




Science Fund
of the Republic of Serbia

Potentials for improving
the competitiveness of the agri-food
sector in the function
of sustainable economic
development

P  T 4food

REPORT OF NEEDS

Project acronym	POT4food
Project full title	Potentials for improving the competitiveness of the agri-food sector in the function of sustainable economic development
Project number	Project No. 10911
Funding scheme	Science Fund of the Republic of Serbia
Project start date	03/01/2024
Project duration	2 years

TITLE OF DOCUMENT	Report of needs
Work package	WP1
Deliverable	D1.1. Report of needs
Responsible Team members	Bojan Matkovski, Žana Jurjević, Danilo Đokić
Due date	31/3/2024
File name	POT4food_Report of Needs
Number of pages	27
Dissemination level	Public

Abstract	The primary purpose of this report is to determine the specificities of the agri-food sector in Serbia. This report will be starting point of research of competitiveness. The report of needs will have at least 25 pages and will be published on the website of the project.
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VERSIONING AND CONTRIBUTION HISTORY

Version	Date	Description	Responsible members
1	18/3/2024	Draft	Bojan Matkovski, Žana Jurjević, Danilo Đokić
2	30/3/2024	Final	Bojan Matkovski, Žana Jurjević, Danilo Đokić

This research was supported by the Science Fund of the Republic of Serbia, 10911, Potentials for improving the competitiveness of the agri-food sector in the function of sustainable economic development – POT4food.

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List of acronyms

POT4food	Potentials for improving the competitiveness of the agri-food sector in the function of sustainable economic development
WP	Work package
EFSUNS	Faculty of Economics in Subotica, University of Novi Sad
EKOF	Faculty of Economics and Business, University of Belgrade
IAMO	The Leibniz Institute of Agricultural Development in Transition Economies

1. Analysis of the agri-food sector of the Republic of Serbia

The strategic objective of Serbian economic policy is the acceleration of **European integration/EU accession** by implementing systematic reforms to create a more attractive economic environment. For Serbia, it is very important to work on improving the competitiveness of the agri-food sector by looking at the strategies and policies of the EU, and the harmonization of measures and mechanisms in Serbia with the EU. Issues in the segment of agriculture, rural development, and related sectors (fisheries, food safety) represent about 40% of the total legal framework that must be harmonized with the EU, which indicates that meeting the conditions in the field of agriculture and rural development is one of the most complex and demanding segments of negotiations for EU membership. On the day of accession, an acceding country must be able to implement the Common Agricultural Policy (CAP); candidate countries need to be able to implement the CAP policy cycle, which consists of planning, disbursement of support payments, monitoring, evaluation, and contribution to the formulation of the CAP support system. According to the latest Annual Report of the European Commission for Serbia, for Chapter 11—Agriculture and Rural Development, it is defined that Serbia has reached a certain level of preparedness in the field of agriculture and rural development, especially through the adoption of amendments to the Law on Agriculture in November 2021, the improved efficiency of processing the Instrument for Pre-accession Assistance for Rural Development (IPARD) applications, as well as timely delivery of the IPARD III program for the period 2021–2027. One of the most important fields of agricultural policy in the process of EU accession is the implementation of the IPARD, with the aim of preparing candidate countries for the effective implementation of programs within the European Agricultural Fund for Rural Development (EAFRD) after EU accession.

The process of Serbia's accession to the European Union implies **market liberalization** and more significant pressure from foreign competition. Liberalization from one side provides the market access, but from the other side reveals vulnerabilities of uncompetitive agri-food sector. The survival of local producers is crucial for the country's food security. In this regard, numerous measures have been proposed to improve Serbia's food security, emphasizing the adoption of adequate food standards and strategies, the establishment of trust with investors, and the reduction of corruption present in the agri-food sector. In the case of EU accession, there is a threat that local producers will not survive in the market, which is why it is necessary to increase their competitiveness. Also, new challenges in the food market, which are particularly characteristic of the EU, concerning the sustainability of production. In the last few years, there has been an environmental radicalization of European policies, which is best reflected in the European Green Deal, Farm to Fork Strategy, and the new Common

Agricultural Policy 2023-27. These strategies affect the food market and require rapid adjustments by all participants in the food supply chain. This is very important, especially since frequent occurrence of global and regional crises could have a negative impact on food security. From 2008 until today, several significant crises have occurred (the world economic crisis, the migrant crisis, the COVID-19 pandemic, and the Ukrainian crisis) that destabilized the food market in Serbia and the region. The best evidence is the drastic increase in the price of food in the last three years, which harms social welfare. The more efficient and competitive agribusiness sector reacts better to such shocks.

Market liberalization in Serbia (and other Western Balkan countries) was created by signing trade agreements with EU countries and signing a regional CEFTA agreement and other bilateral agreements. In the context of market liberalization, significant results have been achieved in the foreign trade of agri-food products in the last decade, but export performances of Serbia are significantly worse than in the EU countries. One of the main causes, among others, is the low level of agricultural productivity. When Serbian agri-food producers become a part of the common EU market, a strong competitive pressure from more efficient producers from highly developed EU countries can be expected. To improve Serbian agri-food sector production performance, it is necessary to encourage the agri-food production growth, because 20% of economically active population is employed in agri-food sector and about 10% of the GDP comes from this sector, that more than 100,000 people are employed in the food industry (processing of food products, beverages, and tobacco).

Agricultural production has specific importance for the overall economy of Serbia which is the result of the favourable agroecological conditions and insufficiently developed overall economy. Even though agriculture represents significant economic activity in rural areas, the share of income of rural households in the agriculture is not the dominant one. A lower share of income from agriculture is conditioned by inadequate structure of agricultural holdings, i.e. fragmentation of individual family farms and a level of agricultural productivity is low as well, which therefore has low level of competitiveness. Due to the relatively large significance of agriculture in the economy of Serbia, the adaptation to the European policy will present huge challenge and implies actions in direction of harmonization of legislation, strengthening of institutions, as well as changes in policy.

The smallholder agricultural sub-sector which accounts for the significant amount of food production in Serbia is characterized by low competitiveness, low productivity, and vulnerability to natural vagaries. More intensive production structure and sustainable ownership structure within the European agricultural model would significantly enhance the production potential in terms of partial agricultural productivity growth and thereby create a production base for the development of the food industry, which would increase the competitiveness of the industry and considerably improve the export potential of Serbian agricultural sector. In the context of future EU membership, Serbia should try to secure a better position for its farmers during the pre-accession negotiations, but also do everything to increase the level of agricultural competitiveness in the future common EU market. This difficult task involves a series of measures and coordinated activities, from knowledge transfer to the changed structure of agricultural holdings, to improve the production performance of agriculture.

To improve the production performance of agriculture, **agricultural policy** measures need to encourage more intensive agricultural production, which further aims to create a better basis for the development of the food industry. According to the previous research of competitiveness of agri-food products there are identified many difficulties which can hinder the increase of competitiveness: insufficient financial sources, lack of specific knowledge (technological, entrepreneurial, marketing, promotion, project management, etc.), poor idea preparation, lack of the protection of intellectual property. Improving competitiveness will not be possible without adapting to the high and growing demands of the developed EU market, especially when production standards are concerned. Apart from the state support, organisational leaders with their initiatives also have an important role in promoting the international standards for business operations in the function of raising the competitiveness level. The crucial task will be strengthening the institutional capacity for better organisation of small agricultural producers, for example, in forms of cooperatives and clusters. In addition to institutional capacities, it is necessary to promote cooperatives to increase awareness of the benefits of such an organisation. Of course, adequate education of farmers is also needed.

