“Vegetable market: competitive advantages of Georgian product and competition challenges”

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VEGETABLE MARKET: COMPETITIVE ADVANTAGES OF GEORGIAN PRODUCT AND COMPETITION CHALLENGES

Abstract

The paper evaluates the level of competition on the vegetable market. Based on the analysis of the production development trends and resource potential, dynamics and ratio of export and import of agricultural products, including vegetables are presented; dynamics of self-sufficiency ratio of these products is studied; challenges of food security and competitive advantages of Georgian vegetables are identified.

The article concludes that the country has a significant potential for exporting vegetables both to the countries of Europe and Middle East. The paper discusses the factors that hinder export of vegetables; in addition, the ways for reducing dependency on seasonality, opportunities for the development of modern greenhouses and mechanisms for supplying goods to customers all year round are suggested.

On the basis of analyzing the level of competition on the vegetable market, vegetable business is considered as monopolistic. In addition, it is calculated that, currently, local vegetables products account for only 75% of the market.

The paper evaluates the outcomes of high market power caused by monopoly in vegetable business; the impact of market power on pricing mechanism and the welfare of population is determined. In accordance with the problems identified, conclusions are made and recommendations for solving these problems are suggested.

Keywords vegetables, competition, competitive advantage, competition challenges

JEL Classification A1, L17, L67

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INTRODUCTION

Agriculture in Georgia has traditionally played a crucial role in provision of food to the population and improvement of welfare. However, food production has decreased in the last decade, the level of satisfaction of the population with local food products is low, poverty rates are high in rural areas, income is small, the food shortages are mainly complemented by imported products (Kharaishvili, 2016). According to the data of 2017, import of agro-food products is 4 times higher than the export volume (Georgian National Statistic Office, 2018).

1. LITERATURE REVIEW

Food markets play an important role in economic development. These markets can contribute significantly to the growth of income, employment and local wellbeing (Ekanem, Mafuyaib, & Clardy, 2016).

According to researchers, the economic growth of the agricultural sector in GDP reduces poverty much more than the other sectors (Thematic Group, 2013).

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Development of food markets in the perspective will become even more relevant. Moreover, it is considered that in order to achieve a long-term result, it is necessary to take appropriate measures not only in private, but also in the public sector (Dobermann & Nelson, 2013).

The economic policy of the country's environment greatly contributes to the proper operation of food systems and providing high-quality products to the population. Reforms based on such policies will contribute to sustainable food security in the long term (International Panel of Experts on Sustainable Food Systems, 2015).

In terms of increased demand for food, it is important to assess the trends in production development, increase productivity in the field (FAO, 2017).

According to modern research, provision of food is directly related to productivity, especially in developing countries (Nsiah, 2017).

In the context of modern competition, it plays a decisive role in food prices, especially that the recent price instability has become one of the major challenges. The sharp change in prices covers almost all kinds of products (Committee on World Food Security High Level Panel, 2011).

Two categories of policies and programs are contemplated at the national level to solve the volatility problem in relation to food security. The first aims at stabilizing the prices. The second aims at reducing the impact of price volatility on income and purchasing power. This can be divided into two further categories: steps taken in anticipation of price shocks (ex ante) to reduce their impact, and steps taken after the shocks occur (ex post) to help people and businesses cope with price volatility (Committee on World Food Security High Level Panel, 2011).

The increase in food prices is often higher than the increase in the living wage, higher is the inflation rate. It is necessary to achieve the optimum ratio between the minimum wage, inflation and food prices. (Kharaishvili, 2017).

The increase in food prices is not only a scientific, but also a political point of view. The price change in the international food market is considered as the main challenge for food provision. Researchers have identified several factors that should be taken into account in terms of food provision:

1) develop a relevant policy that will oblige suppliers to provide high quality products;

2) ensure the proper functioning of food systems;

3) carry out a reform that will support sustainable food system in the long term (International Panel of Experts on Sustainable Food Systems, 2015).

The local agricultural sector in Georgia is in a difficult situation due to the competition of products imported from abroad. Despite this, some subsectors are expected to develop. Among them are vegetable oils and fats, vegetables, fruit and sludge fruits and animal products (Ecorys, 2012).

Development of the vegetable market in Georgia will facilitate diversification of products in food markets. In general, scientists focus on the research of farmers' diversification problems.

