5. Disruption of European agri-food markets due to Covid-19: The case of Poland

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Abstract

Purpose: The chapter describes the economic impact of Covid-19 on the agri-food market in Poland and its influence along food supply chains by discussing demand accommodation and alterations in supply channels.

Design/methodology/approach: The study delivers a critical literature review, analyzes secondary data, and utilizes available statistics.

Findings: The chapter shows the impact of Covid-19 on the various branches of agri-food sector like cattle meat, cereal, poultry, pork, milk, and horticulture. It shows quantitative information, time period, the level of sales decreases and increases, and price fluctuations caused by the coronavirus pandemic. Furthermore, the study scrutinizes consumer reactions to the first and latter period of economy lockdown in respect to the food products. Food demand adjustments were shown in respect to types of food product, shopping frequency, and the use of alternative delivery channels.

Practical implications: The analysis of the agri-food market reaction to the Covid-19 pandemic allows us to find bottlenecks in the system and design support programs to help farmers, intermediaries, and delivery channels of food to build resistance to similarly extreme situations.

Suggested citation
**Originality and value:** The chapter presents in a short and complex manner the Polish agri-food market’s reaction to the coronavirus pandemic. The reactions of particular branches and the entire agri-food sector can be of interest to academics, governmental institutions, administration officials, and students.

**Keywords:** agri-food sector, food supply, Covid-19, coronavirus pandemic.

### 5.1. Introduction

The appearance of the Covid-19 pandemic has caused disturbances in the functioning of the European economy on an unknown scale and caused a shock to the European economy. Big concerns were related to the agri-food sector because of its crucial importance, especially in the context of ensuring food security. Therefore, this chapter aims at answering what was the reaction of Polish agri-food markets to the first wave of the pandemic, which in the case of Poland, can be perceived as the period from March to August 2020. Such an analysis is particularly important because Poland is a relatively large EU Member State and this sector plays an important role in its economy, being at the same time an important exporter of agri-food products. The analysis of the effects of the pandemic for this sector is equally important in the face of the new strategy for agriculture adopted by the European Commission, whose implementation – as it is currently estimated – may result in a decline in agricultural production in the EU by about 20%.

### 5.2. Decrease of export

According to Statistics Poland, in April and May there was a decrease in the value of production of agricultural and food products sold in Poland respectively by 12.7% and 6.8% (AGROFAKT 2020a). Before the outbreak of the pandemic, a significant part of Polish meat production was exported abroad, mainly to the EU (e.g. 80% of beef and approx. 50% of poultry). The first wave of the pandemic caused the Polish export of meat to drop significantly (i.e. beef by 30–50%, pork by 22%). The most important cause is seen in the closure of the HoReCa market throughout the European Union, which meant that precious meat parts such as sirloin, roast beef, and entrecôte stopped selling. Polish poultry producers also found themselves in a dramatic situation. In March and April, the export practically stopped, the demand dropped (closure of HoReCa in Poland and in the EU), the frozen inventory rose, and prices fell even by 60% (AGROFAKT, 2020b). After removing the economy lockdown, the branch started to revive, but in comparison to the year 2019, the decline in foreign demand for Polish meat (March-September
2020) fell approx. by 30% for turkey and 6% for chicken (MARD, 2020a; MARD, 2020b). In the period of March to June 2020, foreign sales of dairy products and eggs also decreased (−8.1%), as did those of fish and seafood (−12.4%) (AGROFAKT, 2020a). In general, producers were only partially able to compensate for the loss of exports with sales on the domestic market, however e.g. the export of milk and cream in the period January-August in comparison to the year 2019 has lowered in volume by app. 4%, but increased in value by 16%.

Despite the defrosting of the economy between May and September of 2020, the HoReCa sector continued to develop slower than before the outbreak of the pandemic and the situation is worsening because of its second wave and the resulting restrictions. Only a few percent of the sector’s capacity is currently used. Everything seems to indicate that food demand will not return to “normal” levels in the coming months. This unfavorable trend will be felt especially by the meat producers, the dairy sector and the producers of processed fruit and vegetables. It concerns both producers for the domestic market and exporters. In many cases, pandemic-induced decline in demand has driven prices down, which further reduced profitability and deepened losses (AGROFAKT, 2020b). The price consumer index in Poland shows the general drop in prices from the March onwards. The increase of CPI in June was instable, what presents the drop of CPI in July on Figure 1.

![Figure 1. Consumer price indices in July 2020](source: (Statistics Poland, 2020)).
5.3. Consequences for and challenges to individual industries

The analysis of information (AGRONews, 2020) from member organizations of the Federation of Industry Associations of the Agricultural Producers and from the integrated agricultural market information system of the Ministry of Agriculture and Rural Development show the following consequences and challenges in individual industries.

**Cereal Plant Market.** In the first phase of the pandemic (March–April), one of the immediate effects on the cereal producers was the full or temporary closure of buying points, but during the harvest season they reopened so that purchase was carried out smoothly. The pandemic had a paralyzing effect on logistics in the market of mineral fertilizers and plant protection products. In the first months, farmers had big problems with the availability of these goods, and orders were processed with a delay of several weeks. This created huge problems in the normal functioning of farms due to the inability to meet the recommended dates of the application of these fertilizers and plant protection products. Limitations in their supply also increased the prices.

