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## EXPANSION OF MARKETING CHANNELS AND THEIR INFLUENCE ON TRADE IN AGRI-FOOD PRODUCTS: INTERNATIONAL EXPERIENCES

Ekspanzija kanala marketinga i njihov uticaj na trgovinu poljoprivredno-prehrambenim proizvodima – međunarodna iskustva

### Abstract

The research aims to point to the possibilities of efficient placement of agri-food products of the Republic of Serbia as one of the major strategic goals of socio-economic development. More rigorous customer demands for quality products imply an effective marketing channel design that allows fast delivery. France, as an agriculturally developed country, achieves a competitive advantage in the placement of food through the inclusion of Intertek global operator in the channel of marketing. The entire research is based on the application of several methods of modern quantitative and qualitative analysis. The result of the analysis of international experiences is the proposal of an institutional solution and sustainable development of the channel of marketing of agri-food products. Fast, flexible and vertically integrated food marketing channels play a decisive role in competitiveness in the domestic and international market of agribusiness. Increasing competitiveness at domestic, regional and international level is the outcome of the research. By examining the results of structural changes and involving Intertek operators in the food supply chain at the international level, we are pointing to the possible directions of the development of the agribusiness system in the Republic of Serbia. The way to create competitive advantages is to establish, innovate and strengthen links between the subjects of the agribusiness marketing channel as an inseparable component of the reproductive process in the agricultural and food industries.

**Keywords:** *marketing channels, agriculture, Intertek global operator, competitiveness.*

### Sažetak

Istraživanje ima za cilj da ukaže na mogućnosti efikasnog plasmana poljoprivredno-prehrambenih proizvoda Republike Srbije, kao jednog od bitnijih strateških ciljeva društveno-ekonomskog razvoja. Sve rigorozniji zahtevi potrošača za kvalitetnim proizvodima nameću efikasan dizajn kanala marketinga, koji omogućava brzu isporuku. Francuska, kao poljoprivredno razvijena zemlja, konkurentsku prednost u plasmanu hrane ostvaruje uključivanjem Intertek globalnog operatera u kanal marketinga. Istraživanje je utemeljeno na dokazima koji su izvedeni korišćenjem statističkih instrumenata i bazira se na primeni više metoda savremene kvantitativne i kvalitativne analize. Predlog institucionalnog rešenja, održivog razvoja kanala marketinga poljoprivredno-prehrambenih proizvoda, je rezultat analize međunarodnih iskustava. Brzi, prilagodljivi i vertikalno integrisani kanali marketinga hrane imaju odlučujuću ulogu u konkurentnosti na domaćem i međunarodnom tržištu agrobiznisa. Povećanje konkurentnosti na domaćem, regionalnom i međunarodnom nivou je ishod istraživanja. Sagledavanjem rezultata strukturnih promena i uključivanjem Intertek operatera u lanac snabdevanja hranom na međunarodnom nivou, ukazuje nam na moguće pravce razvoja agrobiznis sistema u Republici Srbiji. Put stvaranja konkurentskih prednosti je uspostavljanje, inoviranje i jačanje veza subjekata kanala marketinga agrobiznisa kao nerazdvojne komponente procesa reprodukcije u poljoprivrednoj i prehrambenoj industriji.

**Ključne reči:** *kanali marketinga, poljoprivreda, Intertek globalni operator, konkurentnost.*

## Introduction

A continuous supply of consumers in the food market, savings in distribution costs and productivity increase are the goals whose achievement leads to the economic growth. Well-coordinated production and consumption take strategic importance in making of business decisions. More rigorous customer demands for quality products imply an effective marketing channel design that allows fast delivery. The comparative method and statistical comparison of the world practice with the practice of the Republic of Serbia show the development, productivity and competitiveness of the agribusiness of the Republic of Serbia. An important principle of modern short supply chains is to emphasize the origin of the product. [37] This type of food chain has certain social and economic impact at regional and farm level, as well as environmental impact. France is recognizable by the distribution model, which can be translated as a short circuit or a circuit electric. Honey and vegetable producers are most engaged in this type of distribution. The type of farm distribution is the type of circuit electric used by small producers. France can serve to Serbia as an example of a well-organized and successful market on the road to future development.

## Literature review

Modern quality management is focused on linking all stages of the value creation process. In the last few decades, the procurement function has been ahead of other business functions in the company. The main goal is to provide a safe and quality product to the end consumer with cost reduction in the supply chain [17], [18]. In the 1980s, the first research that was conducted brought into the spotlight creating of additional value for more suppliers [32]. The great competitive influence of foreign companies in the European market, which is followed by internationalization and globalization of the market, contributes to the greater importance of suppliers in the domestic market [42], [46], [33]. The procurement through the inclusion of food producers in the food supply chain, along with the development of technology, is a safe way to meet the needs of demanding consumers [7], [45], [8].