Increasing production diversity on smallholder farms through introducing additional crop and livestock species can improve smallholder diets and nutrition through the subsistence pathway. It is well known that smallholder households typically consume a sizeable part of what they produce at home. A farm diversification strategy is also supported by ecologists, as this can help to maintain and increase agrobiodiversity (Sibhatu & Qaim, 2017).

Aims

The main purpose of the research is to study and analyze vegetable market in Georgia, competitive advantages of Georgian product and competition challenges in modern conditions. Assessment of the abovementioned issue is based on identifying development opportunities and designation of competitive model of this sector.

2. RESEARCH METHODOLOGY

In order to achieve the purpose of the research, we used complex methods of obtaining and analyz-

ing information, as well as quantitative research. Secondary data mining, sorting and analysis were made with a bibliographic research.

3. RESULTS

Vegetable cultures are widespread in Georgia, however, its production per capita is 2.2 times lower than the annual demand (Baramidze, Ketereli, Koshid, 2015). Oxfam research finds that 50% of Georgian population has problems with access to food; 61% is experiencing deficiency of meat and fish, 45% of the population is experiencing deficiency of food and vegetables, and 20% is experiencing deficiency of dairy products. 14 % of families regularly borrow money to buy food. In terms of food safety assessment, the research concluded that the index of food production is low and food prices are very high. The main problem in Georgia is not lack of food, but excess starchy food, in addition, more than 50% of the consumed food is imported; the import dependence is high (Georgian National Statistic Office, 2018).

Solving the food safety problem is related to the solution of many neighboring issues. At the same time, great attention is paid to the study of the challenges of competition in agro-food products to achieve a sustainable food supply, also the identification of those forces, which will make it possible to determine the competitive advantages of the product. Also, the improvement of the supply chain should be taken into consideration, which, in its turn, is a new basis for the development of new relations between food reserves and society (Renting & Wiskerke, 2010). In order to achieve food safety, significant role should be given to reduction of food losses, because this indicator is 30-40% of the total number of food in Georgia. Due to this problem, no large number of products is being delivered to customers on agro-food markets (Giovannucci et al., 2012). Georgia has a favorable natural-economic potential for the production of vegetable crops. Georgian vegetables are characterized by naturally distinctive taste, production is associated with less expenditures, more environmentally clean and, therefore, due to these competitive advantages, the demand for the product is huge both on domestic and international food markets. According to the data of 2017, Georgian vegetable exports amounted to 17 thousand tons, however, the volume of imports remains high – 84 thousand tons (Georgian National Statistic Office, 2018).

Therefore, the vegetable import volume exceeds 4.9 times the volume of exports. There are significant opportunities for replacement of vegetable imports in the local market of Georgia. In addition, most of the vegetables produced in Georgia have export market potential. In 2017, Georgian food products were exported to 80 countries. Deep and Comprehensive Free Trade Agreement (DCFTA) will provide new trade opportunities with EU countries and will play a significant role in diversification of export markets. However, it will be necessary to meet the strict requirements of the European market as a measurement of standards, as well as productivity improvement, development of farming and cold storage facilities, improving the supply chain and other directions. It is especially important to demonstrate competitive advantages of Georgian vegetables in accordance with the competition level, to justify its role in solving the problem of sustainable food security and in forming competitive environment.

The research aims to demonstrate competitive advantages of Georgian vegetables based on the level of competition on vegetable market and to develop recommendations in line with food safety challenges on the development opportunities of the field.

The study of global tendencies in the development of horticulture has shown that the demand for vegetables in the world is growing. This tendency is due to population growth, as well as to the growth in the share of vegetables in structure of the food consumption.

World vegetable market is mainly dominated by products from ten countries, China occupies a leading position and these indicators increase in dynamics (see Figure 1).

Main producers of vegetables from European countries are Spain, Italy and France (see Figure 2).

As for horticultural development trends, global research has found that 70% of total vegetable products are sold in natural form. However, lately, there has also been observed cleaned and pack-

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Source: Nsiah (2017).