According to Matkovski et al. (2022), who analysed **comparative advantages of agri-food products of Serbia** and concluded that Serbia has comparative advantages in the export of agri-food products on global market, as well as on the EU and the CEFTA market and highlighted that the largest comparative advantages on the global market have the products of a lower processing phase. Improving agri-food competitiveness is a major challenge for policy makers. The focus will be on resolving issues inherited from the past that are still creating burdens for agricultural sectors. In the plant production sector, the level of competitiveness is not particularly low, but improving storage capacities, transport infrastructure and irrigation systems, as well as better organization of farmers would certainly be beneficial. A much larger problem is the livestock sector, which is predominantly concentrated in small holdings, where it is far more difficult to achieve adequate production and meet required standards. Also, the creation of a competitive food industry would enable Serbia to reduce dependence on exporting raw materials, and instead export products with higher added value. The whole process involves multi-track action, ranging from budget support and structural transformation to large-scale improvement of agricultural institutions. In other words, building a modern agribusiness sector should be an imperative for future agricultural policy in Serbia.

2. Contribution of the POT4food project in the analysis of competitiveness of the agri-food sector in Serbia

Research on the competitiveness of the Serbian agribusiness sector is mostly partial, insufficiently reliable in the analytical sense, and partially considers individual segments, that is, sub-sectors. A comprehensive analysis of the competitiveness of the agri-food sector in Serbia implies that all elements of the food supply chain should be analyzed, whereby this research includes the agricultural sector (farm level), the food industry, the market, and the

food consumer, i.e. “farm to fork”. Such a complex analysis would fill a **gap in the literature** and would be a basis for **strategic recommendations** to all stakeholders (farmers, agribusiness companies and policymakers). Considering that competitiveness is an essential issue in the EU agri-food market, Serbia should focus on improving competitiveness in the agri-food sector to be able to withstand market pressure from the EU.

The focus of the POT4food project is the food supply chain and looking at the possibilities for improving the competitiveness of its main segments: agricultural production, food industry, and food distribution. **The main goal** of the POT4food project is to assess the possibilities for improving the competitiveness of the agri-food sector to achieve sustainable economic development. The specific objectives of the project are: assessing the potential of the agri-food sector of the main segments of the food supply chain, publishing research results in top international journals and presenting research results at international scientific conferences, connecting with agricultural policymakers through panel discussions, with the participation of representatives of science, but also of all segments of the food supply chain; strengthening the capacity of young researchers in scientific and research work, by creating new teams that would compete for international projects in the future. The activities of the project are aimed at filling the gaps in a competently based approach to the research of the problems of the competitiveness of the agri-food sector of Serbia, which will also contain a proposal of measures for improving the competitive position of Serbian food production. It is imperative that all results be made available to stakeholders and to be valorised through the implementation of proposed measures and instruments at the institutional level.

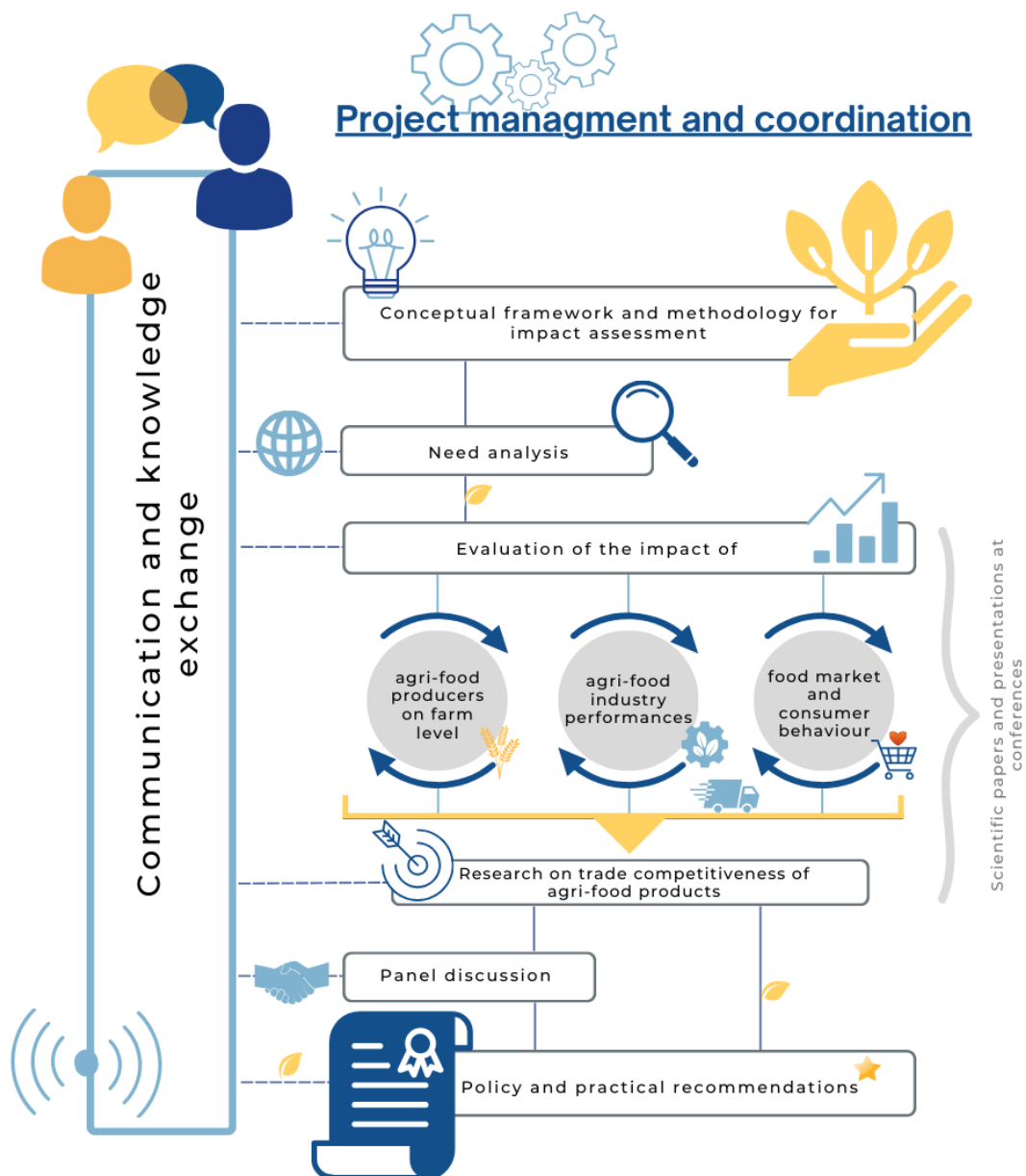
Scheme 1 shows the work plan of the project. The central part is the analysis of competitiveness of agri-food sector in Serbia. The first step of this project will be analysis of the micro-level drivers of export competitiveness within the agri-food sector of Serbia through *analysis of efficiency of agricultural production, performances and export competitiveness of food industry and consumer behaviour of food products*. For analysis of the efficiency on farm level, FADN data will be used. Performances of food industry will be analysed using data from Business Register Agency where influence of different variables (market concentration, liquidity, financial leverage, debt ratio, firm size, tangibility, total assets turnover, fixed assets turnover, current assets turnover, growth) will be estimated. For analysing of export competitiveness of food industry, we will apply the concepts of heterogeneous firms’ theory to specify a two-stage empirical model of firm-level export performances.

