2219	81,0
1927	12	2288	83,5
1928	11	2477	90,4
1929	11	2727	99,5
1930	11	2476	90,3
1931	8	1690	61,7
1932	8	1558	56,8
1933	8	1612	58,8

Source: Szűcs, 1978. 77.

In the mid-1920s, production, which amounted to about 500 million Hungarian pengő, fell to 260 million in 1937. During the same period, the volume of exported mill products decreased from 2.3 million qq. to 0.6 million q. From 1939 onwards, state measures regulating grain and flour production appeared one after another. In the interest of local supply, the mills were banned from performing independent commercial activities and the price of crop stocks was locked from 1940 onwards.

In the following years, a flour and bread ration system was introduced. The state compiled a list of mills that were permitted to carry out milling activities locally. During the war, the coal supply of the mills also became a huge problem (Halkovics, 1961).

3. THE MILLING INDUSTRY IN THE PERIOD OF SOCIALISM

The nationalisation implemented after 1947 brought great changes to the milling industry. Fourteen of the major mills, with more than 100 employees in total, became state-owned in mid-1948, pursuant to Act XXV of 1948 on the Nationalisation of Industrial Enterprises, followed by the nationalisation of 28 other large mills. Their production and capacity accounted for just over 10 percent of the milling industry as a whole. The state milling industry became dominant at the end of 1949, when mills with a capacity of more than 10 tonnes per day or more than 10 employees were taken over by the state. The number of mills nationalised at that time was 661 and their daily grinding capacity was 12,045 tonnes.

Not long after, in 1951-52, about 700 small-scale mills were nationalised at a hurried pace. From then on, bread grain could only be ground in a state-run mill. To organise and manage the milling industry, the Milling Industry Directorate was established in 1948, which supervised the activities of the sector as a ministerial authority until 1962. The mills under

its management operated as companies with 9 milling centres in 1950 and as 19 county milling associations from 1951. Each conglomerate managed 20-80 mills (Halkovics, 1961).

By the early 1960s, the last wave of collectivisation marked the end of the socialist reorganisation of agriculture. The labour force no longer needed in agriculture was looking for work in the manufacturing industry. As a result, the market share of the milling industry, which had previously played a dominant role in food production, began to decline significantly, with the baking and pasta industry, as well as the meat industry gaining a much higher importance in domestic supply than before.

Between 1960 and 1976, the proportion of food consumption increased, and its structure changed significantly at the same time. The production of

some sectors of the food industry grew in line with the development of consumption, others significantly exceeded the domestic needs, and their products were exported to foreign markets in increasing quantities. The production of some industries was not able to satisfy the demand placed on them, partly due to their short supply of raw materials and partly due to their limited capacity. These trends further modified the structure of the food industry.

By 1967, all mills in Hungary were electrified. While in 1938, 75 kilowatt-hour of electricity was needed to grind a tonne of grain, by 1975, as little as 42 was sufficient. Although the milling industry had gradually shrunk within the food industry, it still played an important role in foreign exchange acquisition.

Table 4. Flour exports vs total food exports in 1976 (%)

Industry	Share of export sales in total sales	Export distribution by price in Rubles	Export distribution by price in a currency other than Rubles
Meat industry	17.5	11.8	88.2
Poultry and egg processing industry	34.2	9.9	90.1
Preservation industry	28.1	65.7	34.3
Milling industry	14.5	29.0	71.0
Vegetable oil industry	18.7	12.6	87.4
Wine industry	24.2	85.6	14.4

Source: Ipargazdaság, 1979

Table 5. Proportion of the largest export industries and ranking by foreign exchange output (foreign exchange earnings)

Industry	The share of exports within the total export volume of the food industry accounted for in Rubles	Ranking based on foreign exchange output
Preservation industry	36.4	5.
Milling industry	24.2	1.
Wine industry	18.3	2.
Meat industry	10.9	4.
Poultry and egg processing industry	7.0	6.
Vegetable oil industry	1.1	3.
Industry	Share of exports within the total export volume of the food industry not accounted for in Rubles	Ranking based on foreign currency revenue
Meat industry	33.6	4
Poultry and egg processing industry	26.4	3
Milling industry	24.4	1
Preservation industry	7.8	6
Vegetable oil industry	3.2	2
Wine industry	1.3	5

Source: Ipargazdaság, 1979

4. THE MILLING INDUSTRY IN THE DECADES AFTER THE REGIME CHANGE

In the period following the regime change, the organisational system of the milling industry was thoroughly transformed. This period of privatisation was accompanied by the streamlining of the product structure of the cereal industry. Small-capacity mills, feed mills, and grain storages were separated from the previous trusts and then sold independently. A big boost to this process was the fact that in 1993, in addition to smaller mills, small and medium-sized storage facilities and feed mixers were also sold. The privatisation of state farms and the transformation of cooperatives was taking place at the same time, during which feed mixers and storages were often transferred into private ownership (Schlett, 2014).