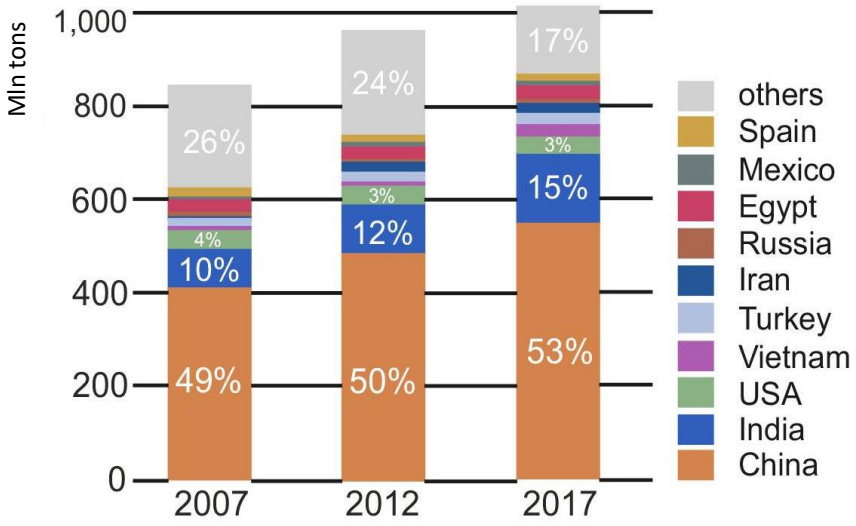

Figure 1. The ten main producers of vegetables

aged vegetable demand growth. In contrast to the abovementioned, the demand has been reduced to presented vegetables (CBI, 2018). It is also important to note that recently the tendency to increase demand for organic vegetables has been identified. 22% of vegetable crops hold tomatoes, sweet pepper and chili – 12%, garlic – 7%, the rest of the vegetable share is relatively small and varies up to 4% (Figure 3).

The main barrier to access to the European vegetable market is the high level of certification and standards. Bibliographic research has shown that product suppliers in the European market are highly developed, mostly European countries (FreshPlaza, 2013).

Vegetables sown area in Georgia is reduced by 5 thousand hectares during the period 2014–2017. In the same period, the production rate decreased by 27.7 thousand tons, however, average yield increased by 0.7 tons per hectare (Ministry of Environment Protection and Agriculture of Georgia).

Horticulture is the traditional agricultural sector in Georgia and it is developed in almost the whole

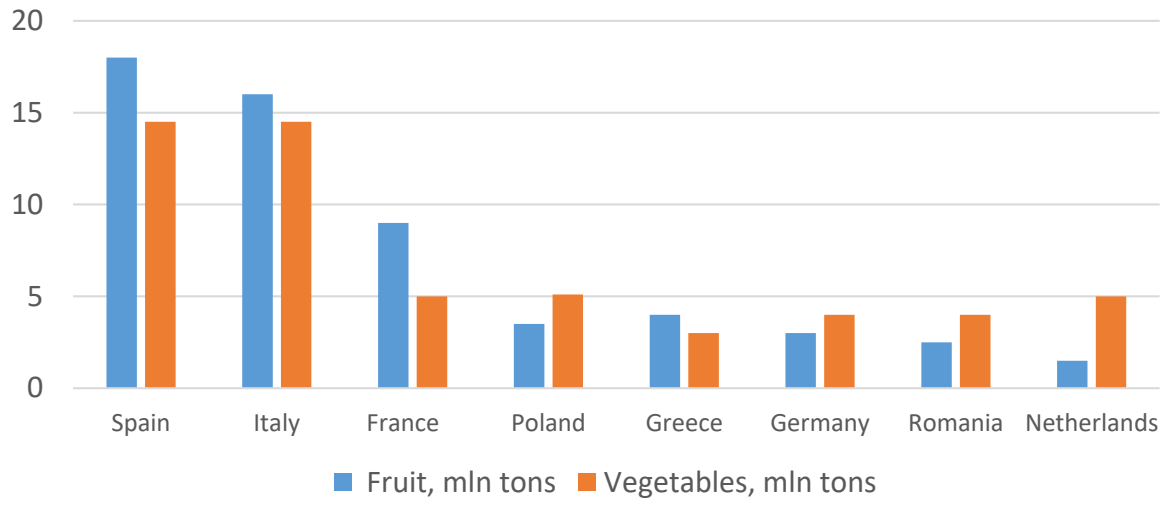

Figure 2. Vegetable production in European countries (2015)

