

## FOOD MARKETS IN POLAND AND LATVIA – THIERS CAPACITY AND COMPETITIVENESS

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**Abstract.** The objective was to identify the capacity of the food markets in Poland and Latvia, and their level of competitiveness. Market capacity decrease was observed in both countries, measured the decline in the shares of expenditure on food and the decrease of final food and non-alcoholic beverages consumption expenditure (in Poland, the level of consumption in 2013 was around 43 billion EUR and Latvia 2.7 billion EUR). The effects of declining demand for food were more than offset by the fast-growing export, which in 2014 in Poland and Latvia respectively amounted more than 20 billion EUR and more than 2 billion EUR. The value of export, in the years 2005–2014, in Latvia has increased more than four times, and in Poland and has tripled. Polish and Latvian foods, during the period, was competitive in foreign markets, although the observed high levels of competitiveness are lowered. In 2011, in Poland 11 product groups was characterised by a high or very high competitiveness, in Latvia much more – 23. Monitor levels of competitiveness is necessary, in particular, the rapidly growing competitiveness of import of some product groups, for example pig meat. Then the next step can be taken – looking for the reasons for these phenomena, as well as to take the appropriate action on the administrative and legal sphere.

**Key words:** market capacity, competitiveness, final consumption expenditure, market shares

### INTRODUCTION

The food sector is an important component of community and country (region) economic development and an indicator of social well-being within region.

To undertake studies on the development of this sector and the various agricultural markets, identifying opportunities and directions of its development is an important element of the strategy for the development of the country.

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After many discussion on the development of agricultural markets two work areas were identified: capacity and competitiveness. The improvement in this fields has created a myriad of economic and social opportunities for agricultural producers, communities and regional development.

The capacity of the market is the size of the volume of the goods, which can be sold at a given price and income in the specified time and space [Mynarski 2001]. Otherwise: the amount of goods and services, which can be absorbed by the market. A concept similar to the capacity of the market is the market potential as the maximum possible to achieve sales of goods within a certain time when specified input are made on marketing [Balicki 2002].

The economic literature cites several definitions for competitiveness in three different levels – company, sector and country [Porter 1990, Krugman 1994, Pitts and Lagnevik 1998]. These are not necessarily interlinked each other as the competitiveness of a whole economy cannot be connected to the rise or fall of a particular sector. To characterise the competitiveness of a particular industry such as the food sector it is meaningful to consider economic-theory references and, consequently, the sources of competitiveness concept. The main theory references for competitiveness are based on comparative advantage and competitive advantage [Banterle 2005].

To assess the competitive performance of food products in Poland and Latvia, the present analysis refers to the approach of comparative advantage, evaluating indices calculated on trade data and based on OECD definition of international competitiveness. According to them competitiveness means the ability of companies, industries, regions, countries or supranational groupings to meet international competition, or getting competitive advantage from other operators in the same industry in the market.

Food production and trade flows are on continued upward trend, however, the detailed analysis will indicate on the which markets changes are needed and those in which the producers tend to do very well.

The purpose of this paper is indicate the foreign products that compete quite easily on local markets in both countries and products whose production is competitive in foreign markets.

## **MATERIAL AND RESEARCH METHOD**

In the paper a few research methods were used: studies of reference books, the analysis of the competitiveness, capacity and foreign trade. The data was from mass statistics: Eurostat and Faostat in the years 2004–2014. Due to the lack of data the detailed analysis is for the year 2011. The research were made according to the different degrees of aggregation CN nomenclature, although in a manner comparable to individual agri-food markets. In the study used descriptive and an indicative methods. In order to separate the competing products on the domestic and foreign markets, it has been calculated the market shares of imports in the domestic market and export shares in national production. Such an approach is first phase, beginning with an analysis of the level of ex post competitiveness. It allows you to extract the products or groups of products for which it does not possess or have the potential competitive.

The indicators used for the calculations:

$$S_I = \frac{I}{P - E} \quad S_E = \frac{E}{P}$$

where:  $S_I$  – import shares in domestic market;  
 $S_E$  – export share in national production;  
 $I$  – import;  
 $E$  – export;  
 $P$  – national production.