In the early 1990s, there was a significant overcapacity, mainly due to the fact that the decline in animal husbandry led to less and less demand for feed and thus grain. Cereals used for animal feed fell from 8.9 million tonnes in 1990 to 5.5 million tonnes

in 1994. Cereal companies struggled with severe liquidity issues in the early 1990s.

The privatisation strategy for the sector was adopted in spring 1993. A key element of this was the divestiture and rapid sale of smaller units and, in the case of the remaining assets, the sale of 25% of the county associations to producers, having been transformed into companies. The mills generally sold for 120-130% of the values determined by the state property appraiser, and the buyers were almost exclusively domestic.

During the privatisation debate, one important view was the marked opposition to the sale of dominant companies to foreigners to prevent a situation similar to the one faced by the vegetable oil industry. Therefore, a closed tender was recommended as the method of sale. Part of the privatisation picture was that the grain trade had been strongly interested in industrial ownership since 1991. Agrimill became a joint stock company and was one of the main initiators of the commodity exchange. Its main owner was Investor, a company which became majority English-owned in 1991.

Table 6. Development of milling (and feed) industry investments (million HUF)

	1990	1991	1992	1993	1994
Milling industry	3.179	2.052	233	474	1.213
Feed industry			1.319	870	931

The feed industry has been treated as a separate food industry since 1992.

Source: Mohácsi, 1996

Internal groups included workers, managers, and farmers. Areas related to the milling industry fall within the spheres of interest of the baking industry and feed users. Among external actors, a financial investor and the Hungarian Development Bank, acting as a reorganising bank in two cases, as well as commercial companies were also keen to participate.

Foreign traders and business investors were indirectly involved in the privatisation of the milling industry by being owners of traders and other companies that acquired property in the grain industry. The motivation of foreign professional investors was different. This is best illustrated by Goodmill in Austria. By acquiring ownership in Hungary, they were able to ensure that the Hungarian milling industry did not pose a serious competition for them in Austria.

By 1996-1997, the successor companies of the trust accounted for 70% of the production of the milling industry and 20-30% of the production of fodder, and a third of the storage facilities were also acquired by them. In 1995, 6,900 people worked in the milling industry and 7,700 in the feed industry.

Following the 1993-1995 wave of privatisation, a series of company mergers began in the period lasting until 2003. A significant number of obsolete mills with small capacity were closed by their owners, and many mills were closed by new owners after their acquisition. There is less and less room left for smaller players who have not been able to raise enough capital to modernise their company and technology and build new external and internal relationships.

With the consolidation, traders who did not pay for the grain they purchased, thus harming producers, disappeared and unreliable partners who did not pay on time also went bankrupt. There are fewer and fewer opportunities left for smaller players without a clear survival strategy, who have not been able to raise enough capital to modernise their company and technology, to build new foreign and domestic relationships. As a result of depressed flour and feed sales prices, more and more processing companies producing end-products became insolvent, leaving only the larger players in the market.

This process did not stop in the 2000s and the tough competition became even more and more fierce. In the 2010s alone, 10-12 major businesses closed down or merged into other companies. As a result of this process, large companies such as Cerbona, Cornexi and Szabolcs Gabona have disappeared from the domestic market. (Development opportunities ahead of the domestic milling industry, Agrárium, 2016).

At the turn of the millennium, milling capacity was double what was needed by the domestic market and flour exports decreased steadily in line with international trends, failing to exceed an annual volume of 100,000 tonnes in 2003. Oversupply due to overcapacity and reduced exports resulted in market disruptions.