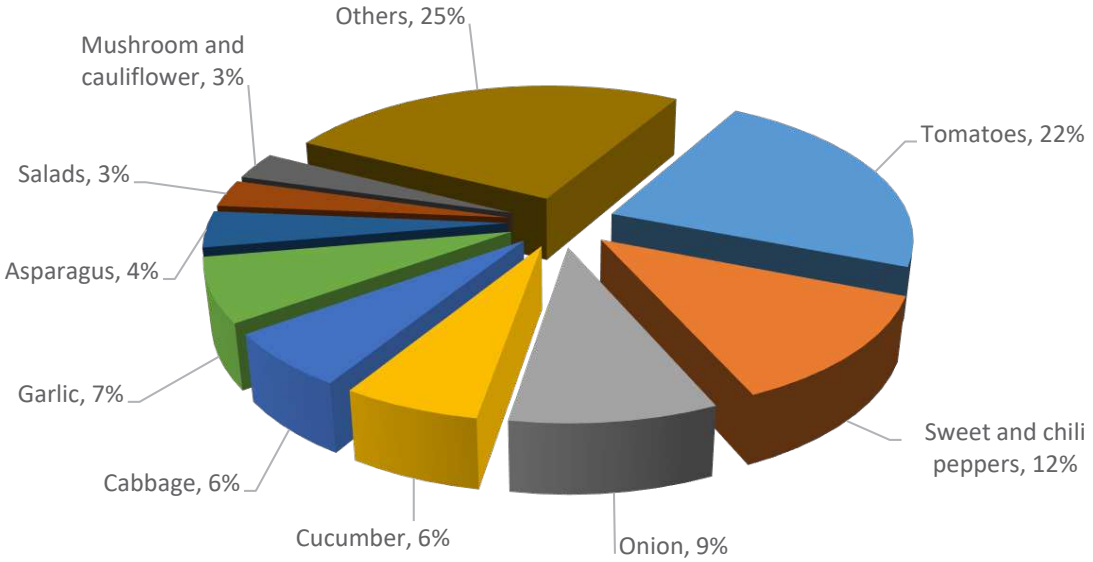

Figure 3. The main exported vegetables according to the volume (2016)

area of the country. During the period 2010–2016, along with cutting the area occupied with vegetables, we also have low indicator of self-sufficiency (see Figure 4).

Vegetable production is developed in almost every region, however, some of them are distinguished by their share. In particular, more than 50% of the harvested area come from Kvemo Kartli and Shida Kartli, 18% of the total production of vegetables are produced in Kakheti, 10% in Imereti. Kvemo Kartli region has a high yield indicator (14 t/ha). This indicator is relatively low in Shida Kartli (10.1 t/ha), the rest of the regions are characterized by low productivity. The corresponding indicator is much higher in European countries and it is 32 tons per hectare. Thus, when assessing competitive advantages of vegetable crops in Georgia, and the levels of competitiveness in the food market, we should take into account the current potential in this regard. It is also worth considering that the data on the import of vegetables stays more or less unchanged over the years (110 thousand tons a year), but the main part of the imports (80%) comes in the first and second quarters (see Figure 5).

The diagram shows that seasonal impact on vegetable production is great. Of course, it has a negative impact on farmers' income and the pricing