Special attention will be devoted to the research of food consumer behaviour. As part of this research, primary data will be collected through a survey, and with adequate statistical analysis and interpretation, certain guidelines will be given for the adaptation of food producers. The aspect of demand is extremely important, so that producers from the agri-food sector could adequately respond to the challenges of improving the efficiency of this market. This analysis allows a clear view of all participants in the food supply chain, thus creating a basis for making better recommendations for agricultural policy makers.

The next step in this project will be an analysis of overall competitiveness of agri-food sector in Serbia using adequate methodology. The macro-level export competitiveness in this regard could be analysed using dynamic models of export or the gravity models, depending on the data availability and model performances. Additionally, methodology will be based on indices

of comparative advantages and index of integration of different segments of agri-food products. Also, our project can influence on achieving goals of the National Employment Strategy through encourage entrepreneurship at local level. Our project, as well as this strategy, will promote employment in less developed regions. Additionally, project is in synergy with the Strategy of Agriculture and Rural Development of the Republic of Serbia, as well as in line with Rural Development Programmes of Serbia (IPARD Programmes). This project can be good preparation for application for IPARD. These results will be useful for government in process of creation of measures of agricultural policy, as well as for agri-food producers, which will ultimately increase the competitiveness of Serbia's agri-food sector.

Scheme 1. Pot4food work plan.



The research results of the POT4food will provide comprehensive knowledge base with clear and direct benefits at the macro-level and the micro-level. According to the objectives of the project research results are, above all, informational support to agri-food producers at the micro-level, while from the macro-aspect main beneficiaries are policymakers of agricultural policy, i.e. national/regional/local authorities. The impact is, thus, reflected in different levels with numerous spillover effects in obtaining and transferring knowledge in this area, relevant not only for the national economy, but also from the aspect of integration into a highly developed agricultural EU market.

Crucial stakeholders and potential partners who will enable project activities to be fulfilled include primarily *business representatives* and *policymakers*. Project team members cooperate with companies in the food industry (Neoplanta, Coca Cola HBC Srbija, Japan Tobacco International - JTI, Zbir brewery and others), whereby benefits for business representatives from the Pot4food project are insight into competitiveness research in relation to foreign companies from the same sector. At the macro level, stakeholders are policy makers, as well as all decision-making actors from the local to the national level, primarily representatives of the Ministry of Agriculture, Forestry and Water Management of Serbia. The idea of the project is to propose a new concept of agricultural policy that would influence the increase of efficiency in the food chain, thus influencing the long-term competitiveness of the agri-food sector in Serbia. Recommendations for agricultural policy will be summarized in a strategic guide with policy recommendations, which will include all findings from scientific works, conferences, panel discussions and cooperation with other institutions. POT4food project could assist agricultural policymakers during convergence process towards EU developed economies. Catching-up process in general is extremely complex, particularly in agri-food sector due to its specific importance for the national economy. Research results of the Project in the form of proposals for measures of agricultural policy will help to improve the competitiveness, production, and export performances of agri-food sector, with numerous spill-over benefits at the macro level. Namely, better performance of agri-food sector is reflected in stimulated export, employment, and economic growth in general, with more favourable trade balance on external plan. Accordingly, the beneficial transmission effects to the overall macro-performance of our country during integration and convergence processes is unambiguous.

Additionally, establishing and improving the collaboration among other members of the *academic community* in Serbia, as well as an external associate from the diaspora (Ivan Đurić) can benefit team members and quality of the project. It would enhance the quality of the work and extend the research repertoire of the partners. This collaboration would be particularly valuable to acquire modern knowledge and experience.

3. Kick-off meeting conclusions

At the kick-off meeting, research plans were agreed upon, which can be summarized in six key fields of research in accordance with project outcomes:

1. Determinants of technical efficiency and profitability of farms in Serbia
2. Profitability of agri-Food companies in Serbia amidst COVID-19 turbulence: does leverage matter?
3. Generation Z behaviour in the Republic of Serbia: Is buying healthy food products a symbol of social prestige?
4. The Impact of agricultural trade agreements on agricultural trade: The role of sanitary and phytosanitary measures and technical barriers to trade
5. Competitiveness of agri-food sector: Evidence from Open Balkan
6. Considering regional specificities in formulating agricultural policy in Serbia: Directions and recommendations

3.1. Determinants of technical efficiency and profitability of farms in Serbia

a) Description (Background and Purpose)

Serbian agriculture is in the European integration process, which implies harmonizing agricultural policy with the EU's Common Agricultural Policy. For several decades, the CAP was an extremely productivist policy, as evidenced by the press release about the CAP, published on the 50th anniversary of the Treaty of Rome, where its productivist conception was again at the forefront: the CAP enables production, ensures the stability of markets, strengthens the European economy, and secures and creates jobs (Erjavec & Erjavec, 2009). However, in the last few years, there has been an environmental radicalization of European policies, which is best reflected in the European Green Deal, Farm to Fork Strategy, and the new Common Agricultural Policy 2023-27. These strategies affect the food market and require rapid adjustments by all participants in the food supply chain, especially farms.

Serbia's position on this issue is very interesting. The productivity and efficiency of agriculture are at a lower level than the EU, as evidenced by numerous studies (Bogdanov & Vasiljevic, 2011; Horvat et al., 2020; Đokić et al., 2022). The biggest challenge for agricultural policy creators is balancing productivism and environmentalism or determining the pace of the turn towards environmentalism, which is becoming increasingly present in the EU. A particular problem is that new measures can be expected to protect the EU market regarding ecological production standards so that domestic green producers are protected from foreign competition. Such changes will lead to neo-protectionism, and the EU market will become relatively closed for Serbian farmers.

Following the defined problem, the research subject is the competitiveness of Serbian farms reflected through technical efficiency and profitability. The main objective of the research is to determine the factors that influence technical efficiency and profitability. In the context of modern policies, special attention will be focused on the effects of the use of chemical inputs (pesticides and mineral fertilizers). The importance of this topic is evidenced by the EU goals expressed in the F2F strategy: The Commission will reduce nutrient losses by at least 50% while ensuring no deterioration in soil fertility. This will reduce the use of fertilizers by at least 20% by 2030. The Commission will take additional action to reduce the overall use and risk of chemical pesticides by 50% and the use of more hazardous pesticides by 50% by 2030 (Farm to Fork Strategy, 2020). An additional research idea is to create a scenario of reducing the use of these inputs on output and efficiency.

Additional factors that will be analyzed are demographic characteristics, types of farms, regional differences, and state support. Considering the inconsistency of agricultural policy, it is exciting to analyze the effects of state support for different types of agricultural holdings. Although it can be considered productivist, the effects of Serbia's agricultural policy measures are questionable and insufficiently researched, which opens up space for filling the gaps in the literature. Finally, due to the specific research period (data is available for the years 2019, 2020, and 2021), it is possible to discover whether the COVID-19 crisis created certain distortions in the agricultural sector and whether it reflected on the profitability of farms.

b) Methodology

Competitiveness of agricultural production on farm level will be analysed using measure of efficiency through Data Envelopment Analysis (DEA). Additionally, the determinants of efficiency will be investigated. The Farm Accountancy Data Network which includes 1772 farms will be used. The following variables will be used in the calculation of technical efficiency test: total output, total labour input, total utilised agricultural area, total livestock units, total intermediate consumption, depreciation. The variables for determining the factor that influence technical efficiency are: fertilisers, total subsidies, regional variables, type of production.