After joining the European Union in 2004, there have been significant changes in each ownership group. Due to depressed prices and the strong expansion of Austrian-owned players, the domestic milling industry has had to face new problems. The Austrians built three new mills with large capacity and state-of-the-art equipment. In addition, by operating one of their companies in Baja Mill since 2011, they have achieved a nationwide presence. In contrast, a wave of liquidation swept through Hungarian-owned milling companies between 2010 and 2015: 10-12 major Hungarian companies ceased to exist or merged into other companies. In many cases, a company was purchased because one of its units was one of the large mills. The purchase of such a larger capacity mill meant that most of the flour market in the given area (county, region) was taken over.

Food safety, environmental and quality requirements significantly increase the minimum profitable farm size. And since most of the purchases are handled by a small number of large purchasing associations, food businesses must be able to provide a standard, uniform and high-volume supply (Lisányi, 2014).

As a result of the processes that started after 2004, automated large mills became dominant in Hungary. In some cases, the former unit was replaced with greenfield development (in Komárom or in the case of the Tiszapalkonya mill instead of the Miskolc mill), and almost all large mills are equipped with automated equipment today. It should be noted that while a large mill could previously give employment to 80-120 people, after the changes, 30-50 people are enough to operate a mill with a similar capacity. In 2011, 40% of flour production came from foreign-owned mills. In 2017, five large companies accounted for 73 percent of the total production.

In 2020, the so-called Mill Register recorded 52 operating mills with a wide range of capacity. The geographical location of the mills is partly based on historical traditions along road transport routes, the new mills however are typically located near a motorway. The biggest challenge for the milling industry is the concentration of the users of milling products.

In the relationship between the milling industry and traders, traders are clearly the stronger party. Although the importance of long-term relationships based on mutual benefits is undeniable, strong trade concentration is coupled with increasingly strong trade action against producer companies. Trade chains grouped in purchasing associations make strong use of their buyer power. There is a strong information and power asymmetry between the producer and distributor. Purchasers can achieve extremely low prices from vulnerable suppliers. In addition, retailers can achieve additional discounts on various items (60-180 days payment period, listing price, shelf money, progressive bonuses, quota deduction, campaign financing. They can cut 15-20% of suppliers' offer prices), thus, the margins of hypermarkets can be 20-35%.

The dominance of retail chains and their ability to dictate prices often led to a situation where the mills could not pass on their actual expenses in the selling prices. Due to the very low flour prices, large milling companies with a long tradition (Cerbona Zrt., Cornexi Zrt., Sikér Zrt.) went bankrupt. Their weak position is largely due to the excess capacity available (Bidló, 2019. pp. 300-302).

Despite of these, mill suppliers have a vital interest in reaching an agreement with retailers at any price, as most of their turnover is channelled through them and because large retail units provide them with a secure and high-volume market. If they do not agree to the dictated terms, they will be pushed out of the market. If a food manufacturer wants to sell its products in large quantities, it cannot avoid hypermarkets. Their market share is constantly growing, especially the role of locally baked bakeries has become more important in recent years (Lisányi, 2014).

It seems that the concentration process is not over yet either. The milling industry is stuck at a production level of 1.2 million tonne. In contrast to other food industries, the milling industry processes grain of domestic origin and is able to meet 100 percent of the domestic demand, meaning that Hungary does not need imports. However, mill products (flour, groats) and bakery products are

mainly placed on the domestic market, exports are only of minor importance.

5. SUMMARY

The Hungarian milling industry was built up and became world-class, producing significant quantities for export, from the last third of the 19th century. In the 20th century, however, the most serious problem was the continuous narrowing of the foreign and domestic flour markets. Not only did flour exports not reach the level of previous years, but as a result of milling industry developments in the surrounding countries, an increasing amount of cheap imported flour was brought in from the neighbouring countries.

The reasons for the failure are several, but it can be stated that the lack of efficient technology and organised logistics was the biggest problem in the milling industry. The lack of homogeneity of the raw material and the varied quality of the finished products were also a special sectoral problem. It would be a step forward if the product range were to move towards higher value-added target flours and ready-to-eat flours. It may also be an advantage to use more intensive marketing to promote domestic products, but the results of this process would only be felt very slowly in the market conditions. However, a significant increase in flour exports cannot be expected in the wake of the milling industry developments in the surrounding countries. It is a fact, however, that the future for the Hungarian milling industry is not homogenisation with additives, but the improvement of technical standards.

Serving the ever-expanding market looking for special flour products can be a breakout point. This is because consumer demand is shifting towards whole grain products or other special or traditional products.

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