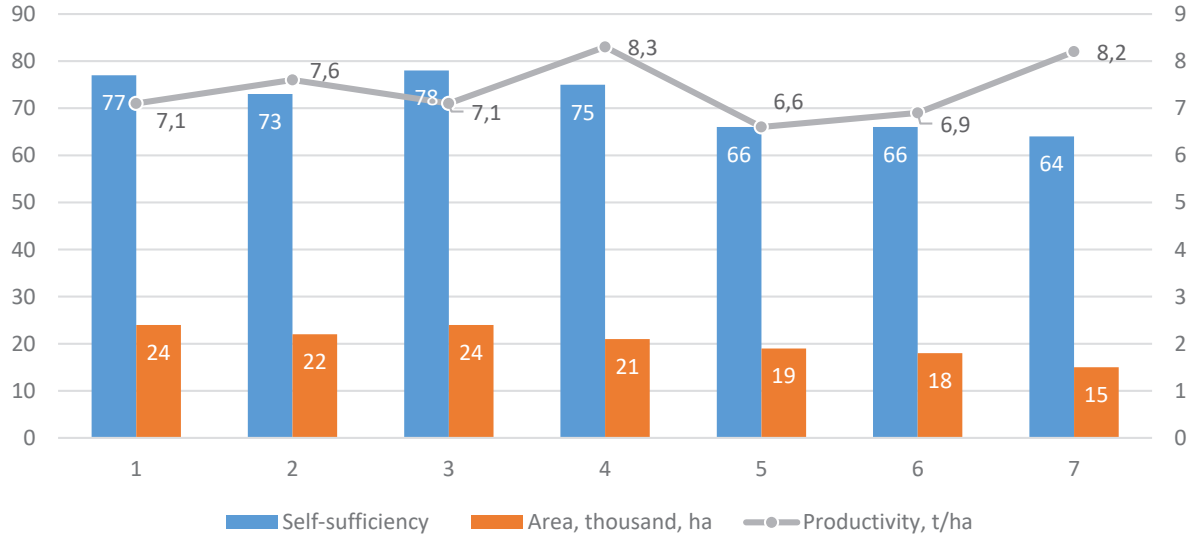

Figure 4. Main indicators of vegetable production in Georgia in the period 2010–2016

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Source: International Panel of Experts on Sustainable Food Systems (2015).

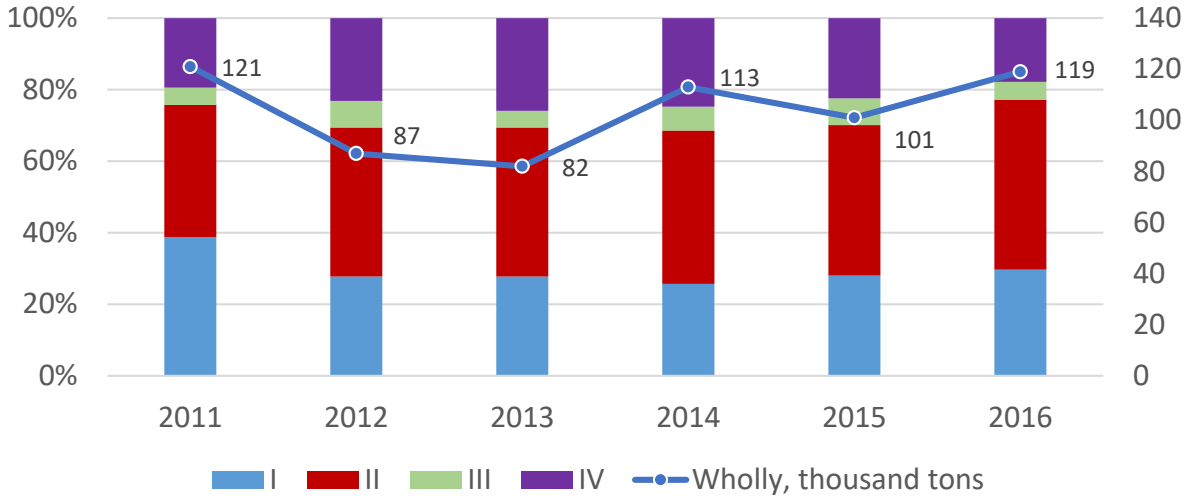

Figure 5. Dynamics of vegetable import in Georgia

mechanism. Due to the natural resource potential of Georgia, the country has a significant potential for vegetable export in the European and Middle Eastern countries. Largest export countries of Georgian vegetables are Belarus and Ukraine, as well as Kazakhstan, Latvia, Bulgaria, Moldova, Estonia, Romania and Lithuania. The Russian market is also open for Georgian vegetables, but the manufacturer's access is still limited to this market. The Russian market has replaced Georgian vegetables by Azeri, Uzbek and Iranian products. Due to the high quality of Georgian vegetables, it is possible to obtain new market niches on the EU market at this stage.

It's necessary for product to be competitive in domestic and international markets. Experts estimate that vegetable business is monopolistic, which doesn't help to increase the product's competitiveness. At the same time, development of modern greenhouse farms will be necessary to reduce dependence on seasonality, which provides product delivery during the whole year. Market power is high because of the monopoly in the vegetable business, which affects the pricing mechanism and, because of the low purchasing power of population, customers prefer cheap and low quality products imported from abroad. Today, the ratio of national and foreign products is at 1:4 in the local market and therefore implementation of import and export support policies is necessary at the national level. The non-competitiveness of Georgian vegetable products also contributes to the high price of fuel (because of the abovementioned, the majority of the population is unable to cultivate the land) (Georgian National Statistic Office, 2018). In addition, most of the countries stimulate agro-food product exports, including vegetables. Accordingly, imported vegetables can influence the price of Georgian products. As for export of Georgian vegetables, international market entry is a hard process and because of the low competitiveness of most of the products, market conquering mechanisms are ineffective. Implementation of the vegetable import replacement policy in Georgia requires large amounts of investments, however, in this way, the country will be able to meet local demand for vegetables, compete effectively on local markets, enter foreign markets and hold their own niche.