C) Impact

Research results can have an impact on two levels. First, at the farm level, the results can indicate the key factors that affect the efficiency of agricultural production and, therefore, the competitiveness of farms. In this way, it is possible to create recommendations for improving the business of different types of farms. Second, by including additional variables related to state support, it is possible to create recommendations for agricultural policymakers to use public funds more efficiently in order to improve agriculture's competitiveness.

3.2. Profitability of agri-food companies in Serbia amidst COVID-19 turbulence: does leverage matter?

a) Description (Background and Purpose)

The outbreak of the COVID-19 pandemic has triggered an unprecedented global economic crisis, affecting every industry and aspect of society. Among the sectors profoundly impacted is the agri-food industry, which connects diverse activities from agriculture and food processing to distribution and retail. The disruptions caused by the pandemic have been complex, ranging from supply chain interruptions to shifts in consumer behavior and changes in government regulations. One of the key areas of concern within the agri-food sector has been its financial performance. The pandemic has introduced significant challenges that have directly impacted the revenue, profitability, and financial stability of companies operating within this industry. Lockdown measures, social distancing requirements, and shifts in consumer demand have led to fluctuations in sales volumes, supply chain bottlenecks, and increased operating costs. Additionally, restrictions on travel and trade have disrupted international markets, affecting both exports and imports of agricultural products. According to the official data from the Statistical Office of the Republic of Serbia, the index of industrial production in manufacture of food products sector in Serbia had been decreasing for several years prior to the pandemic. Starting from 2020, production has been exceeding the previous year's output. Output growth may be a positive signal for the sector, but not be sufficient to assess financial performance. However, it is essential to examine additional financial indicators in order to comprehend the impact of the pandemic on the profitability of companies in the food sector. Thus, along considering the effects of the coronavirus pandemic, the research would also incorporate firm-specific indicators such as liquidity, financial leverage, debt ratio, firm size, tangibility, total assets turnover, fixed assets turnover, current assets turnover, and sales growth rate.

The financial performance of companies plays a crucial role in the improving process of competitiveness of one sector. Profitable companies are better equipped to withstand and recover from external shocks, such as economic downturns, market volatility, or unexpected crises like the COVID-19 pandemic. A strong financial position allows companies to weather challenges, maintain operations, and capitalize on opportunities that arise during periods of uncertainty. Furthermore, companies that achieve sustainable growth of profitability rate usually expand into new markets, both domestically and internationally. Internationalization enhances competitiveness by diversifying revenue streams, reducing dependency on domestic markets, and accessing new growth opportunities. Profitable companies have the financial capacity to invest in research and development, in strengthening their supply chains, improving logistics, and enhancing collaboration with suppliers and partners. Thus, when assessing the potential of trade competitiveness, it proves necessary to examine the factors that influence profitability.

Distinguishing between highly and low indebted enterprises is crucial among profitability factor analysis as it provides insights into business resilience. Companies with different levels of indebtedness may have varying degrees of financial risk exposure. While some companies entered the crisis with substantial debt burdens, others maintained relatively lower levels of indebtedness. Highly leveraged companies may face greater challenges in servicing their debt

obligations during periods of economic downturn, such as the COVID-19 pandemic. Analyzing the profitability of these companies in the context of the pandemic can highlight potential vulnerabilities and the likelihood of financial distress. Conversely, companies with lower levels of indebtedness may demonstrate greater financial flexibility and resilience in adverse market conditions. Understanding how the pandemic has influenced the profitability of companies across different debt profiles is crucial for developing effective mitigation strategies and informing financial decision-making.

Moreover, subsectors within the agri-food sector have experienced divergent impacts, with some witnessing increased demand due to changing consumer behaviors, while others faced operational constraints and market uncertainties. Exploring the specific implications of COVID-19 on profitability within different segments of the agri-food industry provides valuable insights into sectoral resilience and vulnerability amidst crisis conditions. Primarily, COVID-19 has led to significant changes in consumer behavior, including shifts towards online shopping, increased demand for certain food products, and a greater emphasis on health and safety. Understanding how these changes affect the profitability of companies in different agri-food sub-sectors enables businesses to adapt their marketing strategies, product offerings, and distribution channels to meet evolving consumer preferences effectively. Also, insights into the impact of COVID-19 on the profitability of companies within different agri-food sub-sectors are invaluable for policymakers in designing targeted support measures and policy interventions. By understanding the specific challenges faced by companies in each sub-sector, policymakers can tailor assistance programs to address sector-specific needs, mitigate financial distress, and facilitate economic recovery.

This research paper aims to analyze the impact of the COVID-19 pandemic on company profitability, with a particular emphasis on comparing the effects between highly and less leveraged companies. Additionally, the study seeks to outline the influence of the pandemic on various subsectors within the agri-food industry. By examining these dimensions, the paper aims to achieve the following objectives:

- Assess the extent to which COVID-19 has affected profitability in agri-food sector in Serbia, considering firm-specific factors in period from 2014 to 2022.
- Identify any significant disparities in the impact of the pandemic on profitability between highly leveraged and low-leveraged companies operating in Serbia.
- Examine the specific challenges faced by subsectors within the agri-food industry in light of the COVID-19 pandemic.
- Provide recommendations and guidelines for enhancing the trade competitiveness of the agri-food sector by focusing on controlling factors that significantly influence financial performance in view of the global coronavirus outbreak.

b) Methodology

Descriptive analysis would be used to provide fundamental details about the examined sample. To analyze the impact of firm-specific factors and the COVID-19 pandemic on the profitability of companies in the agri-food sector in Republic of Serbia, as well as to compare the impact of the pandemic on profitability between high and low indebted companies, panel data analysis would be applied. Immediately upon the application of panel analysis, it proves necessary to

assure that the fundamental assumptions for the application of panel analysis, such as multicollinearity, autocorrelation, and heteroscedasticity, are not violated.

To further validate the impact of the Covid-19 pandemic on the profitability of agri-food companies, a placebo test would be conducted to assess if agri-food companies exhibit impacted financial performance as a result of altering fiscal year. The test would omit the financial data from 2020 and define 2019 as the epidemic year.

C) Impact

Comprehending the impact of COVID-19 on the financial performance of agri-food companies in Serbia is of great importance for multiple reasons. Insights gained from this research can inform policymakers and stakeholders in the agri-food sector about the specific challenges faced by businesses during the pandemic. This knowledge could guide the formulation of targeted policies and interventions aimed at supporting the sector and enhancing its resilience in the face of future crises. Agri-food companies could utilize the findings of this research to adapt their business strategies and operations in response to the ongoing pandemic and its aftermath. By understanding how various firm-specific factors influence profitability during times of crisis, companies could proactively mitigate risks and capitalize on opportunities. Moreover, investors and financial institutions could use the insights from this research to assess the financial health and risk profiles of agri-food companies operating in Serbia during crisis. This enhanced understanding could facilitate more informed investment decisions and promote greater stability and confidence in the sector. Furthermore, the research contributes to academic literature by advancing understanding of the complex interplay between pandemics, firm-level factors, and sectoral dynamics in the agri-food industry. It provides a valuable empirical basis for further scholarly inquiry and theoretical development in this field.