The development of strategic relationships with suppliers, the exchange of information and proposals regarding the quality of goods is constantly gaining in importance [31], [15], [57]. The benefits to suppliers (growers) from intermediaries are continuity in and intimacy with local markets, and the possibility to generate efficiency through the exploitation of specialization in sorting, assorting, storing, and transporting [11]. Efficiency is important because of its effect on costs, prices and margins. To facilitate efficiency, firms reviewing channel design often find it advantageous to implement separate and unique structures to achieve basic marketing requirements [52]. It is accepted that it is an important facet of marketing channels [44], and effective communication in marketing channels is difficult enough to achieve in domestic marketing channels where culture is relatively homogeneous. But the aims of rural development lead to the question: Don't mountains and poor regions need agricultural activities [13]? Relationships within marketing channels are complicated by the presence of multiple marketing channel members.

## Role and importance of the marketing channels for agri-food products

The agricultural food market has an international and national component where there are significant opportunities for increasing the volume, quality and range of the offer, but the internal market especially opens up new opportunities. Trade in agri-food products is mainly within the states because national markets are protected by state measures from free and uncontrolled imports. Successful development of agricultural production will not give adequate results without direction through higher market price orientation and continuous structural adjustment. Lower prices will benefit consumers, and leave space for development in favor of high quality special products. The benefits to suppliers (growers) from intermediaries are continuity in and intimacy with local markets, and the possibility to generate efficiency through the exploitation of specialization in sorting, assorting, storing, and transporting [11]. Efficiency is important because of its effect on costs, prices and margins. To facilitate efficiency,

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Based on the perspective of long-term development factors and expected changes in the structure of nutrition, population growth, national income, income elasticity and relative prices of food products, the following data keep increasing domestic demand for basic agricultural food products.

**Table 1: Trade in food products in Serbia in retail trade**

Year	2013	2014	2015	2016
Turnover of food products (in millions of RSD)	377.776	401.266	413.520	441.472

Source: Independent processing by the author using [68].

In underdeveloped countries with the transition to a market economy, there is a decrease in agricultural production, as domestic demand decreases as a result of economic recession in the initial transition period.

The construction of the market economy model in the agrosector of transition economies starts from the necessity of realization of the following reform processes: market liberalization, restructuring of agrosectors, reform of the pre-industrial and post-industrial sector and creation of adequate market infrastructure. The demand for agricultural and food products in the international market will go towards demanding high-value, safe and environmentally reliable methods of breeding products, a lower amount of value, products without synthetic additives, products of nature, meat of animals raised in pastures. In this direction, it is necessary to orientate and look for ways of expanding the market and an efficient export channel of transport, to the advantages of agrarian resources. The developed market pays the most attention to industrial food produced for health, which improves the physical and psychological state of the organism, organic food and natural food.

Consumers are expressing interest in new products, measuring quality, cultural value and satisfaction that

food can provide them, and this will have an increasingly important place and requirements for trade and producers in proportion to income growth leading to reduction in the relative share of food costs in total household spending. Two consumer structures will be formed, those with higher income that are guided by their health needs, image of consumption, and consumers with lower income whose priorities are the amount and price of food.

The European Union has been a member of the World Trade Organization since its foundation and has accepted the GATT package, which, in addition to other agreements, includes the Agreement on Sanitary and Phytosanitary Measures, as well as the Agreement on Agriculture. The GATT deals with agricultural products in three areas:

- 1) access to market or customs concessions;
- 2) internal support (subsidies) of production; and
- 3) export subsidies.

With the agreement of the members on the enlargement of the European Union, a plan for restructuring agriculture in candidate countries was developed (Agenda 2000), which offered different instruments and a special accession program for agricultural rural development, where 520 million euros have been allocated for a six-year period. This program is designed to help candidate countries to improve their agriculture, in order to establish an adequate framework for supporting sustainable agricultural and rural development, solve problems that hamper long-term alignment of agriculture. The necessity of global integration and the level of development of the EU impose the need to include many standards of social and planning policy, with the mandatory respect for the principles of sustainability. What is primarily discussed here are regional aspects, traffic, aspects of housing and environmental protection. In order to do this, the basic planning assumptions must be changed. Therefore, CAP (Common Agricultural Policy) support, as it has been used for almost half a century, through the commodity market and prices of agricultural products, has to gradually focus on direct payments in the fields of defined cultural, regional and environmental standards.

Hence, the basic slogan of the CARPE Policy Plan (Common Agricultural and Rural Policy of Europe) is to provide economically efficient and environmentally

sustainable agriculture through the creation of conditions favoring the integral development of rural areas in the EU.

The policy advocated in this way requires the following four elements to be systematized:

1. Market stabilization – MS,
2. Environmental and cultural landscape payments – ECLP,
3. Rural development incentives – RDI,
4. Transitional adjustment assistance – TAA.

During the Uruguay Round of negotiations, due to the importance of the agricultural sector and the need for a clear regulatory framework regarding the application of the restrictions, the Agreement on Agriculture was defined. The scope of application of the agreement are agricultural products, processed foods and food products. The agreement defines specific obligations regarding the reduction of measures of domestic support and export subsidies in agriculture, as well as the protection and improvement of access to the market for agricultural products.