The opening of the economy after the first phase of the pandemic caused the wheat exports in the period of January to August 2020 to become four times higher (2.9 mln t) than in the previous year (977 thous. t). Responsible for that were mainly Saudi Arabia, South Africa, Germany, and Algeria, which most probably was the will to increase the storage level for the case of potential food shortage caused by the Covid-19 pandemic. However, the Polish imports in the similar period were also higher in 2020 (561.5 thous. t) than in 2019 (388 thous. t). It may be explained by lower prices abroad. The situation was similar for barley (export 2020 – 222.8 thous. t vs. 2019 – 66.5 thous. t; import 145.6 thous. t vs. 2019 – 152 thous. t) and maize, whose imports, however, decreased slightly in 2020 (export 2020 – 707 thous. t vs 2019 – 513.8 thous. t; import 2020 – 145.6 thous. t vs 2019 – 152 thous. t; MARD, 2020c).

**Meat Cattle Market.** The meat and dairy industry are responsible for 40% of the revenues of the Polish food sector and 32% of food exports from Poland (WH, 2020). For this reason, they are particularly important for the Polish agri-food industry. In the beef cattle industry, significant problems arose with the export of Polish beef, especially to Italy and Spain, which fell by 30–50% (AGROFAKT, 2020b).

Moreover, as it can be seen in the Figure 2, beef cattle prices in 2020 were significantly lower in the period March-June compared to 2019, however from June to September they exceeded the levels from 2019. We may observe that the prices were also significantly lower throughout 2020 compared to 2018 and 2017, which constitutes a significant problem for cattle producers. If the crisis deepens, interventions on the beef market may be necessary.
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**Figure 2. Average prices of beef cattle in the period 2015–2020**
Source: data from (Ministry of Agriculture and Rural Development, 2020).

**Poultry Producers Market.** The industry was particularly hard hit by a significant drop in the live poultry prices for both chickens and turkeys, which ranged from 6–30% depending on the category (e.g. carcasses, breast fillets). Polish exports of poultry meat in the period from January to August 2020 decreased in value by 8.2% compared to 2019, while imports decreased practically by half in the same period (MARD, 2020b). This market operates on low margins, so lower turnover with lower prices constitutes a serious threat to the poultry sector.

**Pork Producers Market.** Since March 2020, the industry has recorded price drops which, falling from a higher level than in 2019, in April 2020 equalled the prices of 2019. Since May, however, the decline in prices has deepened, reaching in end of October a level lower than in 2019 and 2017, close to 2018. Exports in terms of weight suffered the most. In the period January-August comparing to the same period in 2019, they decreased by 22%. In the same period, imports decreased by 4.6%. In terms of value, however, counting in thousands of euro, the exports were slightly lower (PLN 2.265 mln) in 2020 than in 2019 (PLN 2.412 mln), due to the increase in prices on foreign markets (MARD, 2020d).

**Milk Producers Market.** The biggest turmoil related to the spread of the coronavirus in the Polish milk sector was with milk powder. Its price has fallen in the period of January to July 2020 by almost 32%. Poland is the sixth biggest producer of skimmed milk in the world (NationMaster, 2020a) and seventh in the milk powder (NationMaster, 2020b) and, therefore, the drop of prices is influencing the milk sector a lot. It can be observed that the prices for milk have dropped by 4.5% in the period January-May. The Covid-19 pandemic also affected the prices of butter (−12% in January–July) and cheese (−6 to −10% in January–July). However,
the prices at the end of October were almost the same as at the beginning 2020. The vast majority of these products are exported. The coronavirus has not influenced the volume of milk export (January–August 2020), and its value was higher by 1.5% than in 2019 (January–August). The import was in the same period by 1% higher looking at the value and 6% lower looking at the volume (MARD, 2020e).

**Horticultural Market.** The flower industry was alarming about a real catastrophe caused by the coronavirus pandemic. The growers suffered huge losses because they could not sell them in the period of March to May 2020. Flowers deteriorate quickly, which forces producers to bear the costs associated with their disposal. From March to May, the trade was completely stopped, which hit gardeners and flower growers, but also wholesale and retail companies. The Polish floristic industry in this period suffered huge losses. Preliminary analysis based on data obtained from seven out of 24 wholesale markets participating in the Polish Wholesale Markets Association (SPRH) showed that the pandemic means losses in the period of March to May 2020 exceeding PLN 300 mln per month. If the pandemic were to continue for longer, the industry was in danger of a complete collapse and liquidation of many companies. Similar black scenarios were outlined by the Polish Horticultural Association. Its data (March–April) show the losses of about 5000 flower-producing farms operating in the country already reached PLN 1 bln (about EUR 250 mln; SADYOGRODY, 2020).

