The theoretical aspects of forming the competitiveness of food and vegetable processing industry on the example the Polish market were considered. In the article basic characteristics of competitive processing plants in Poland were analyzed. The processing of fruits and vegetables were evaluated. Considered export market of vegetables and fruits. The basic factors of increase the competitiveness of processing companies in Poland were analyzed.

**Keywords:** food, vegetables, fruits, Polish market, competitiveness, export, enterprises.

**Problem formulation.** Processing of fruit and vegetable is very important in terms of Polish economy. It is one of the most prosperous branch of food industry and there is observed a significant surplus of balance of the trade and a rapid growth rate of exports. Over the past few years there has been a concentration and capacity development of the production and increase the economic efficiency of the industry. This means, that Polish enterprises of fruit and vegetable processing industry has to operate in a global market conditions and within its own requirements. To be included in market competition companies has to constantly develop and seek for new business strategies.

Food and vegetables processing can be defined as primary and advanced processing of fruit and vegetables on the following preserves: canned, bottled, preserved, frozen, dried or otherwise processed or preserved food products intended for human consumption. It results in wide selection of final products, such as: juices, preserves, jams, condensed or frozen food, canned vegetables, droughts and many more products, that are demanded by the customers. This activity is naturally seasonal, which is associated with the growth cycle and maturation of fruits and vegetables. The economic result of this industry is influenced mostly by weather conditions, national and European Union policy and the chosen strategy of development.

**Analysis of recent publications.** Issues such as competitiveness of food and vegetables processing industry enterprises on Polish market scientists examined Bugala A., Firlej K., Nosecka B., Nosecka B., Wiśniowska J. Wiśniowska researched competitive strategies of companies in fruit and vegetable processing in the conditions of the convergence of domestic and foreign markets.

**Unresolved parts of the general problem.** Despite the great scientific and practical interest to the fruit and vegetables market in Poland, many questions remain open and unresolved. In the available literature we found many questions that were researched, e.g. market, competitiveness and others. However, we tried to combine as analysis of industry, competitiveness, and export tendency. This paper is intended to complement the knowledge in the available literature.

**Setting tasks.** The aims of the study are theoretical aspects of forming the competitiveness of food and vegetable processing industry on the example the Polish market. Analyze basic characteristics of competitive processing plants in Poland. Evaluate the processing of fruits and vegetables. Consider export market of vegetables and fruits. And analyze the basic factors of increase the competitiveness of processing companies in Poland.

**Statement of the main material of the study.**

**Analysis of the processing of fruits and vegetables industry in Poland.** As was mentioned in introduction, it is already well developed part of the market in Poland, but this process continues and it is very prospective. The sector of processing of fruits and vegetables is an important branch of the Polish food industry – approx. 8.5%: the share of all products sold. The industry processes about 60% of fruit harvests and 10-15% of the harvests of vegetables depending on year [1]. In 2014, total production of fruits and vegetables amounted to 3.8 million tons comparing to the 3.6 million in previous – 2013, which is an increase of 3.6%. The production of fruits and vegetables processed products in Poland is 5-7% of production in EU-25, and these figures are lower than in the production of products with higher degree of processing. Poland is the largest EU member producer of condensed fruit juices (mostly considering apple juice concentrates) and frozen fruits. Regarding structure of production in this sector – it was dominated by juices, nectars and drinks, with the production of 1.5 million tons in 2013. In result, they comprised 40% of the whole production in the segment [2]. Therefore, 29% of the categories were frozen vegetables and fruits, and 17% other canned fruits, such as jams, marmalades or concentrates. Pickles and preserves in jars and canes, and sauces based on vegetables accounted for 14% of total production of the sector (Figure 1) [1].

Taking into consideration only the structure of fruit preserves, 41% of their production were frozen foods and 34% concentrated juices, while in the structure of vegetables preserves it is respectively 56% of frozen foods, 13% of canned food, 11% of marinades and 10% of sauces.

In Poland, in processing fruit and vegetable industry there are more than 1360 enterprises established, and operating in industrial scale there are approximately 270 companies. The value of domestic market as of 2015 amounted to 733 mln PLN,
which means 3.7% growth comparing to the previous year. To the biggest firms operating in this segment are including companies such as: Frosta, Iglotex, Polish Garden (Hortex and «Wiosenny Przysmak»), Hortino, Rolnik, Kotlin, Krakus, Jamar, Heinz, Lowicz, Stovit [6].

However, approx. 40% share of the market of fruits and vegetables processing belongs to the small and medium enterprises. Their activity is based on national and foreign (southern fruits) raw material base obtained from the contracting, purchases on the stock exchanges, markets and through intermediaries. In consequence, big companies are forced to compete with their smaller equivalents, despite quite a big share in this industry.

Export

The Polish industry of processing of fruits and vegetables is strengthening after the economic crisis. Companies are developing, there is high level of competition between them on the domestic market. Fortunately, in recent years they have begun to expand on foreign markets. Not surprisingly, the main targets, in terms of markets, are European Union membership countries. The obvious reasons are the common rules and policies, as well as the free flow of goods and services within the borders of European Union. Almost 1/3 of processed fruits and vegetables is exporting to the Germany [4, 5]. Secondly, the important receivers are Russian Federation (10%) Great Britain (9%) and Netherlands (9%). The export destinations of Polish companies are more precisely and clearly presented on the following Figure 2.