3.3. Generation Z behaviour in the Republic of Serbia: Is buying healthy food products a symbol of social prestige?

a) Description (Background and Purpose)

The food industry aims to continually identify changeable consumers' trends since the consumers are at the center of all marketing efforts (Lee et al., 2018). Due to the modern consumers' environment, one noticeable growing trend is buying healthy food products (Duarte et al., 2021). According to the authors Tabassum et al. (2018) healthy food products are categorized into five groups: Organic Food (OF), Functional/Fortified Food (FF), Better-for-You (BFY), Naturally Healthy (NH) and Food Intolerance (FI). This trend presents an opportunity for food manufacturers to redesign their marketing strategies (Liñán et al., 2019). Concerning future marketing strategies, marketing food experts must identify which factors have an impact on specific consumer segments. Therefore, the subject of the proposed paper is going to be healthy food consumption with a special focus on Generation Z (Gen Z).

Gen Z refers to individuals born in the late 1990s and the early 2010s. In line with that, these consumers are going to represent the head of the household henceforward. In students' status, many of them are currently moving out of their parents' homes and they are developing

new purchasing habits (Kymäläinen et al., 2021). As they are going to be the most dynamic actors on the market in the near future, the authors Özkan and Solmaz (2017) states the importance of researching exactly this segment.

Early adulthood of the Gen Z members is expressed by specific lifestyle and an effort to differentiate from the surroundings. Thus, their purchase behaviour is unique and authentic (Šramková and Sirotiaková, 2021). Since the food consumption can be a strong expression of self-identity, the food market is particularly interesting research field for marketers (Husic-Mehmedovic et al., 2017). Many of young adults cite French lawyer and politician Brillat-Savarin: "Tell me what you eat, and I will tell you what you are.". Motivated by that attitude, the authors Palma et al. (2017) empirically found that lower-class individuals consume special food products in order to become members of a higher class. Hence, the main aim of the proposed paper is going to be examining the Gen Z behaviour in the Republic of Serbia: is buying healthy food products a symbol of social prestige?

According to the authors Šapić et al. (2018) the possession and usage of certain products could reflect the social prestige and improve consumers' self-esteem. Consumers often try to be popular in their social reference groups, especially the young ones (Heide & Olsen, 2018). The proposed research framework is going to analyze whether is consumption of healthy food products a powerful weapon in that social dimension. As for the following attributes, the proposed research framework will analyze the taste, price, in-store availability, and nutritional composition of healthy food products as well. In accordance with that, the obtained data is going to provide valuable insights into Gen Z response on healthy food market attributes.

b) Methodology

The empirical research is going to be conducted on the territory of the Republic of Serbia, while the majority sample will be students, i.e., Generation Z members. Their responses are going to be collected through the survey method that gathers information from a group of individuals by asking them questions. The formed questionnaire would start with a cover letter that describes the aim of the scientific research, the identity of the researcher and the guaranteed anonymity of the respondents.

Further, the formed questionnaire would contain these two sections as well:

1. Socio-demographic characteristics of the respondents (gender, age, living arrangement, monthly personal income and respondents purchasing' habits)
2. Respondents' attitudes regarding the concept of healthy food using a Likert scale from 1 (I do not agree at all) to 5 (I completely agree).

Before statistical processing, the completed questionnaires are going to be reviewed while the certain irregularities will be removed from further analysis if they are found. The rest of the data will be tested using statistical software IBM SPSS Statistics and Amos.

C) Impact

Regardless the fact that buying healthy food products has become a growing trend, the research field is characterized by a lack of available literature, while the empirical gap is particularly noticeable in the Republic of Serbia. Thus, the proposed research framework would extend the existing theoretical base by providing valuable insights into Generation Z behaviour in the food industries. Accordingly, marketing implications would help marketing food experts as well as food manufacturers to adapt their business strategies by better understanding these young consumers.

3.4. The impact of agricultural trade agreements on agricultural trade: the role of sanitary and phytosanitary measures and technical barriers to trade

a) Description (Background and Purpose)

Trade barriers represent impediments to the trade flows. Historically, tariffs stood as the primary trade barriers, but concerted efforts through multilateral, plurilateral, and bilateral trade liberalization initiatives have substantially diminished these traditional barriers in recent decades. The diminishing significance of traditional trade barriers over time has, however, given way to the ascent of neoprotectionism, a trend accentuated significantly post the World Financial Crisis., with countries around the world starting to introduce new or ramp up the existing non-tariff measures. Nations globally responded by introducing or intensifying non-tariff measures, thereby creating substantial hindrances to international trade, notably in the agricultural sector. The existing non-tariff barriers create regulatory heterogeneity, preventing the integration of world markets. Agriculture is particularly sensitive in this regard since much of the regulation affecting agricultural trade is concerned with the health and safety of the consumers. When the regulatory standards significantly differ between the countries, the potentials for trade disruption grow. The adjustments producers and exporters need to make in order to implement the required standards of foreign markets incur additional costs. For this reason, differences in standards could be considered a distinctive type of resistance factor in the trade flow analysis.

The standards regulating agricultural trade are a necessity. They are aimed at realizing the goals of consumers' safety and health, as well as the preservation of animal and plant health and prevention of diseases, by addressing various risks related to different products. In addition, the standards in agricultural trade are important as a method of confronting the problems of informational asymmetry. Finally, the standards could also support the cultural norms of trading economies.

The standards in agricultural trade have the potential to serve as trade catalysts. The exporters adjust their products in order to ensure that the importing economy's goals are reached, and overcome legal barriers to trade, leading to the establishment of trade flows. Moreover, the implementation of standards in export products increases the compatibility of products on different markets and could improve the quality of the export products, as well as their consistency. The implementation of standards also leads to the unification of product

characteristics, reducing country-specific adaptation costs for exporters. Finally, the implementation of standards could result in additional network effects and improve the effectiveness of production processes. However, the positive trade effects of standards exist only if the said standards are set fairly and objectively, and are not misused for discrimination against foreign producers. The existing literature on agricultural trade suggests that the standards are particularly likely to be catalysts to trade if domestic producers face higher compliance costs than foreign ones.

The heterogeneity of standards in agricultural trade could have significant negative effects, as such circumstances incur additional compliance costs on exporters, decreasing their international competitiveness. Additionally, standards' heterogeneity imposes high investment costs as an export requirement, which prevents firms from realizing economies of scale, further reducing trade. The standards are particularly problematic in world trade if they are applied discriminately or inconsistently or if they lead to favoritism of domestic producers. As such, the heterogeneous standards may serve as a trade barrier. They are more likely to be a trade barrier if the compliance costs the standards incur are higher for foreign producers, than the domestic ones.

The existing limited empirical evidence suggests that the differences in sanitary, phytosanitary, and technical regulation among countries hinder agricultural trade. It is, thus, expected that the movement towards the harmonization of the standards applied in agricultural trade should have positive effects. One common channel through which this harmonization occurs is through the provisions of regional trade agreements. Deep trade agreements are particularly interesting in this regard, as their provisions directly reduce the burdens of complying with heterogeneous standards in agriculture, leading to more cooperative choices of regulation among the agreement participants. This channel of harmonization of standards and its effect on agricultural trade is at the heart of this proposed research project.