**5.4. Impacts along food supply chains**

The OECD forecasts that Poland’s GDP will decline by 7.4–9.5% (OECD, 2020) and Fitch – by 3.5% (WBJ, 2020). It is also expected that the crisis entry and exit curve will most likely not have the shape of the letter V but rather the letter U. A significant part of those who lose their jobs will probably not be covered by aid programs, if only for formal reasons. Therefore, experts expect a marked decrease in the purchasing power of the society, which can last for at least two to three years. This will have a very strong impact on the condition of the food economy, despite the considerable stiffness of demand in this market. Adverse effects are expected primarily for industry and agri-food trade and production. Changes in the demand structure are anticipated – sales of more expensive food will decrease, and sales of cheaper, basic food will increase.

With the outbreak of the pandemic, the food market in Poland experienced a temporary shock, but during the first wave there was no acceleration in general food price growth (Statistics Poland, 2020). Due to the spread of the coronavirus in March, consumers rushed to stores en masse, buying out meat, fish cans, groats, rice, pasta, and other food products. However, even then, individual consumers
did not experience any serious disturbances in the functioning of the food market, and the greatest difficulties were considered to be the regulations limiting e.g. the number of customers in the store.

Food demand is generally rigid, but consumption patterns change. For example, due to the abovementioned purchases for stock, the sale of products with a longer shelf life increased. Demand for canned food, pickles, milk, flour, groats, ready meals, and feeds grew, while demand for meat, sea fish and bread decreased. The shopping habits of Poles also changed. Today, people buy more at once, but less often – once a week or even every two weeks – to minimize the frequency of visiting shops where they can meet other people who are potential carriers of the disease. This also applies to the June-July period, when the spread of the coronavirus significantly slowed, and the economy restarted at a normal pace. The lower frequency of shopping causes e.g. serious problems for fresh fish and fresh pressed juices markets.

The pandemic also changed distribution channels. Increase in the popularity of small shops, visible in some agglomerations, at the expense of retail chains, is probably temporary. However, the increasingly popular online shopping with home delivery may become permanent. It seems that its scale could already be much larger, but it is limited by the organizational possibilities of suppliers. It is also possible that the importance of home delivery of ready meals will become permanent. Some restaurants run or expand this business especially after new restrictions imposed in October, which allow restaurants to prepare food only for take away or direct home delivery. The success of this strategy depends, among other things, on the level of delivery costs, but it is hardly possible to compensate for losses caused by the closure or limited operation of premises (Wielkopolska, 2020).

The wholesale trade in agri-food products has lost important sales channels. The overnight closure of hotels, restaurants, and cafes, along with schools and kindergartens, was a serious blow not only to the owners and employees of these enterprises but also to entrepreneurs specializing in supplying food to these places. A ban on organizing wedding parties – until end of May and again from October 24, 2020 – was and still is very painful for the Polish HoReCa industry. The importance of weddings for this sector was the reason for allowing wedding parties to be arranged for up to 150 people from May 30, 2020, even though they were often the source of new outbreaks. The situation in the HoReCa industry improved temporarily during the summer thanks to the huge number of tourists who spend this year’s holidays in the country, however it suffers a lot under the new restrictions caused by the second wave.

At the end of the first wave of pandemic the most important sales channels were functioning as before the outbreak. The purchase of animals for slaughter and milk took place normally and e.g. lower purchase prices of milk were mainly the result of an increase in deliveries to dairies. Wholesale markets like Bronisze
(Warsaw), Franowo (Poznań), and others most important intermediaries between farmers and retail trade in fruit and vegetables also operated without major disruptions, despite the rumours about their closure circulating in the first period of the pandemic. Moreover, local marketplaces – an important part of trade in both large and small towns – were not closed despite many hygienic and sanitary concerns (Rowiński, 2020). The first few weeks of the second wave show that the main sectors of the agri-food industry – including dairy and meat industries – ensure regular supplies, although they experience various organizational problems.

5.5. Conclusions

The food industry in Poland is based mainly on domestic agricultural raw materials and food products supplied by Polish farmers, and their production is higher than internal consumption. Therefore, the food security of the country due to the pandemic was not threatened and the availability of agri-food products remained good. This also translated into the retaining of the earlier price level. However, prices decreased for some products as a result of the decline in exports. One of the reasons why the food economy has not suffered major financial losses so far was the fact that – despite various, usually minor, sometimes troublesome restrictions – retail trade in these articles worked relatively normally, unlike in many other industries. However, there are some demand adjustments and changes observed in consumption patterns. Going as dry as possible through the beginning of the pandemic does not mean that its second wave will not worsen the financial condition of enterprises along food chains. There also emerges the question of how the gradual accumulation of negative economic effects of the pandemic will influence the market. The Polish agri-food sector will survive without a doubt, but the question remains: in what condition? This depends mainly on exporting possibilities, consequences of European economy lockdown during the second wave of the pandemic, and the adjustments of whole value chains to the new situation.

References


OECD (2020). *Poland.* Retrieved from https://www.oecd-ilibrary.org/sites/6a2d8fc9-en/index.html?itemId=/content/component/6a2d8fc9-en


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