The rules defined in the Agreement on Agriculture relating to market access include three basic elements: the use of customs as a basic safeguard mechanism and the tariff procedure, the regulation of the use of tariff quotas and protective measures. The Common Agricultural Policy and market organization were defined in 1962, with the principles of a single market, the Union's priorities and financial solidarity.

The reduction of customs protection will apply to customs rates and according to the formula that provides higher reductions for higher customs rates. The reduction bands for developed countries will increase and will be 50% for customs rates that are currently under 20%, 57% for customs rates between 20% and 50%, 64% for customs rates in the range of 50% to 75%, whereas customs rates of more than 75% are projected to decrease by 70%. The minimum average reduction must be 54% and special restrictions for customs rates exceeding 100% are foreseen. Reductions should be made for a period of 5 years.

For developing countries, the reduction in each band will be two thirds of the equivalent reduction for developed countries, with a maximum required reduction of 36%. The reduction bands for developing countries are: for

**Table 2: Reduction of customs protection under the Agreement on Agriculture**

	Average reduction	Reduction by product (tariff code)	Implementation period
Developed countries	-36%	-15%	6 years
Countries in development	-24%	-10%	10 years

Source: [55].

customs rates over 130% reduction of 46.7%, for customs rates between 80% and 130% reduction of 42.7%, while for customs rates below 30% decrease would be 33.3%. The implementation period of the proposed solutions would be 10 years.

The export of agri-food products, primarily to the European Union market, requires the development of programs that promote domestic products. The manufacturing industry participates in the channels of marketing of agricultural products primarily in the purchase, since the purchase of agricultural products, processing companies, primarily the food industry, provide a raw material base. In addition, the processing industry is also in the function of stable raw materials supply, because it provides security to agricultural producers in terms of placements and prices.

### Intertek operators as innovation channels of the marketing of developed economies

Geographical diversity, cultural specialty and different degrees of economic development are the basic characteristics of the rural areas of the European Union. But the aims of rural development lead to the question: Don't mountains and poor regions need agricultural activities [13]? In the last decades of the 20th century, agribusiness in many parts of Europe experienced profound changes. A significant factor in these changes is the development of the Common Agricultural Policy of the European Union. Also, we should mention the development of high and communication technologies, changes in the way of life and habits of consumers. The concept of rural development has entered the practice of the countries of the European Union through the agricultural and regional development policy. Agriculture and regional inequalities in economic development are mentioned in the first constitutional

Table 3: Indicators of European Union agriculture

Indicators	Data
Total surface:	418.113 million hectares
Land resources (000 hectares):	Agricultural - 39,505 / Arable - 24,888 / Fields and gardens - 16,945
Number of farmers:	23,214,000 (2008) 22,388,000 (2009)
Number of employees in agriculture:	11,406,000 (2008) 11,018,000 (2009)
Share of employed persons in agriculture in total employment:	About 4.6% of total employees
Rural population:	26.37%
The share of agriculture in GDP:	2.80%
Average farm size:	About 18 hectares
Distribution of value by sector:	Cereals and oil crops production 67% Livestock production 40%

Source: [23].

acts of the European Economic Community (Rome Agreement 1957).

Structural policy is aimed at strengthening economic and social cohesion between the different EU regions. In 1975, the European Regional Development Fund (ERDF) was established in order to co-finance measures aimed at developing and adapting the less developed regions.

The organization of the European Union, which is under the influence of a constant need for expansion, as well as adapting to the conditions imposed by the market and the World Trade Organization, has affected the reform of agriculture still in progress. Also, the importance of agrarian policy is in direct relation with the single market and the European Monetary Union, which are two main pillars of European integration; at the same time, the marketing and trade have become very active functions, as a result of changes in final demand and consumption, at the market of the European Union.

The agrosector of developed economies today is based on the existence of two models. The first is farmer's with a backing on the family farm, while the second is the model of agro-industrial business.

As an example of an agriculturally developed country, we will single out France.

France is one of the leading agricultural countries in the world. The area dedicated to agricultural production is 19.5 million hectares (48.2 million hectares) in 1999, or 35.5 percent of the total land area of France. It has the most of the agricultural land in Western Europe. Important products that characterize France include dairy products,

wine, beef, veal, wheat, fresh fruits and vegetables. The Common Agricultural Policy (CAP) had a tremendous impact on French agriculture. The CAP has created a system of common agricultural product prices across the EEC, stimulated agricultural production and improved the income of many French farmers. As the most prominent agricultural producer in Western Europe, France is the largest recipient of the CAP funds.