Based on the statistical analysis of the importance of export in the development of food industry in Poland<sup>1</sup>, there have been a separation specified class compartments and their division of the very high, high, medium and low competitiveness.

Import competitiveness to domestic market, export competitiveness on third market is:

- small, when  $S_{I,E} < 10\%$ ;
- medium, when  $10.1\% < S_{I,E} < 30\%$ ;
- high, when  $30.1\% < S_{I,E} < 50\%$ ;
- very high, when  $S_I > 50\%$ .

It should add that the results obtained were corrected by the author which took into account the production capacity and the final statement of products with a high and very high competitiveness suggests a group of items or goods whose production occurs within the country. It is worth noting that in both countries there was a list of about thirty products which was eliminated, often where we had a competitive advantage calculated using other indicators such as export-import coverage ratio (CR), indicators of the revealed comparative advantages, including relative index of comparative advantage export (XRCA), the relative index of comparative import advantage (MRCA). For example, in the case of Polish competitiveness, they were some citrus fruits or spices, and for Latvia, soya beans. In this cases big import allows for large export to another country and having competitive advantage in export.

## RESULTS AND DISCUSSION

The development of the agro-food sector is mainly dictated by two factors: the capacity of the internal market and competitiveness in foreign trade. Therefore, about the pace of its development, decide the internal demand and export food [Mroczek 2014].

Within the development of the countries of Central and Eastern Europe and is going to revenue growth its inhabitants, had to expect a decline in the shares of expenditure on food. Decreases was observed in both countries since 2004, according to Engel's law. Final food consumption expenditure of households dropped from 21.4% and amounted 18% of total expenditure in Poland and fell from 22.7 to 19.1% in Latvia in 2013 (Fig. 1).

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<sup>1</sup> It has been observed a large increase the share of export in the food industry. The rate of 20% in 2005 increased to nearly 34% in 2013.

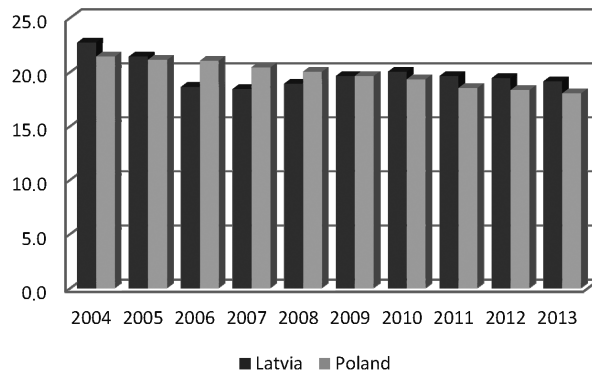


Fig. 1. Final food and non-alcoholic beverages consumption expenditure of households in Poland and Latvia (percentage of total)

Source: Own elaboration based on Eurostat data (access: 22.09.2015).

In recent years, after the global crisis, has been seen not only the decline in the shares of expenditure on food, but also decrease of final food and non-alcoholic beverages consumption expenditure in both surveyed countries (Fig. 2).

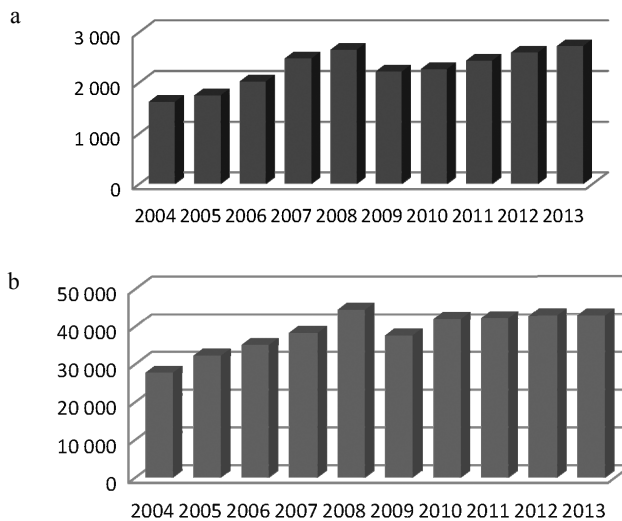


Fig. 2. Final food and non-alcoholic beverages consumption expenditure of households in Latvia (a) and Poland (b) prices in 2004–2013 (million EUR)

Source: Own elaboration based on Eurostat data (access 22.09.2015).