It should be considered that consumers have changed attitudes towards the retail markets. Recently, there has been identified the tendency of Georgian customers to buy fruits and vegetables in big supermarkets and hypermarkets. In 2016, the share of food sold in the named networks reaches 30%. Switching of customers in this network mainly caused increased prices due to the prices offered in the food retail network. Also, consumers are more or less familiar with competitive advantages of Georgian vegetables, product origin and characteristics of ingredients. Market power in the food markets mainly consists of the following supermarkets: "Carrefour", "Smart", "Goodwill", "Fresco". However, the procedures for entering this market are vague. In most cases, it is almost impossible to obtain relevant in-

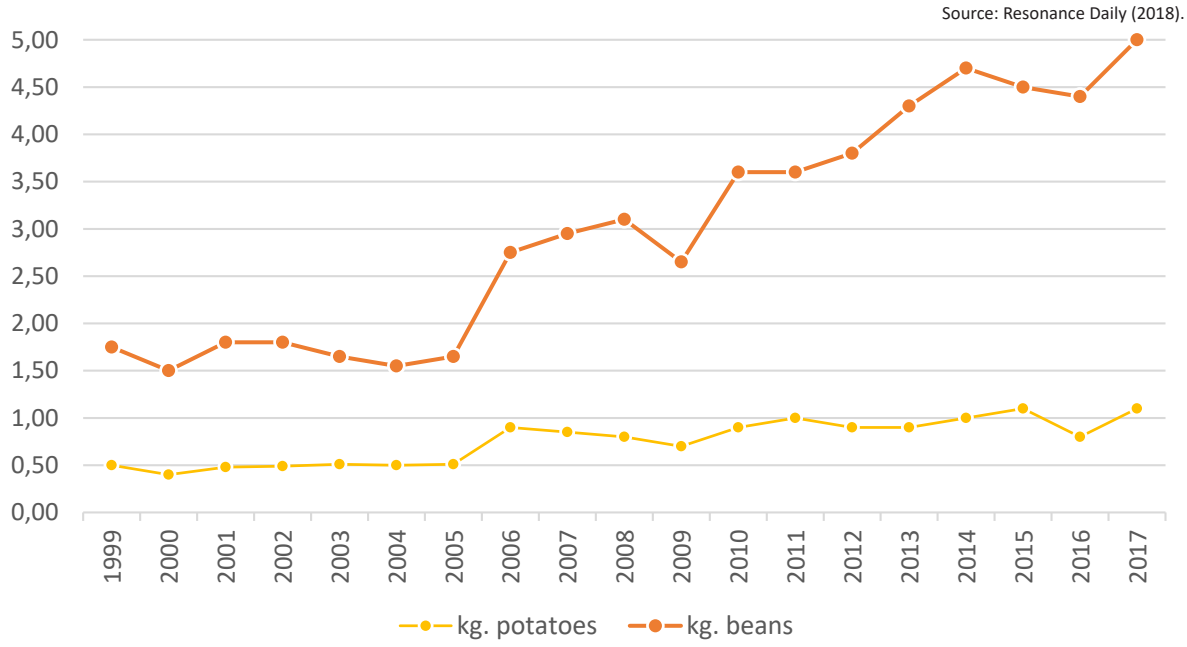

Figure 6. Dynamics of vegetable prices in Georgia

formation about major parameters of market and market participants. Competitive advantages of Georgian vegetables, as noted above, are also determined with quality and prices. In order to study the minimum, medium and maximum price of vegetables, real time monitoring of prices was conducted. As a result, range of price changes has been determined. Almost all varieties of vegetables have shown a tendency to increase the prices. According to the SakStat report of 2017, prices increased by 21.3% on vegetables and potatoes compared to the previous year. This indicator varies according to the product type, however, the growth trend is characteristic for all of them (see Figure 6).