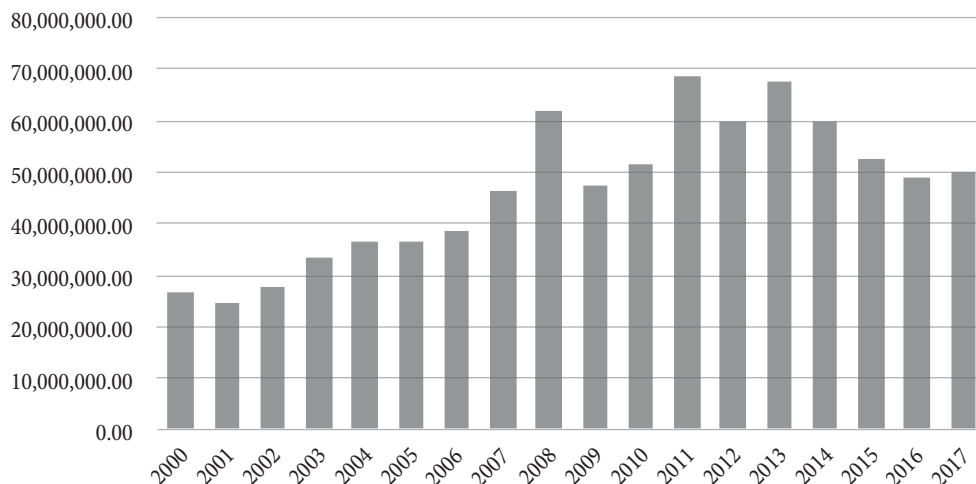
In addition to the realized agricultural production of 70.4 billion euros in 2011, French agricultural production began to occupy the leading position in Europe. The share of France in the value of agricultural production in the EU is 18.1%, Germany 13.4%, Italy 12.3% and Spain 10.6%. France thus holds the first place in the production of beef, poultry, cereals, sugar beet, oilseeds and potatoes. The French trade surplus of food and agriculture rose in 2013, as co-operation expanded to developing countries.

The total trade in food products grew by 11% annually for the period from 2001 to 2013, based on the latest data on FAO trade. In 2009, after the financial crisis, total food trade fell by 11%.

French agriculture and the agri-food industry note new records in 2013. During the first six months of 2013, the French trade deficit was down 16% from the previous year in the same period. By the end of June 2013, this deficit reached 30 billion euros, while it was 35.8 billion euros at the end of June 2012.

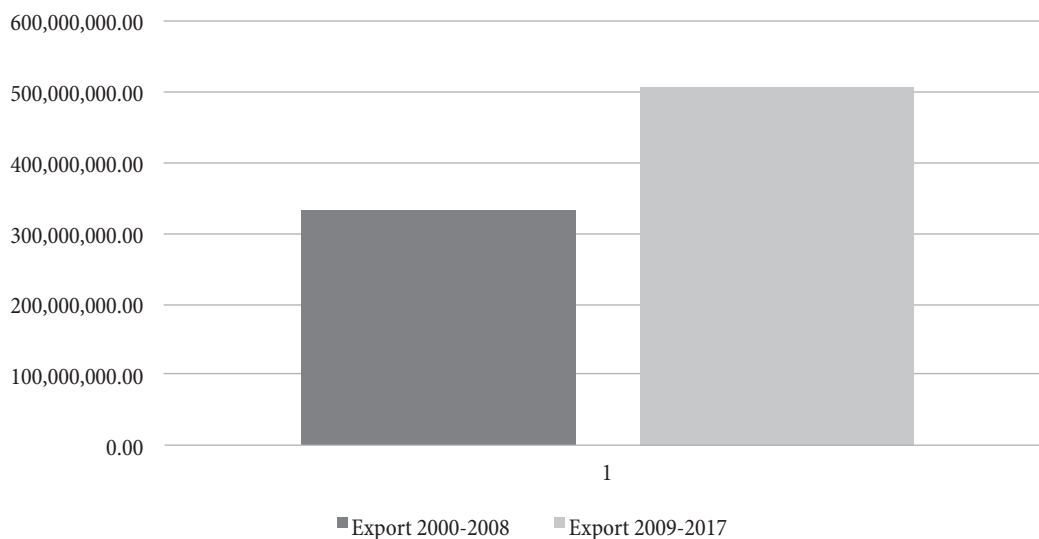
A new record of food exports was reached during the first semester of 2013. French exports to the United States increased by 48% compared to 2012 in the same

**Figure 1: Value of France’s export by year (2000-2017)**



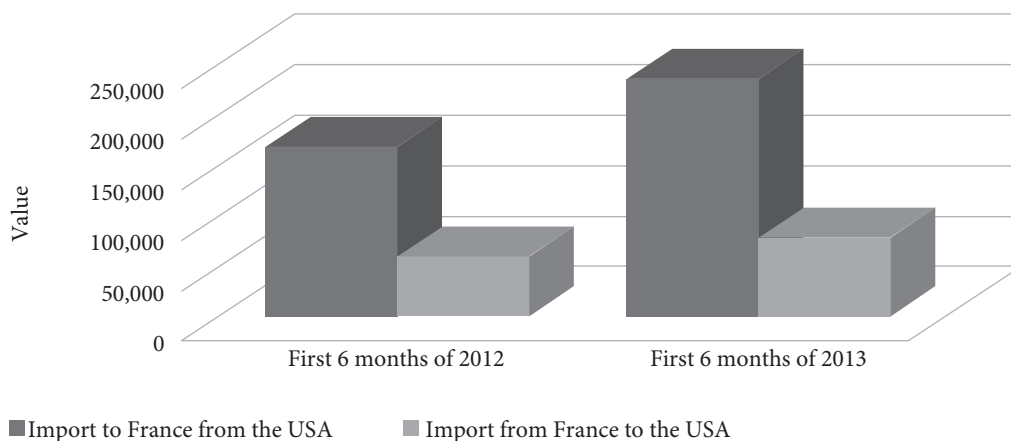
Source: Author’s view based on statistics data from [73].