The general approach to trade liberalization on a global scale following the Second World War was based on multilateralism. However, the last successful multilateral negotiation round was completed in 1995, resulting in the creation of the World Trade Organization. In 2001, the new Doha round of negotiations was launched under the auspice of the World Trade Organization, and it focused, inter alia, on agricultural trade. However, this negotiation round stalled due to divergent interests of developing and developed economies related to agricultural trade liberalization. Namely, the developing economies oppose providing market access in the agriculture sector, while the developed economies are resistant to giving up on agricultural subsidies. Many problems, including the misuse of standards as a trade barrier, remain as a result of the inability to complete the round and enhance the multilateral trading system. Lately, there has been a concurrent evolution of multilateralism and regionalism in trade liberalization, with the regional trade agreements being increasingly seen as a potential solution to this problem, due to the higher degree of flexibility they offer in regulating trade relations between the signatories. This is evidenced by the proliferation of regional trade agreements, which has increased from 50 in 1995 to 365 in 2024, the majority of which belong to the free trade agreements category. The main idea behind this cooperative approach to fostering economic integration is that trade relations are regulated between or among the

countries on a bilateral or plurilateral level. Through these agreements, the participants define the rules of trade transparently. The existing trade agreements are heterogeneous in terms of their complexity and provisions. A portion of the existing trade agreements address certain aspects of non-tariff barriers' usage.

An increasing number of regional trade agreements and deep trade agreements, in particular, reference various standards and include provisions regarding their harmonization. Sanitary and phytosanitary provisions, as well as the provisions related to the technical barriers to trade, are highly relevant for regulating and promoting agricultural trade. Current estimates suggest that more than 80% of agricultural trade is affected by sanitary and phytosanitary measures and slightly less than half of the trade flows in the sector are affected by technical barriers to trade. Regional trade agreements, as an avenue of addressing the problems related to these measures and harmonizing the regulation and standards, are important as they level the conditions for domestic and foreign producers within the trade agreement, reducing existing trade barriers and promoting trade. The participants in international trade covered by such agreements rely on greater security and have a more transparent regulatory framework for conducting trade. In regards to the sanitary and phytosanitary measures and technical barriers to trade, the provisions can range from cooperation and reciprocity to, sometimes, complete harmonization of regulation and formation of joint supervising bodies.

The main purpose of our study is to explore the role of regional trade agreements in harmonizing sanitary and phytosanitary regulations and technical standards and evaluate their effect on agricultural trade. In addition to this, we aim to investigate how different trade agreements' formulations of the provisions related to harmonization affect agricultural trade flows. We also seek to review the sectorial heterogeneity of these effects within the agricultural sector. For this purpose, the countries in our sample provide an interesting sample, as the majority of them are not World Trade Organization members and, as such, do not have a high level of standardization. In this context, standardization through regional trade agreements is especially important.

Another goal of our proposed study is to describe the contents of the regional trade agreements in which the sampled countries participate and consider the nature of heterogeneity in provisions related to sanitary and phytosanitary measures and technical barriers to trade and to determine in which cases and at which levels of commitment the provisions have the most positive effect of trade creation between partner economies. We are also interested in exploring how the harmonization commitments affect agricultural trade of individual product groups, and where the greatest potential for promoting trade exists. The possibility of sectorial heterogeneity of trade creation effects is suggested by the recent empirical evidence, which shows that the negative effects of sanitary and phytosanitary measures depend on product- and economy-level idiosyncrasies, caused by concrete differences in applied regulations and standards (Santeramo and Lamonaca, 2019; Fiankor, 2021).

In our proposed study, we expect to demonstrate the differing effects of various approaches of standards harmonization through provisions of regional trade agreements on agricultural exports. The important contribution lies in the sample of countries not previously treated in a similar context as well as the empirical exploration of provisional and sectorial heterogeneity

of trade effects. The empirical results should show what type of standard harmonization is the most beneficial for fostering trade and in which contexts the regional trade agreements and their provisions related to sanitary, phytosanitary, and technical measures can best be employed for improving the international competitiveness of agricultural production through the means of economic diplomacy.

The novelty of our research is supported by the review of the existing literature, which indicated that only few studies address the role of sanitary and phytosanitary measures and technical barriers to trade provisions within regional trade agreements. Furthermore, none of these studies treat the problem for the subset countries covered in our study. None of the aforesaid studies deals with the heterogeneity of the trade agreement's provisions and none consider sectorial idiosyncrasies of their trade effects. The study will provide a detailed exploration of the scope and depth of the standards-related provisions in the existing regional trade agreements and their respective effectiveness in different contexts. In addition to the aforementioned contributions, our proposed study is based on one of the largest samples used for this purpose until this date, which will provide a substantial generalizability of the obtained results and shed light on this insufficiently explored topic.

b) Methodology

The planned empirical analysis requires us to combine various data sources. Considering the specifics of our project, it is ideal to make the best use of the United Nations COMTRADE database for bilateral trade flows, as a foundation for our sample. We could consider both imports and exports to check for the robustness of the results, or we could focus on total trade volume between countries. This data needs to be joined with the data from the World Trade Organization database, which allows us to identify active trade agreements in which the sampled countries participate. The database also provides basic information on sanitary and phytosanitary and technical provisions that could be used for constructing the independent variable in the focus of the analysis. The research could also go a step further by conducting content analysis on the identified regional trade agreements in which the sampled countries participate and providing much greater details before classifying the provision related to sanitary and phytosanitary measures and technical barriers to trade. The data from the United Nations Conference on Trade and Development, United Nations Food and Agriculture Organization, Centre d'Etudes Prospectives et d'Informations Internationales, and World Trade Organization Information Management System could be used for quantifying other standard gravity variables needed to properly specify and estimate our empirical model.

It is important to collect and prepare the data in the form that facilitates the application of the gravity model. This would entail listing all the pairs of countries and for each pair consider all the years in the specified timeframe of the analysis. For this top-level framework, additional information related to regional trade agreements, their provision, and standard gravity model variables need to be added. The data should be checked for inconsistencies, and if needed, cleaned, which can be achieved through conducting a descriptive analysis prior to model estimation.

The estimation of the gravity model of trade will require the use of panel data. We will observe country pairs over a number of years. This is important as such an approach increases the

sample size and will greatly improve the precision of our estimates. This particular data structure is especially important in the gravity framework context, where it allows for the control of individual and time-specific effects which reflect the unobserved multilateral resistance terms. It also enables the control of country-pair fixed effects that account for unobservable relationships between endogenous variables and error terms, addressing the problem of trade policy variables endogeneity (Baier and Bergstrand, 2007). In our context, the inclusion of country-pair fixed effects addresses the possibility that the standards harmonization is caused by preexisting voluminous trade flows, which create the initial demand for harmonization. The higher level of controlling the individual effects (such as controlling country-pair fixed effects) can absorb bilateral time-invariant factors determining trade, making the gravity model highly minimalistic. Although this reduces the possibility of interpreting other aspects contributing to agricultural trade flows, the parameters related to the variables in the focus of our research still can be estimated and interpreted (Agnostva et al., 2019), so it is a feasible analytical approach for the need of our prospective research.

