Market structures in the Ukrainian poultry sector

Introduction

In 2017–18 after poultry meat retail prices sky-rocketed by about 30%, the Antimonopoly Committee of Ukraine (AMCU) made several statements, suspecting Ukrainian poultry meat producers to be engaged in concerted pricing practices, and initiated a number of investigations to check if companies in the poultry sector were acting in compliance with applicable law on the protection of economic competition (AMCU 2018). According to statements provided by the Ukrainian Poultry Association, only market forces (higher energy and feed costs, minimum wage growth, increase in consumer demand, and the impact of world prices) determined the domestic prices for poultry products during the investigation periods and there was no evidence of illegal anticompetitive activities (AMCU 2018). Nevertheless, the high industry concentration along with the steady export growth gives rise to concern about the potential market power abuse by the largest domestic poultry producers and its negative impact on overall social welfare. In June 2019, the AMCU launched a new investigation into possible exploitation of market power by the most dominant producer in the domestic market (AMCU 2019).

At the same time, developing and improving international competitiveness of the livestock sector in general, with a special focus on the poultry industry have always been primary goals of national agricultural policy and substantial state support has been provided to certain producers. The first steps to understanding how the poultry industry in Ukraine is performing and assessing the competitiveness within the industry requires an evaluation of market structure of the poultry industry. Based on different concentration data, the following essay provides a descriptive analysis and discourse of market structure of the Ukrainian poultry meat industry. The results of which are being used to prepare the pending empirical
analysis of the market power and behaviour of firms in this sector, which is dominated by a few large firms. The findings of this study are particularly beneficial for policy makers, producers and consumers in the sector as well as researchers in these fields. All players have an interest in evaluating and improving structural changes, market policies, entrepreneurial behaviour and identifying opportunities for improvement in a concentrated industry.

Theoretical background

Since the early 1930s, many theories and empirical approaches have been developed to assess competitiveness in agricultural and food processing markets. Commonly used descriptive models are based on the structure-conduct-performance-paradigm (SCP). This concept evolved within industrial organisation economics (IO) and facilitates examination of interrelated factors, which determine the competitiveness of the market in one approach. The earliest empirical studies within SCP were conducted in the 1950s for a series of US industries. They described the market structure as arrangements between sellers, buyers, between already established sellers and buyers, as well as potential new entrants. Those relationships or arrangements have an influence on pricing and define the competitive environment on the market.

Among the numerous ratios of the market structure the most frequently applied in empirical studies is the degree of industry or buyer/seller concentration, which measures the number and shares of buyers and sellers in the market. To measure the degree of concentration usually cumulative key figures of four-, six-or eight-firm concentration ratios (CR-4, CR-6, CR-8) and the Herfindahl-Hirschman Index (HHI) are used. CR-4, CR-6, and CR-8 ratios are shares of industry sales of the four, six and eight largest firms, respectively. CR-4 is used most often. HHI is widely used by the Antitrust Division of the US Department of Justice (DOJ) to evaluate mergers and acquisitions. The index is calculated as a function of adding up the squared market shares of each firm competing in the market. The larger the number of relatively equal size firms in the market, the lower the index. Markets with an HHI between 1,500 and 2,500 are considered moderately concentrated and highly concentrated if the index is higher than 2,500.

Barriers to market entry, i.e. conditions for new firms to enter the market, is another fundamental characteristic of the market structure and is often viewed as the most relevant for assessment of the intensity of competition in a market. Barriers to entry are usually either structural or strategical. The structural or economic barriers are connected to the essential industry settings such as demand, cost advantages, capital intensity, technology, product differentiation, specific industry regulations, economies of scale, and, as a rule, they can be quantified. The strategic entry barriers, such as exclusive deals between firms already performing in the market, have an impact on the behaviour of an enterprise and are usually difficult to measure and evaluate. Other relevant factors for the market structure analysis include

1 If, for example, there is a market with five competitors with 35, 25, 15, 15 and 10 shares, this corresponds to HHI 2400 (35^2+25^2+15^2+15^2+10^2 =2400).
the degree of vertical integration of a firm and the legal form of business organisation.