**Figure 2: Foreign trade of France shown cumulatively by years (2000-2008 / 2009-2017)**



Source: Author’s view based on statistics data from [73].

**Figure 3: Trade in agricultural products between France and the United States**



Source: [66].

period; French imports from the US also increased by 36%, so the trade balance for the food sector amounted to € 916.7 million at the end of June 2013 (€ 875.4 million in June 2012).

In principle, the commercial environment in France is favorable for the sale of U.S. goods and services. The marketing of products and services in France is similar to the approach in the United States, regardless of some significant differences in cultural factors and certain legal and regulatory constraints. Although competition is strong, local partners have great access to most sectors and product lines. The new markets of Asia and South America, targeted by France, in 2017 increased the trade surplus in the export of food and agricultural products. For the first time, in 2013, the trade surplus for countries outside the European Union was higher than the surplus with the EU countries. At the time, it was €105 million more than in 2012 (an increase of 3.3%).

The United States remains the leader in 2017 in the export and import of agricultural products, especially food. France is in the top five countries in terms of export in 2017, while it is the seventh in terms of imports of agricultural products.

**Table 4: The world's largest importers and exporters of agri-food products**

Leading world exporters (in billions of USD)	2017	Leading world importers (in billions of USD)	2017
USA	148.10	USA	137.78
Netherlands	102.46	China	116.91
Germany	86.30	Germany	100.78
Brazil	81.22	Netherlands	68.46
France	69.26	England	61.99
China	62.18	Japan	59.72
Spain	50.40	France	57.71
Italy	46.53	Italy	46.34
Canada	45.89	Belgium	38.90
Belgium	45.16	Canada	35.58

Source: [63].

The contribution to the trade surplus is given by raw agricultural products, like wheat, whose exports were increased by 20% by the United Kingdom, North Africa and the Middle East. High prices in the potato market increased the value of the exported potato.

It mostly establishes cooperation with EU member states, and exports to these countries account for 70% of total exports.

Although France is third in Europe in exports with \$69.26 billion, its imports of agricultural products are significantly lower than Germany and the Netherlands, amounting to \$57.1 billion.

The top ten importers and exporters of agricultural products have a share of at least 50% of the market flows of agricultural products. Supply markets are concentrated around the same importer.

**Table 5: Countries with the highest market share of agri-food products**

Importers	Market share (2017)	Average growth rate 2015- 2017
USA	9.4%	3.3%
China	8.0%	3.3%
Germany	6.9%	5.1%
Netherlands	4.7%	5.5%
England	4.2%	-0.9%
Japan	4.1%	2.7%
France	3.9%	5.0%
Italy	3.2%	2.6%
Belgium	2.7%	6.7%
Canada	2.4%	1.0%

Source: [64].

Agri-food products (excluding fish products) make up 70% of the agricultural products traded on average.

The National Economy Guide with its Commercial Service Office in Paris offers many services and solutions for rapid adaptation and development of market entry and facilitates exports to France.

In France, the establishment of the Inter-Ministerial Delegation for Industry and Agribusiness (DIIAA), whose role is to animate and coordinate activities in favor of the development of the agri-food industry and agri-industry, is a novelty. DIIAA is under the auspices of the Ministry of Agriculture and the Ministry of Industry (Ministry of Economy, Industry and Employment).

Over the past few years, U.S. consumers have become more rigorous for healthier and authentic foods and drinks. The focus is on the origin and quality of the product. These growing American trends stimulate a demand that fits nicely with quality French agricultural supplies.

In addition to the comparative advantages it possesses, with Intertek Operator France acquires competitive advantages. Intertek is a global operator in France that takes care of monitoring safety and quality at every stage of the supply chain, which guarantees the best quality to its users. Implementation of supply chain management can protect against failures in food safety, incidents or failures in quality, and help identify and correct problems before reaching consumers.

The population, groups of people, organizations and various social groups in societies understand the importance of the use of information technologies to improve all kinds of people's lives such as: education, health, rural development, agriculture ... Adoption of such technology leads to increased productivity, time savings, energy and money [6], [47].

Information and communication technology is rapidly growing as the most important asset for rural development in third world countries, where most people adopt these technologies to advance education in the field of agriculture. In addition, these communication technologies are expanding and widening business in a small business [26].