As a result of these phenomena, reported a decrease in market capacity. Decline in demand, which started in 2009, was a characteristic feature of the Polish and Latvian market. It was a big change, one of the basic factors for the development of food economy. As for example, in Poland for the last 15 years the consumption of these goods grew at a rate of 2.8% a year [Mroczek 2014]. According to IERiGŻ, the value of consumption

of food and stimulants in constant prices in Poland in 2013 was almost 5% below the record levels of 2008. According to the data presented in Figure 2, there was a big fall in consumption in 2009 in both countries and a slightly different situation in the years 2010–2013. In Poland there has been a slight reflection and stable situation in the last four surveyed years, reaching a level of consumption of 42.8 billion in 2013 (in current prices). While the upward trend was visible in Latvia, which has led to consumption of 2.7 billion EUR in 2013. It is worth noting that these countries represent a totally extreme markets incomparable capacity.

The effects of declining demand for food were more than compensated for the fast-growing export (Table 1), which in 2014 in Poland and Latvia respectively amounted to more than 20 and over 2 billion EUR. The value of export in the years 2005–2014 in Latvia has increased more than four times, and in Poland and has tripled. In the light of the above, it can be concluded that this foreign trade gives great opportunities for the development of the food sector in both these countries.

Table 1. Latvia and Poland food, drinks and tobacco export (million EUR) in 2005–2014

| Country | 2005  | 2006  | 2007  | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   |
|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| Latvia  | 465   | 591   | 792   | 1 048  | 933    | 1 167  | 1 361  | 2 022  | 2 114  | 2 003  |
| Poland  | 6 747 | 8 082 | 9 451 | 10 899 | 10 788 | 12 708 | 14 280 | 17 049 | 18 977 | 20 076 |

Source: Own elaboration based on Eurostat data (access: 22.09.2015).

It is worth noting, that in Poland since 2005 more than half of the food industry's production growth is put up in foreign markets, so without the development of export, which is the effect of accession to the EU and the competitiveness of Polish products, increase in production would not have been so spectacular.

To a large number of factors determining competitiveness there are various ways to empirical analysis of this phenomenon. In assessing the market shares of imports in the domestic market and export shares in national production it was extracted the four groups of import and export competitiveness: the very high, high, medium and low.

In Poland a very high and high import competitiveness had the following products: tomatoes and products, mutton and goat meat, honey, nuts and products, sunflower seed oil, sunflower seed, sugar and sweeteners, pig meat. While in Latvia it was: bovine meat, rye and products, barley and products, rape and mustard oil, peas, rape and mustard seed, offal-edible, butter and ghee, poultry meat, pig meat, beer, eggs, pulses, milk (excluding butter), fats – animals raw, onions, wheat and products. You will find that far more goods and product groups imported to Latvia is characterized by high competitiveness in relation to national production (Table 2).

After analyzing the export competitiveness you will notice that the Polish 14 product groups had high and very high level of competitiveness, Latvia however – 23, as presented in Table 3. It should be noted that part of the goods had to high competitiveness of both exports and imports. In the case of Latvia it was nine following product groups: wheat and products, butter and ghee, rape and mustard seed, pig meat, peas, poultry meat, rye and products, milk (excluding butter), eggs. In Poland it was five product groups: sunflower seed oil, sunflower seed, honey, nuts and products, fruits – other.

Table 2. The competitiveness of import in relation to national production in Poland and Latvia in 2011

| Import competitiveness in relation to national production | Poland  | Latvia  |
|---|---|---|
| Very high   | tomatoes and products, fruits – other, mutton and goat meat, oil crops – other, honey, nuts and products, sunflower seed oil, sunflower seed  | bovine meat, vegetables – other, rye and products, barley and products, rape and mustard oil, peas, rape and mustard seed, offal-edible, oil crops – other, butter and ghee, poultry meat, pig meat |
| High  | sugar and sweeteners, pig meat  | beer, eggs, pulses, milk (excluding butter), fats – animals raw, onions, wheat and products   |
| Medium  | cream, wheat and products, rape and mustard oil, milk (excluding butter), onions<br>animal fats, barley and products, meat – other, vegetables – other, groundnut oil, bovine meat, apples and products, fats – animals raw, peas, rape and mustard seed, maize and products, beans | oats, potatoes and products, cereals – other  |
| Small   | sugar beet, fermented-beverages, beer, oats, rye and products, poultry meat, potatoes and products, pulses, starchy roots, millet and products, alcoholic beverages, eggs, butter and ghee  | honey, beans, mutton and goat meat – other, cream   |

Source: Own study.