--- Ukrainian poultry sector characteristics and trends ---

Since the start of economy transformation in the 1990s, the meat industry in Ukraine has been in continuous stagnation. In general, the output and sales of the livestock and meat processing sectors have declined heavily. The only sector to overcome the economic system collapse of the 1990s and to experience output growth is the poultry industry. **Figure 1** — Traditionally, poultry in Ukraine has been produced by rural households for personal consumption with small amounts offered on the market in nearby towns and cities. Though household poultry production represents a large part of the total output, it is mostly viewed as subsistent and does not compete with industrial poultry production. The poultry sector was established in the 1960s in the former USSR and played an important role in the total livestock production and policies to ensure food supply. The current expansion of industrial poultry farming (in particular chickens) started in the mid-2000s after the privatisa-

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**Table 1** — Meat production in Ukraine

<table>
<thead>
<tr>
<th>Year</th>
<th>Beef</th>
<th>Pork</th>
<th>Poultry</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>1985.4</td>
<td>1576.3</td>
<td>708.4</td>
<td>87.7</td>
</tr>
<tr>
<td>1995</td>
<td>1185.9</td>
<td>806.9</td>
<td>235.2</td>
<td>65.7</td>
</tr>
<tr>
<td>2000</td>
<td>754.3</td>
<td>675.9</td>
<td>193.2</td>
<td>39.4</td>
</tr>
<tr>
<td>2010</td>
<td>427.7</td>
<td>631.2</td>
<td>953.5</td>
<td>46.6</td>
</tr>
<tr>
<td>2013</td>
<td>427.8</td>
<td>748.3</td>
<td>1168.3</td>
<td>45.0</td>
</tr>
<tr>
<td>2014*</td>
<td>412.7</td>
<td>742.6</td>
<td>1164.7</td>
<td>39.6</td>
</tr>
<tr>
<td>2015*</td>
<td>384.0</td>
<td>759.7</td>
<td>1143.7</td>
<td>35.2</td>
</tr>
<tr>
<td>2016*</td>
<td>375.6</td>
<td>747.6</td>
<td>1166.8</td>
<td>33.6</td>
</tr>
<tr>
<td>2017*</td>
<td>363.5</td>
<td>735.9</td>
<td>1184.7</td>
<td>34.1</td>
</tr>
<tr>
<td>2018*</td>
<td>358.9</td>
<td>702.6</td>
<td>1258.9</td>
<td>34.5</td>
</tr>
</tbody>
</table>

Note: *excluding Crimea and a part of Donetsk and Lugansk regions
Source: SSSU (2019)
tion of former state enterprises. The production growth was driven by rising domestic consumption as well as by the increase in global demand. The sector contributes significantly to the Ukrainian agri-food industry not only because of domestic food security issues, but also due to creation of jobs in the rural areas, tax revenue potential and high export capacity. Ukraine is among the top eight world poultry meat exporters, and since 2015 it is the third (after Thailand and Brazil) largest supplier of poultry meat to the EU (EC 2019). According to The Federal Tax Authority of Ukraine (SFSU 2019), the total value of poultry exported in 2018 to all destinations increased by almost 30% to USD 507 million, which comprises about 1.1% of the total Ukrainian export of goods. Figure 2 — The industrial poultry production primarily is done by the large vertically integrated companies, which grow grains and oil-seeds for fodder and have their own parent stocks, hatcheries, fodder mills, slaughterhouses, processing plants and distribution channels. The contractual relationships between independent small and medium size companies at the different stages of production that are coordinated through the free market exist but are not prevalent. In 2018, 63 poultry meat producers of all sizes existed in Ukraine. The top four companies controlled over 70.4% (CR-4) of the poultry meat market.