In the agricultural sector, the green market offers a platform that integrates players across specific value chains, enabling efficiency and productivity. Remote farmers via a mobile phone, with the help of regional buyers, research institutions and transport companies can connect with many consumers and traders. In this way, communication between suppliers and producers is realized, as well as demand forecasting, transport and stock tracking. Mobile purchasing and distribution management enables farmers and other marketing channel participants to reliably identify a signal for demanding agricultural products and find a way of distribution.

The mobile money category provides the possibility of integrating with mobile money providers and enables payment through the supply chain. Monitoring and managing knowledge through the program is another advantage by having insight into what is happening in the value chain, which provides better effects and results. The advantages are multiple because it allows all entities of the marketing channel to have bidirectional information.

Short marketing channels are being promoted in France. Definition of short supply chains developed by [37] has been studied by researchers much later. They claim that short marketing channels have the capacity to "socialize" food, enabling consumers to make value estimates of food. The food that is the subject of trade is defined by a locality or even a specific farm where it is produced. Interestingly, [37] indicate the importance of the origin of products and information and the involvement of consumers in the information provided. Built-in information is printed on the package or delivered personally at the point of sale. This information allows the consumer to connect with the site and the space production and production methods [37]. Differentiating products in this way, in theory, allows products to command a superb price if information provided to consumers is important.

They are considered to be the most profitable. There are several types of short channels of marketing that can be identified, such as a farmer's community that includes farm sales, market sales, collective sales, especially to public institutions, which are closest to sales. This type of food chain has certain social and economic impacts at regional and farm level, as well as the environmental impact. Short food distribution channels are present throughout the EU, although there are some differences in the different members regarding the dominant species.

By definition, the circuit electric is characterized by no more than one agent between the producer and the consumer. The geographical distance between consumers and manufacturers is not taken into account due to the desire to engage producers who are far from the consumer markets, who still want to access these markets. Information and communication technologies provide facilities for the independent organization of economic activities. In this context, the significance of this technology is that it applies networking and information exchange among users, which is the main medium of communication technologies for small rural households [5].

It is significant that the concept of a circuit electric moves beyond direct sales from farmers to producers and includes shops, restaurants, school canteens and allows intermediaries and collective groups to become more involved in the development of circuit.



The rural development of France adopted distribution through circuit electric as a basis for territorial development. The concept of short distribution channels and definitions has been developing in France since 2009. The National Food Program also endorsed the principle of a circuit electric system that would find its application in collective catering, for example in schools. Agricultural modernization is supported by a law that allows canteens to buy food directly from a producer or a group.

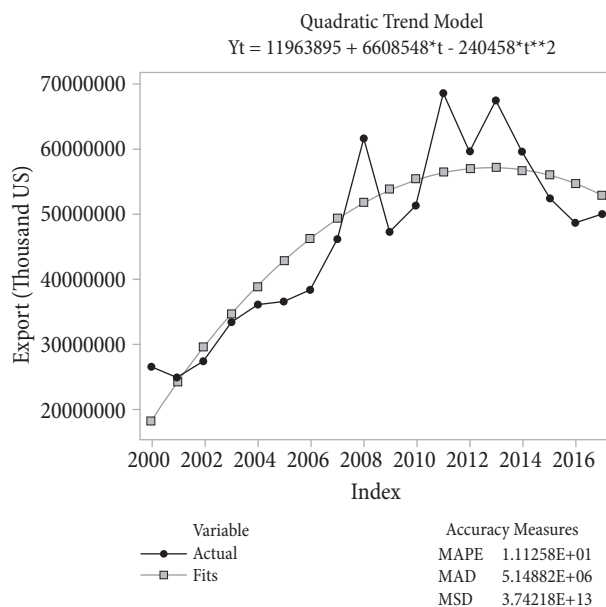
By promoting local managers to provide information to manufacturers and allowing consumers to identify where they can buy local products through the so-called switches of circuit electric, the level of awareness about the importance of distribution across circuit electric is raised. The idea on the creation of an EU label for farm products is at the level of all institutional representatives. The mark on the label should allow farmers to get a fair price for their goods. The label does not necessarily have to be for the type of product, but also for the type of supply chain, and it would help prevent the abuse of the origin of agricultural products. France can serve to Serbia as an example of a well-organized and successful market on the road to future development.

### Statistical analysis based on Minitab software

An analysis of export of vegetables from France for the period of 17 years (2000-2017) has included 231 countries. Using statistical software Minitab, we have analyzed the influence of the marketing channels for vegetables on the development of agriculture in France, as well as the overall placement of agricultural products. The trend analysis plot displays the observations versus time. The plot includes the fits calculated from the fitted trend equation and the accuracy measures. The analysis found that the data had best adapted to the square trend, as it shows the least standard deviation. The fitted trend equation is an algebraic representation of the trend line and interpretation is:  $Y_t = 11963895 + 6608548*t - 240458*t^2$ . This equation describes the movement of variable export over time, and under the influence of marketing channels where innovation has been applied. From the evolution of the marketing channels (the introduction of Intertek 2009), the