Table 3. The export competitiveness in relation to national production in Poland and Latvia in 2011

| Export competitiveness in relation to national production | Poland   | Latvia  |
|---|--|---|
| 1   | 2  | 3   |
| Very high   | apples and products, sunflower seed oil, offal, bovine meat, meat – other, sunflower seed, alcohol-non-food, oil crops oil-other, fish and seafood, soy bean oil | wheat and products, barley and products, bovine meat, butter and ghee, rape and mustard seed, soy bean oil, fish and seafood, tomatoes and products, alcoholic-beverages, fruits – other, apples and products, oil crops oil – other, alcohol-non-food, sunflower seed oil, fermented-beverages, sugar and sweeteners, wine |

Table 3, cont.

| 1      | 2   | 3  |
|--------|---|--|
| High   | honey, eggs, poultry meat, nuts and products, fruits – other  | pig meat, peas, poultry meat, rye and products, milk (excluding butter) eggs   |
| Medium | beans, tomatoes and products, wheat and products, maize and products, oil crops – other, onions, butter and ghee, rape and mustard oil, sugar and sweeteners, vegetables – other, sesame seed oil, milk (excluding butter), pig meat, cream, alcoholic-beverages, fats – animals raw, groundnut oil | pulses, potatoes and products, oats, rape and mustard oil, vegetables – other, onions, fats – animals raw, cereals – other, beer, oil crops – other, offal |
| Small  | mutton and goat meat, sugar beet pulses – other and products, cereals – other, oats, peas, rye and products, beer, barley and products, millet and products, potatoes and products, starchy roots, fermented-beverages, rape and mustard seed   | honey, beans, mutton and goat meat, meat – other, cream  |

Source: Own study.

## CONCLUSIONS

Following the analysis, the detailed conclusions can be made:

- Final food consumption expenditure of households amounted to 18% of total expenditure in Poland and 19.1% in Latvia. Decreases was observed in both countries since 2004, according to Engel's law.
- Final food consumption expenditure of households in Poland amounted to 42.7 and 2.7 billion EUR in Latvia. In Poland is nearly 16 times higher than in Latvia.
- Disturbing phenomenon in Poland is high and very high import competitiveness in the market of tomatoes, sugar and sweeteners, pig meat.
- In Latvia, action should be taken on the market of the following products: barley and products, rape and mustard oil, peas, rape and mustard seed, butter and ghee, poultry meat, pig meat, wheat and products.

To sum up you will notice, that in Poland and Latvia foreign trade and its competitiveness plays increasingly important role in the agri-food sector. Many of the goods characterised high competitiveness, but also in many cases is observed the decrease of the level of export competitiveness and increase the import competitiveness. It is interesting to note that the role of factors of production in agriculture and the food industry, such as low labour costs, labour resources, slowly decrease. Increasing globalisation and removing

barriers in international trade exacerbating market struggle. That is why it is important to monitor the level of competitiveness, and then look for the answer, why selected groups like pig meat lose their high level of competitiveness. It is crucial to continue to take steps on a regulatory level, in particular as regards food quality and safety.