The increase is expected in case of Russia, because of the conflict on line Russia-Ukraine. It gives Polish producers of processing food a chance to strengthen the position. What is interesting, is the share of other countries, which are together giving the score of 29%. It is primarily the countries of Central Europe, which are not yet dominated by countries of Western Europe. Consequently, countries like Hungary, Romania or Slovakia seems very prosperous from the point of view of Polish exporters. However, surprisingly also distant countries in Asia, such as Kazakhstan or Mongolia are becoming more and more valuable for Polish companies and are considered by experts as very perspective in the future for Polish exporters [5].

Insights on competitiveness

Competition between companies on the market of fruits and vegetables processing can be described as strong. Especially, among small and medium enterprises, which are the most common on the market, and have the biggest share. It is still developing branch, open for innovations and modern solutions. The similar situation is regarding entrance barriers. On the one hand, open-minded attitude of customers gives new companies possibility to quickly enter the market, but on the other hand there are high capital cost, which can be limiting for the small firms [3].

Competitiveness and entrance barriers among companies

Enterprise competitiveness means the ability to compete on the market and the ability to achieve and maintain competitive advantage. In the process of creating and implementing the enterprise strategy, a crucial task is to specify company’s competitive advantage. To determine the competitive advantages of the enterprise, it is necessary to
assess the external and internal conditions of the market and competitive potential of the company. All enterprises in the sector of processing of fruits and vegetables are covered in the same way, as other market entities, by the regulations regarding doing business activities by physical and legal persons, labor market rules, insurance and competition restrictions. The responsibility is to comply with common EU rules for the protection of the environment, food safety and hygiene, as well as to fulfill the relevant quality requirements. Although these rules are applying to all enterprises in sector, many firms compete through using the fact of fulfillment of the restrictions and increasing the quality standards to marketing purposes [7].

Small and medium enterprises operating on the Polish market of fruit and vegetables processing has partly begun to use modern business strategies. These strategies depend on the development models implemented in companies. Thus, there are ambitious firms, looking for innovative solutions and using modern tools in organizational structure or management on every level of the process of production and sales, constantly increasing their share and base of customers. They are also building good partner relationships with suppliers and seek for best quality products. The main aim is to develop and increase in potential with building strong brand quality at the same time. Secondly, there are companies with long tradition, strong position and which are well known on the market since 1990s. These firms have proven strategies based on the long experience. In result, they can focus on financial aspects, and improvements in case of revenue management, accountancy and sources of financing [3].

Competition among companies in the industry is linked to their capacity to attract capital for investments in modern, specialized production lines, as well as the acquisition of professional refrigeration devices. Due to the specificity of the industry, consequently because of the low durability of products, companies have high fixed costs associated with storing of processed products in refrigerating chambers. In addition, competition increases as a result of the costs associated with the changes of the products, as well as its transportation costs. Which is why, looking for innovations and new technologies are pivotal in this branch of economy for entrepreneurship. Otherwise, they are not able to produce distinctive products, attractive to their customers.

More complicated is the case of market entrance possibilities for new companies. In recent years we could observed that not all of the customers are tied to any brands, they are looking for best products, innovative and reasonable in terms of price. That is a merit for new firms, which are seeking for the factor, that will attract potential customers.

Another advantages are the relatively easy access to the raw material base, and the absence of close cooperation between producers of fruit and vegetables with processing companies. The main existing problem of the entrance of new firms in the industry is relatively small increase in demand for most products. It is also associated with bearing high capital costs to start production and to take part in promotion of products. In addition, the serious issue can be also marketing — it is important to find the receivers of the products on the domestic and foreign markets, and, consequently, the need for finding an appropriate distribution channels.

Conclusions and proposals. In conclusion, Polish industry of processing fruits and vegetables is promising for further development. Enterprises are in good economic conditions and there is a strong competition between them, which results in better final products for customers. Moreover, there is an advantage for Polish economy, which is growing thanks to the necessity to invest in modern high technologies and innovations including production process and business strategies. Well-developed companies which want to stay competitive, or relatively new entities which are willing to increase a share of the market or take over customers are looking for innovative solutions and strategies.

Also, the increasing value of export is indicating on good condition of Polish fruits and vegetables processing industry and need for expanding to not be beaten by the competitors. The share of small and medium enterprises in this branch is approx. 40% and constantly growing, which means there are opportunities for establishing a new company. Summarizing, there is a huge potential in this branch of food industry, and there is a little doubt that its impact on Polish economy will be increasing in the next years.

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конкурентоспособность продуктов питания и овощей перерабатывающей промышленности на примере польского рынка

аннотация
исследована конкурентоспособность продуктов питания и овощей перерабатывающей промышленности на примере Польского рынка. Определены основные характеристики конкурентоспособности перерабатывающих предприятий Польши. Проанализированы переработку фруктов и овощей. Рассмотрены экспорт рынка овощей и фруктов. Освещены основные факторы повышения конкурентоспособности перерабатывающих предприятий Польши.

ключевые слова: продукты питания, овощи, фрукты, рынок Польши, конкурентоспособность, экспорт, предприятия.