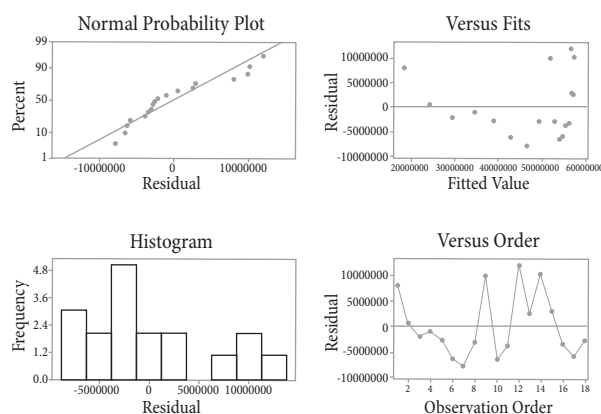
time series shows cyclical variations and a positive trend, which significantly influenced the export of agricultural products compared to exports in the previous period (2000-2008). Therefore, we can conclude that with the introduction of the Intertek, export variable has reached the highest performance.

Figure 4: Trend analysis plot for export (2000-2017)



Source: Author's work based on Minitab software.

Figure 5: Residual plots for export 2000-2017 (in thousands of USD)



Source: Authors' work based on Minitab software.

**Normal probability plot.** The normal plot of the residuals displays the residuals versus their expected values when the distribution is normal. In the case of France's export, S-curve implies a distribution with long tails, so the residuals are not normally distributed.

**Residuals versus fits plot.** The residuals versus fits plot displays the residuals on the y-axis and the fitted values on the x-axis. We use the residuals versus fits plot to determine whether the residuals are unbiased and have a constant variance. Ideally, the points should fall randomly on both sides of 0, with no recognizable patterns in the points. Therefore, residues are impartial and have a constant variation.

**Residuals versus order plot.** The residuals versus order plot displays the residuals in the order that the data were collected. Ideally, the residuals on the plot should fall randomly around the center line, which means that the model is well-adapted to the data.

**Histogram of residuals.** The histogram of the residuals shows the distribution of the residuals for all observations. If the model fits the data well, the residuals should be random with a mean of 0. The histogram should be approximately symmetric around 0, so the residuals in this case are not normally arranged.

## Characteristics of marketing channels for agricultural foodstuffs in the Republic of Serbia

The market for agricultural products in the Republic of Serbia is rather hindered and unorganized, and the main factors determining market trends are: incomplete utilization of the food industry capacity, extensive or semi-intensive production, small areas of farms, unfavorable variety structure, high production costs, product cyclicality, warehouse capacities, free export and import, quality standards and poor organization of farmers. These tendencies lead us to the necessity of seeing that effective marketing channels are a key assumption of the competitiveness of agribusiness in modern conditions.

The incomplete utilization of the capacity of the food industry is due to the narrow performance of the foreign market, the significant decline in demand on the domestic market due to the reduced payment capacity of the citizens and the inadequate production structure.

A particular problem and obstacle to intensifying Serbian agricultural production and increasing the supply of agricultural products are small private farmers' farms, where economically increased investment in production is

not profitable. In the Republic of Serbia the most numerous are agricultural holdings with an area of 1 to 3 hectares, and such a small surface causes a number of problems in the development of farming and fruit and vegetable production, for the following reasons:

- More serious development of production cannot be expected, since our farmers produce almost all kinds of cereals, fruits or vegetables in such small areas;
- Small yields and poor wages from dealing with agricultural production are the main reason for low or no investment in intensifying and modernizing production.

On the other hand, large agricultural holdings which, according to the structure of production, often have the character of agro-industrial factory-farms, deliver their products to the processing industry (for example, slaughter industry, milling industry, etc.) and, as a rule, have warehouses for storage, storing and commercial processing product.

Extensive or semi-intensive production of all sectors of agriculture in Serbia each year causes big losses and makes our products uncompetitive, both on the domestic and foreign markets, because it primarily causes low average yields of cultures. Namely, as a result of the production scale, i.e., small average yields per unit area, high production costs appear that adversely affect the price competitiveness of Serbian products.

Due to adverse weather conditions (drought, excessive precipitation, hail ...) in plantation, vegetable and fruit production, farmers suffer great losses almost every year, while improvised greenhouses, which increase the number of hectares in vegetable production, can protect and improve production to a small extent. All this has a major impact on the supply of agricultural products.

On one inhabitant in Serbia there are 0.71 hectares of agricultural land, or 0.46 hectares of arable land and garden.

In the long-term Serbian policy, the targeted and structural adjustment of total production can be realized on the balance of supply and demand of the most important agricultural products, the construction of market institutions and the application of economic instruments and government guarantees. Most of the

realized agricultural production with the exception of cereal production, in Serbia is still realized through green, quantitative and livestock markets. In order to increase competitiveness in this branch it is necessary to monitor the needs of consumers, to explore new markets for the placement of these products and to increase their value, for which the financial resources required by the community are needed. The disunited and fragmented agricultural producers are a characteristic of developing countries. Long inefficient marketing channels whose subjects are purchasers, wholesalers and retailers are present in the market of developing countries such as that of the Republic of Serbia.