## REFERENCES

- Balicki, A. (2002). Analiza rynku, Wyd. Wyższej Szkoły Zarządzania w Gdańsku, Gdańsk.
- Banterle, A. (2005). Competitiveness and agri-food trade: An empirical analysis in the European Union, Paper prepared for presentation at the 11th Congress of the EAAE (European Association of Agricultural Economists), 'The Future of Rural Europe in the Global Agri-Food System', Copenhagen, Denmark, August 24–27 2005 (unpublished).
- Drożdż, J., Mroczek, R., Rowiński, J., Szczepaniak, I., Urban, R., Wigier, M. (2012). Analiza potrzeb i kierunków wsparcia przetwórstwa, przetwarzania, wprowadzania do obrotu i rozwoju produktów rolnych w latach 2014–2020. IERiGŻ-PIB, Warszawa.
- Firlej, K. (2010). Ocena konkurencyjności i szans rozwoju przedsiębiorstw przemysłu rolno-spożywczego w warunkach unijnych. Roczniki Ekonomiczne Kujawsko-Pomorskiej Szkoły Wyższej w Bydgoszczy, 3, 163–175.
- Firlej, K., Żmija, D. (2014). Transfer wiedzy i dyfuzja innowacji jako źródło konkurencyjności przedsiębiorstw przemysłu spożywczego w Polsce. Wyd. Fundacja Uniwersytetu Ekonomicznego w Krakowie, Kraków.
- Krugman, P. (1994). Competitiveness: a dangerous obsession. *Foreign Affairs* 73 (2), 28–44.
- Mroczek, R. (Ed.) (2013). Procesy dostosowawcze polskiego przemysłu spożywczego do zmieniającego się otoczenia rynkowego (3). [In:] Konkurencyjność polskiej gospodarki żywnościowej w warunkach globalizacji i integracji europejskiej. IERiGŻ-PIB, Warszawa.
- Mroczek, R. (Ed.) (2014). Polski przemysł spożywczy w latach 2008–2013. [In:] Konkurencyjność polskiej gospodarki żywnościowej w warunkach globalizacji i integracji europejskiej, 117. IERiGŻ-PIB, Warszawa, 142–153.
- Mynarski, S. (2001). Badania rynkowe w przedsiębiorstwie, Wyd. Akademii Ekonomicznej w Krakowie, Kraków, 27.
- Pawlak, K. (2005). Wybrane metody pomiaru pozycji konkurencyjnej sektora rolno-spożywczego w wymianie międzynarodowej. *Roczniki Nauk Rolniczych, Seria G – Ekonomika Rolnictwa*, 92, 1.
- Pitts, E., Lagnevik, M. (1998). What determines food industry competitiveness? [In:] W.B. Traill, E. Pitts (Eds), *Competitiveness in the food industry*. Blackie Academic & Professional, London, 1–34.
- Porter, M.E. (1990). The Competitive Advantage of Nations. *Harvard Business Review*, 90211, 73–93.

## RYNKI ŻYWNOSCI W POLSCE I NA ŁOTWIE – ICH POJEMNOŚĆ I KONKURENCYJNOŚĆ

**Streszczenie.** Celem opracowania była identyfikacja pojemności rynków żywnościowych w Polsce i na Łotwie oraz poziomu konkurencyjności tych rynków. W obu krajach zaobserwowano spadek pojemności rynkowej mierzonej spadkiem udziałów wydatków na żywność oraz spadkiem spożycia żywności (w Polsce poziom spożycia w 2013 roku wynosił około 43 mld EUR, a na Łotwie 2,7 mld EUR). Skutki słabnącego popytu na żywność były z nadwyżką zrekomensowane szybko rosnącym eksportem, który w 2014 roku w Polsce



i na Łotwie wynosił odpowiednio ponad 20 i ponad 2 mld EUR. Wartość eksportu w latach 2005–2014 wzrosła na Łotwie ponad cztery razy, a w Polsce zaś potroiła się. Polskie i łotewskie towary w badanym okresie były konkurencyjne na rynkach zagranicznych, aczkolwiek obserwowane wysokie poziomy konkurencyjności obniżają się. W 2011 roku w Polsce, wysokim lub bardzo wysokim poziomem konkurencyjności, charakteryzowało się, 11 grup towarowych, a na Łotwie aż 23. Należy monitorować poziomy konkurencyjności, w szczególności szybko rosnącej konkurencyjności importu niektórych grup towarowych, np. mięsa wieprzowego, i szukać przyczyn takiego stanu rzeczy, a także podejmować stosowne działania na płaszczyźnie administracyjnej i prawnej.

**Słowa kluczowe:** pojemność rynku, konkurencyjność, spożycie, udziały rynkowe

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