C) Impact

The expected results and impacts of our proposed study are multifold. The study should result in a descriptive overview of the state of usage of the regional trade agreements by the sampled countries and, especially, their contents in regard to sanitary and phytosanitary measures and technical barriers to trade. It should provide information about the general level of harmonization of standards between the observed trade partners within the regional trade agreements. The descriptive overview should also indicate the extent of trade that is covered by the harmonized regulation related to sanitary and phytosanitary measures and technical barriers to trade. The study will also provide a comparison of trade flows between signatories and non-signatories on one side and only regional trade agreements' signatories on the other. Additional comparison will be made within the group of regional trade agreement's signatories in regard to the level of harmonization of sanitary phytosanitary and technical regulation. The study results will present a descriptive overview of the evolution of regional trade agreements over time, and their respective structures related to the standards' harmonization. A possible comparison can also be made regarding the misuse of sanitary and phytosanitary and technical measures as trade barriers within the regional trade agreements and in the trade flows between partners not commonly involved in such agreements.

The main insights into the trade creation effects of standards' harmonization within regional trade agreements and the formal test of our initial hypotheses will come from the estimation of our empirical model. The results of this estimation will allow us to quantify the effects of standard gravity variables on agricultural trade. It is expected that the results will indicate that the larger economies with greater physic and physical proximity will have a higher value of agricultural trade. Although such results might not be novel, they will show the applicability of the gravity framework of international trade in the context of agricultural economies. Moreover, it will serve as a valid check of the specification validly. Finally, the estimated parameters of the standard gravity variable could have some useful policy implications. For instance, it could show how elastic agricultural trade is relative to economic growth and to what extent various types of distance affect the trade flows in agriculture, thereby implying

how certain measures decreasing these negative effects can be used as a method of fostering trade in agricultural products.

Arguably the most interesting results will stem from the estimation of the parameters related to the main variables in the focus of our analysis, which are related to regional trade agreements and the level of harmonization they provide in terms of sanitary and phytosanitary measures and technical barriers to trade. These results should provide valuable insight into how the deep trade agreements and their provisions affect agricultural trade. Additionally, a more fine-grained analysis could reveal how various levels of harmonization and provisions' formulations could have different impacts on agricultural trade. It is expected that the provisions overlapping with existing multilateral agreements or provisions that provide only the nominal commitment to harmonization without concrete obligations have an insignificant effect on agricultural trade. In contrast, higher levels of commitment to harmonization should have significant and more pronounced trade-creating effects. Some empirical evidence suggests a possibility of negative effects of standards' harmonization on trade (Santeramo and Lamonaca, 2022). Such a possible outcome of the study could be interpreted as harmonization leading to the increased regulatory stringency that increases the costs for the exporters conducting international trade between standard-harmonizing partner economies. The highest levels of international technical cooperation are most likely to cause positive trade effects. These include the provisions of regional trade agreements related to institutional cooperation, mandating the creation of joint committees and working groups between the agreement signatories. The harmonization through regional trade agreements should have a similar positive and significant trade-creating effect for both sanitary and phytosanitary measures and the technical barriers to trade.

Another expected insight from our proposed study is concerned with how the harmonization provision of regional trade agreements affects trade in different product groups within the agriculture sector. These results should help us identify the agricultural activities that are most likely to benefit from harmonization of sanitary, phytosanitary, and technical regulation through regional trade agreements. Depending on the final specification of our gravity model, the results could also reveal to what extent the existing non-tariff measures limit agricultural trade of the observed countries. However, considering that the data for the Western Balkans countries (including Serbia) are yet to be added to the TRAINS database of the United Nations Conference on Trade and Development, which could make such an approach unfeasible for the timeframe of POT4food project.

The estimation results of our gravity model of agricultural trade could have interesting interpretations that could further exemplify various policy choices by using simple simulation techniques based on the point estimates. Such an approach could be used to show agricultural trade value increases for hypothetical increases in the standards' harmonization levels between the selected countries. Such an overview could be particularly interesting and useful for policymakers in evaluating the effects of prospective new or renegotiated trade agreements. A more advanced simulation technique could entail the use of a general equilibrium framework, which often uses the estimates of the gravity model of trade in the calibration phase.

The conclusion of our proposed study should highlight the importance of the topic. Additionally, it should show how the results of our study contribute to the literature and the policymakers. It could state that our study provides empirical evidence on the effects of deep trade agreements on agricultural trade while providing further insight into which specific contents of these agreements matter the most, and where the highest potentials for trade creation exist. Particularly policy-relevant results are the estimates of trade volume changes based on the existence and concrete provisions of regional trade agreements. This will provide new and valuable information on how these agreements affect trade and will help us and the other researchers and interested stakeholders in the process of identifying the best practices for promoting agricultural trade, negotiating deep trade agreements, and achieving higher levels of economic integration in general. The study will also provide wider implications for understanding agricultural trade flows on a global level, due to the evidence on how many the standards heterogeneity matter for these trade flows.

3.5. Competitiveness of agri-food sector: Evidence from Open Balkan

a) Description (Background and Purpose)

The Open Balkans initiative, signed in 2021 between the three countries of the Western Balkans - Serbia, North Macedonia and Albania, aims to intensify foreign trade exchange, freer movement and economic development. In addition to the memorandum on the freer flow of foreign trade exchange, the agreement on cooperation in the field of veterinary, phytosanitary, and food and feed safety, which is particularly important for the agri-food sector, by which the three signatory countries agree that they will recognize test reports from laboratories of other countries, which enables easier flow of agri-food products between these countries. The Open Balkans initiative actually represents an upgrade to the existing CEFTA agreement, and despite the impossibility of making a clear distinction between the effects of CEFTA and the Open Balkans, this paper aims to review the regional competitiveness of the exports of the agri-food sector of these countries, and to reveal the potential effects of the Open Balkans initiative on competitiveness itself.

Previous research has shown that Serbia achieves the best results in the export of agri-food products both on the international and regional markets and since the Open Balkans initiative, through the memorandum of understanding on cooperation in facilitating the import, export and movement of goods in the Western Balkans and the agreement on cooperation in the field of veterinary, phytosanitary, and food and feed safety, additional intensification of regional trade of agri-food products is expected.

In this direction, with this research, special emphasis will be placed on Serbia, as the most significant player in the foreign trade exchange of agri-food from all the countries of the Western Balkans, and the tendencies in the foreign trade exchange, the regional and commodity structure of export and import of these products will be looked at in particular, and the changes that took place under the influence of the Open Balkan initiative itself, but also the crisis situations that followed the period after the signing of the initiative.