Serbia is one of the countries with very small farms, which is a big problem for farmers in our country, as a large percentage of rural population is engaged in agriculture. The largest holdings are located in the Czech Republic.

Based on the comparison with the EU countries, Serbia is a country with exceptional natural resources, which is the size of arable land that occupies almost half of the total territory, but it belongs to countries with small agricultural holdings and is not using this natural resource. However, from Figure 6 we can see the positive foreign trade balance in the period 2013 - 2017. The year 2017 is the year with a surplus of \$348,607,600.

The implementation of logistics strategies must be in line with the goals that are intended to be achieved, and the

ultimate measure should be significantly higher efficiency and profitability [53]. Every time delays adversely affect the quality and safety of products being transported [24].

Developing countries have faced a number of problems that have influenced the formation of an efficient supply chain:

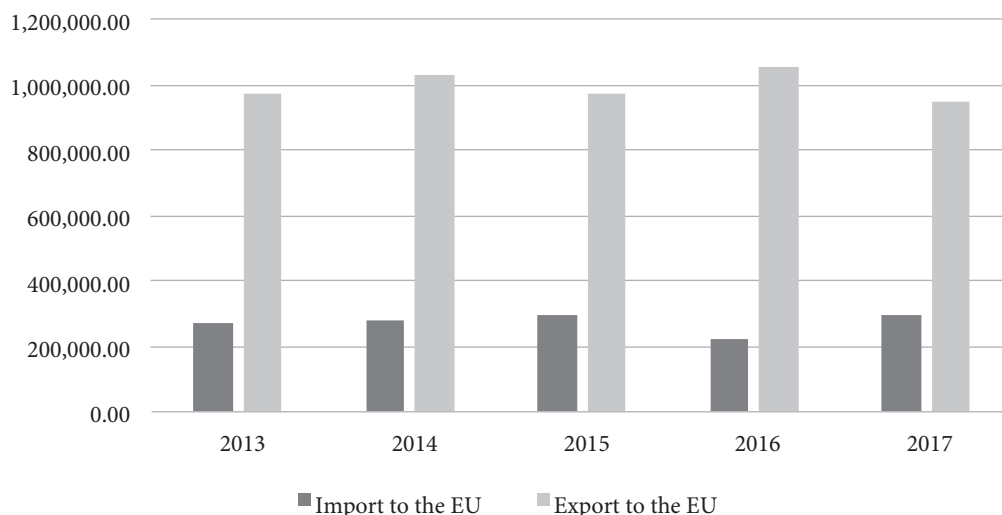
1. Bad timing in the formation of a chain
2. Poor optimization of the supply chain
3. Impact of legislation and policy.

The exchange of information must be constant, whereby subjects will seek the information flow mechanism that suits them best.

### Advantages and obstacles to the establishment of the competition position of the Republic of Serbia

Serbia has all the natural factors for the development of agri-food products. Possibilities for better positioning in the export of these products can be achieved by Serbia thanks to the competitive price of labor, quality fruit and vegetable production, the existence of tradition and experience in production, increased demand for consumers on the world market. Favorable climatic conditions contribute to the creation of a quality and possible health-safe product. Opportunities should be sought in a potential such as better access to new technologies, using export

**Figure 6: Balance of foreign trade of fresh fruit and vegetables between the Republic of Serbia and the EU, expressed in thousands of USD**



Source: [70], [71].

opportunities, a wide range of products, creating value added products. Consumer society imposes growth in living standards, which has the effect of increasing the consumption of agri-food products. The chance should be sought in the approach to the regional and international market through cooperation between the subjects of a marketing channel. The result of this integration would be more efficient business and product preservation, better understanding of the market and making profits.

Growth of investments is the main activity provided by developed countries to all subjects of the short marketing channel, if this leads to an increase in the interest of each individual member of the marketing channel. As a result of higher investments, there is a rise in employment and country standards. Serbia should follow this path. The obstacle to creating a competitive position is the lack of brand names, the fragmentation of the estate, the insufficiently intensive production. The unorganized producer and purchasing is another in a series of weaknesses in building an effective marketing channel. The aggravating circumstance for Serbia is also a regional competition that operates with great state support.

The supply breakdown results in the import of branded fruits and vegetables. Incomplete application of standards in the production of fruits and vegetables increases the consumers' suspicions that health food offer is a priority.

According to the economies of developed countries, seasonal variations and the impossibility of food demand forecasts, this should be tempered by the use of modern technologies and systems. They help companies and manufacturers to be significantly more productive in the market. Creating a competitive advantage in Serbia can be achieved by creating local brands in conjunction with other industries, such as tourism. This would increase the confidence of the agricultural producers themselves.

The obstacle to the development of a country's competitiveness is insufficient information from the producers about the needs of the market for agri-food products. The lack of a combination of producers and consumers creates an inability to placate goods in an efficient way. This shortage of agricultural land, such as France, is eliminated by short marketing channels.

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