2 In 2000 and 2018 the consumption per capita of poultry meat in Ukraine was at 4.41 kg vs. 21 kg, in the EU at 16.44 vs. 35.5 kg, in China 8.40 kg vs. 11.55 and the global average was 9.71 kg vs. 14.2 kg, respectively (OECD 2019).
share compared to 62.1\% in 2017 (SSSU 2019, LATIFUNDIST MEDIA 2019). With the HHI higher than 2,900 in 2018, the industry is highly concentrated. Table 1 — The dominant producer of poultry meat is the vertically integrated agri-industrial group Mironivsky Hliboproduct (MHP), which holds about 53\% of the market share. The company controls every stage of chicken meat production including grain and feed production, egg incubation and broilers farms, slaughter and processing centres, marketing, sales and distribution. The MHP’s major poultry farm in Vinnytsia Oblast holds 18 million birds and has a total production capacity of 27,000 animals/hour. The group exports to 82 countries (mostly to the EU and MENA countries) and in 2018, the total export revenue was up to USD 450 million (about 90\% of all poultry meat exports from Ukraine). In order to process meat in the EU, the group invested into poultry facilities in the Netherlands, Slovakia and Slovenia (MHP 2019). — The second largest Ukrainian chicken meat producer is Agromars Complex that, according to the Ukrainian Poultry Union, controlled over 8\% of the market in 2018. It is also a large vertically integrated company with production and distribution in north-central and eastern Ukraine (LATIFUNDIST MEDIA 2019). The other medium and small-scale industrial poultry meat producers see Figure 3 mostly focus on the regional domestic markets, niche organic production and also export small quantities of poultry meat. — The initial investment costs to enter the poultry meat market in Ukraine are high not only because of the production technology or access to customers, but mostly due to specific industry settings such as requirements to comply with national and foreign (in case of export) food and human health safety standards, animal welfare and environmental regulations. — From January to September 2019 poultry meat production reached 1,156.2 thousand tons (live weight for slaughter)—an increase by 11\% compared to the corresponding period in 2018. However, the domestic consumption has not grown.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>CR-3</th>
<th>CR-4</th>
<th>CR-6</th>
<th>HHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>66</td>
<td>58.10</td>
<td>62.10</td>
<td>66.40</td>
<td>2200</td>
</tr>
<tr>
<td>2018</td>
<td>63</td>
<td>66.2</td>
<td>70.4</td>
<td>75.7</td>
<td>2900</td>
</tr>
</tbody>
</table>

Source: SSSU (2019), Latifundist Media (2019)
accordingly, which is why further expansion of the Ukrainian poultry producers in the international markets will shape the industry. The EU is expected to remain the key destination for Ukrainian export (MHP 2019, SSSU 2019).

— **Summary and conclusions** —

The poultry meat market in Ukraine is characterised by an oligopolistic supply structure dominated by one poultry producer, which controls more than 50 percent of the market. The largest company is followed only by four smaller relevant competitors. The highly concentrated poultry industry in Ukraine might raise serious concerns about exercise of market power by the largest poultry producer and unfair competition at national and/or regional levels. This concern is particularly acute at times of high meat prices, which is of concern for food security, especially considering the fact that many consumers in Ukraine have low incomes and are unable to buy expensive meat such as beef, pork or other meat products, as well as fish and fish products. — In view of the high degree of market concentration in the Ukrainian poultry industry, the hypothesis might be formulated that a handful of poultry meat producers are in a position to exercise oligopoly or monopoly power in the seller’s market. Although this question has already been the subject of controversial debate amongst policy makers and the public, empirical research has not yet seriously addressed this topic. There are only a few empirical analyses for the poultry meat market in the USA. The results of these studies confirm that poultry producers have used market power on an oligopolistic market. To our best knowledge, no econometric analysis according to the market structure and pricing behaviour of the poultry meat producers in Ukraine has been conducted. We want to close this research gap.

— **References** —


— Latifundist Media (2019): We are on the record: global expansion of Ukrainian chicken meat, 26.03.2019 (in Russian). Available online [05.11.2019]


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