Although competitiveness research is widely present in the literature, due to the relatively recent suppression of this initiative, there is not a large number of studies in the literature dealing with the effects of the Open Balkans initiative on the competitiveness of the agri-food sector of these countries, i.e. the export positions that are achieved both within the countries that signed the initiative, as well as on the entire export of this sector. Previous research indicates that regional connection through the Open Balkans initiative, which, among other things, resulted in the facilitation of trade in agri-food products, can have very good effects for all the countries of the Western Balkans, both those that are part of this agreement and for those who are, so to speak, potential members. For Serbia, such agreements additionally facilitate the placement conditions on markets that are geographically closest to them and where they achieve competitive advantages, and additional growth in exports to these countries can be expected. On the other hand, for countries that are dependent on imports, such initiatives lead to easier realization of food security, that is, to the realization of stability on the market of agricultural and food products. The possible fear of competitive pressure from Serbia is not fully justified, since the production structure of agriculture in these countries is largely complementary, which can largely be said for the export structure of the agri-food sector. In this context, export growth can be expected for these countries as well, especially in sectors that achieve comparative advantages. Generally speaking, any trade liberalization leads to the intensification of foreign trade exchange, which in this case will lead to a better regional positioning of agri-food products from these countries. Of course, the effects of the aforementioned process will largely depend on the expansion of the Open Balkans initiative to Bosnia and Herzegovina and Montenegro, without whose participation the results of regional integration will most likely remain at a modest level.

b) Methodology

The methodology will be based on indices of comparative advantages and index of integration of different segments of agri-food products. The most well-known index for measuring competitiveness at the macro level is the Revealed Comparative Advantage (RCA), which represents the ratio between the share of exports of an individual product, or group of products, in total exports in relation to the same ratio of a group of countries. As an alternative measure of comparative advantage, it will also be used Comparative Advantage Index–Lafay Index (LFI). The advantage of LFI over the RCA index is reflected in a better picture of the foreign trade performance of the analyzed product or sector because it takes into account not only exports, but also the side of imports. Namely, LFI also takes into account re-exports, as well as macroeconomic distortions that can have a significant effect on comparative advantages. LFI stands out in the literature as a more complete method, bearing in mind that it provides a more complete analysis of the specific positions of an individual product within its participation in the foreign trade of a particular country. The Grubel-Lloyd intra-industry trade (GLIIT) index will be used to determine the importance of intra-industrial trade in a particular sector, department or commodity group in total trade between two countries (regions). This indicator determines the level of integration of a particular sector, division or commodity group with a particular market, as well as the ability to compete with the competition.

C) Impact

This research will discuss determinants that create export positions in the market of agri-food products in Serbia and the rest of the countries that are signatories of the Open Balkan initiative. Given that liberalization also poses a threat to the agri-food sector, research results may indicate segments of this sector within which additional efforts are needed to lead to improved competitiveness. The research results could be useful for agricultural policymakers, in terms of creating more effective support to the agri-food sector, which would contribute to "favouring" domestic producers, and at the same time, increase competitiveness in the international market. This is particularly important, bearing in mind that all these countries want to become members of the European Union, and therefore they should strive to provide the best possible positions for their agri-food products during pre-accession negotiations for EU membership and take the necessary steps towards increasing the level of competitiveness in the common EU market.

3.6. Considering regional specificities in formulating agricultural policy in Serbia: Directions and recommendations

a) Description (Background and Purpose)

Serbia's agricultural policy is still in transition, where there is no long-term framework, stability of measures is not ensured, financial resources are not determined for several years in advance and change depending on the annual state budget (Volk et al., 2019). Traditionally agricultural policy in Serbia was often centralized, with programs enacted at the national level, without adequate consideration of regional differences. This approach may result in insufficient satisfaction of the specific needs and characteristics of different regions. Insufficient adaptation of policies to regional differences can result in inefficient use of resources and lack of support for farmers in less favorable areas for agriculture. Directing funds to areas with special development problems is an established practice within the European Union regulations, which is not the case with Serbia's agricultural policy. Within the Common Agricultural Policy (CAP) of the EU, support schemes for less favorable areas, i.e. for areas with natural limitations, represent an important support implementation mechanism (Pe'er et al., 2020). Official strategic and spatial planning documents treat Serbian agriculture and rural areas as unique, not considering their heterogeneity, which leads to negative consequences in underdeveloped rural areas (Gajić, 2015). National development strategies cannot cover the pronounced differences especially between rural areas, so it is necessary to look at the regional as well as local heterogeneities of these areas. A regional approach could therefore be useful in the long term for recommending directional guidelines for agricultural policy (Dyba et al., 2018). Understanding these problems and establishing policies that take regional specificities into account can contribute to a better alignment of Serbia's agricultural policy with the needs and characteristics of different regions, which would result in a more sustainable and balanced development of agriculture and rural areas.

In accordance with the defined problem, the subject of the research is regional specificities of agriculture and rural areas in Serbia. The main goal of the research is the creation of a regional

typology based on the development characteristics of agriculture and rural areas of Serbia, as well as the analysis of the spatial distribution of the funds of the agricultural budget of Serbia in accordance with the defined types. Various economic, ecological, and demographic indicators will be used to analyze the regional specificities, which enables the results of the research to give a clearer picture of the situation and indications in which direction Serbia's future development strategies should be directed. This research focuses on answering the following question: How do the regional contexts, potentials and development needs of agriculture and rural areas differ between the regions of Serbia, and how should the creators of Serbia's agrarian policy look at regional characteristics when creating development programs and strategies?

Regionalization of policies in the EU is becoming more and more important due to the ongoing decentralization reforms (Tatham and Mbaye, 2018). The regional approach to agricultural policy, especially the CAP, is extensively covered in the literature. In research Dumangane et al. (2021), CAP funds are measured as intensities to make them comparable across regions and identify their importance for the regional economy and the agricultural sector (primary beneficiary of Pillar 1 direct payments). Kiryluk-Dryjska and Baer-Nawrocka (2021) analyse regional differences in Poland, where the benefits Polish farmers derive from the CAP vary significantly across regions. Despite the redistributive payment, regions with a greater potential (mostly including the territories with a larger average farm area) derive more benefits from the CAP than regions with a smaller potential. This is true for both the 1st and the 2nd pillar of the CAP. Zasada et al. (2018) point out that the diversity of regions across the EU, with different territorial potentials and challenges, is inconsistent with the allocation of funds within the second pillar of the ZAP, that is, within the EU's rural development policy. In their research, regional typology was created using different indicators (agriculture, environment and landscape, socio-economic context, and rural development), connecting the results of the typology with regional payment shares of region types (RTs) per funding priority.

b) Methodology

Territorial units are included in the regional analysis, according to the Nomenclature of Statistical Territorial Units, at the NUTS 3 level. The regional Farm Accountancy Data Network (FADN) will be used, considering various indicators of the regional specificities of agriculture and rural areas of Serbia. The regional typology will be created using multivariate statistical analyses, i.e. Factor and Cluster analysis. The results of the typology will be viewed in accordance with the regional distribution of agricultural policy funds. Also, the results of the typology will be visualized through maps, which enables the spatial aspect to be seen.

C) Impact

The research investigates in detail the regional specificities of agriculture and rural areas in Serbia, including climatic, geographical, and socio-economic factors, connecting them with measures of agricultural policy in Serbia. The research analyses the current approach to the centralized agricultural policy of Serbia and identifies shortcomings in adapting these policies to regional needs, which fills a gap in existing literature. Comprehensive research in this paper gains importance considering that it is necessary to adopt a new Strategy for Agriculture and Rural Development of the Republic of Serbia, given that the current Strategy is dated until 2024. Harmonization with CAP is one of the main goals of the future strategy, whereby the

regionalization of measures of Serbia's agricultural policy enables the creation of a flexible framework that enables the adaptation of policies to the specific needs of each region. Based on the results, the paper proposes a series of recommendations for the successful regionalization of agricultural policy measures.