The diagram shows that the price increase for potatoes is relatively less than the beans, although prices for both products have increased. The same regularity is marked by other species of vegetables. The study of materials shows that the price of vegetables exported from Georgia to the EU is much higher compared to the corresponding indicator of imported vegetables. In EU countries, prices on vegetables are sharply differentiated according to the product types and importing countries (Georgian National Statistic Office, 2018), accordingly, price competition will be difficult for Georgian vegetables. Apparently, Georgia should concentrate on maintaining a high quality, niche herbs with the prospect of selling on EU markets.

The export of Georgian vegetables, including the European market, is quite limited due to the lack of appropriate standards and technologies. One of the limiting factors of competition is the low level of product diversification, which is mainly caused by the lack of land and fragmented plots. The latter, in its turn, leads a small amount of vegetable production. Georgian vegetable manufacturers do not meet the demand for stable supply of large quantities of products from exporters on the international market of vegetables. Competition for Georgian vegetable producers on the international market of vegetables is limited because of the intermittent process of production too. It is known that even the best product loses market share if its supply is not sustainable and reliable. Georgia sends several kinds of vegetables to the EU countries, but still remains a net importer, because it isn't even able to meet its own demand for cucumbers, tomatoes, eggplant and other products all year round (De Cicco, 2016). Experts estimate that it is possible to produce competitive vegetables in Georgia. Therefore, the prospect of exporting this product to the EU market exists. This process can be solved somehow by developing business-oriented cooperatives. The existence of a cooperative will unequivocally ease the relationship with the supplier than it would be possible for one farmer.

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CONCLUSION AND RECOMMENDATIONS

One of the hindering factors of competition is the low level of education on the field of horticulture, the lack of information on modern technologies and markets. Studies have shown that farmers need regular consultations on agrarian and commercial issues throughout Georgia, including through the online services (Economic Policy Research Center, 2016). In this regard, it is necessary to develop free national agricultural knowledge implementation and teaching services. Rate of competition level on the vegetable market and detection of the competitive advantages of Georgian products will contribute to development of horticulture, increase self-sustaining level for this product and improvement of population welfare indicators (UN Women, 2016).

- Georgian vegetables cannot compete with the imported products on the domestic food market in Georgia. The main reason for this is the low competitiveness of the product, as well as product supply on the market. It is possible to produce competitive vegetables in Georgia, as well as there is the prospect of exporting this product to the EU market. This process can be regulated by increasing the productivity in the industry, expanding the scale of production, and developing business-oriented cooperatives. The existence of a cooperative will ease the relationship with the supplier than it is possible for one farmer.

- Vegetable wholesale market segment is underdeveloped in Georgia. To resolve this, it is necessary to prepare a legislative basis for the formation and operation of food wholesale market; creation of food wholesale market infrastructure; resource provision for the program implementation; creation and use of the relevant information system, which should include agricultural commodities, wholesale and retail outlets, infrastructural fields and services; formation of relevant regulatory and management systems of food wholesale market and others.

- Price of vegetables exported from Georgia to international food markets is significantly higher compared to the corresponding indicator of imported products. Therefore, the price competition on the vegetable market will be difficult for Georgia. Therefore, the prospect of selling on international food markets requires Georgia to concentrate on producing niche, high quality herbs.

- One of the hindering factors in competition on the vegetable market is the low level of education in the field of gardening, the lack of information on modern technologies and markets. It is necessary to develop free national agricultural knowledge and teaching services.

- Delivery of Georgian vegetables in the international market, including the European market, is quite limited to adequate standards and technologies vulnerability.

- One of the limiting factors of competition on the vegetable market is the low level of product diversification, which is mainly due to small-scale and fragmented plots. The latter, in turn, produces a small volume of vegetable production. The exporters of the international market are demanding stable supply of large quantities of products that Georgian vegetable manufacturers cannot meet. The increase in the production scale will contribute to legislative amendments – the adoption of the Law "On Farming" is also necessary to harmonize with the legislative bases of foreign countries, meet the international standards of food markets.

- Deficiency in scientific research on the level of competition in the vegetable market in Georgia. Therefore, competitive advantages of Georgian vegetables are not scientifically verified. The competitive advantages of Georgian products will help to develop the field of horticulture, increase self-sustaining levels of the product and improve the population's wellbeing indicators.

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