ORIGINAL SCIENTIFIC PAPER

FOREIGN DIRECT INVESTMENTS AS A DRIVER OF EXPORT COMPETITIVENESS IN SERBIA'S RASPBERRY SECTOR

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ABSTRACT

The research examines the impact of foreign direct investment inflows, as well as the production and exports of raspberries by Serbia's main competitors, Poland and Chile, on Serbian raspberry exports. A multiple linear regression econometric model was applied, based on an annual time series for the period 1995–2023, and estimated using the ordinary least squares (OLS) method with the Newey–West correction. The findings indicate that foreign capital significantly enhances Serbian raspberry exports, while development aid has a weaker effect. The six-equation model facilitates forecasting raspberry production and market placement in Serbia, Poland, Chile, and other raspberry-producing and raspberry-exporting countries.

***Keywords**: agribusiness, foreign direct investment, raspberry, marketing channels, market*

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INTRODUCTION

Economic theory suggests that the level of economic development can significantly influence the effects of foreign direct investments (FDIs) in the host country in general, particularly with regard to export effects. This is especially important for predicting potential indirect effects in the host country [1] [2]. Iheonu et al., [3], [4] [5] provided diverse reviews on the economic aspects of development and their connections with investment strategies and institutions. Further literature indicates that, in addition to the level of economic development, other specific characteristics of host countries can also affect the export effects of foreign direct investments. Political instability in host countries negatively affects these export effects [6] [7] [8] [9] [10] . Magazzino and Mele [11] obtained results that can predict changes in FDI in relation to Malta's economic growth. Caselli et al. [12] using a quantitative trade model, assessed the importance of sectoral specialisation and cross-country diversification, demonstrating that international trade has reduced economic volatility for most countries in recent decades.

Marketing channels for fruit play a decisive role in competitiveness in both domestic and international markets [13]. Through the analysis of vertical integration and the investment of the French company Roger Descours Group in the raspberry marketing channel, solutions regarding the competitive structure of marketing channels are identified. Serbia's climatic conditions are favourable for offering raspberries when the supply from Chile and Spain is reduced. Poland, the main competitor, has been intensively improving its process of fresh raspberry production and distribution in recent years [14] [15] [16] .

The research in this study applies econometric methodology to analyse regression models in the field, identifying foreign direct investment (FDI) as a determinant of increased productivity and raspberry exports from Serbia. The analysis focuses exclusively on raspberry exports, primarily driven by the research topic. Moreover, focusing on a single product helps address the issue of aggregation bias—prevalent in many related empirical studies. Different conditions across sectors imply varying motives for foreign investors [17]. Some theoretical models explicitly predict different effects of FDI on agricultural sector exports compared to the manufacturing sector (e.g., [18]. Empirical studies also highlight the heterogeneity of export effects of FDIs depending on the sector under consideration [19] [20] [21] . The approach advocated by scholars such as [22] , applied in this empirical research, emphasises sector-specific analysis with relatively homogeneous investor conditions and motivations.

The aim of this study is to examine the impact of foreign direct investment (FDI) (independent variable) on raspberry exports from the Republic of Serbia (dependent variable). In addition to FDI, the study also explores the impact of other factors (independent variables): agricultural development donations, quantities of raspberry production, and exports by Serbia's competitors in raspberry exports—Poland and Chile—along with raspberry production in Serbia and temperature changes for the period 1995–2023. By processing data in the EViews program, six relevant equations are derived as models.

Internal explanatory variables contribute to creating Serbia's competitive advantage in positioning itself in the global raspberry market, based on correlation coefficient values. Factors that Serbia can influence to transform comparative advantage into competitive advantage include raspberry production and exports. To enable positive growth, efforts must focus on improving sector profitability through FDI, enhancing raspberry quality (integrated and organic production), and fostering entrepreneurial innovation in rural areas [23] [24].

The results of this study should emphasise and confirm the significant impact of FDI on raspberry exports from Serbia, through its influence on marketing channels and the competitiveness of agricultural production, including raspberry production. Questions regarding the design of marketing channels in this agricultural sector are inadequately researched, both in Serbia and in developed market economies.

The study addresses the following research questions: **RQ1.** Are raspberry marketing channels in Serbia underdeveloped and poorly organised? **RQ2.** What decisive role will FDI in the raspberry sector play in international market competitiveness? **RQ3.** Do vertical and horizontal integration positively impact the efficiency of fruit marketing channels in international markets?

The second and third hypotheses are derived from macroeconomic trade theories, assuming that FDI in the agricultural sector is vertically structured. In this context, it is expected that inflows of FDI into developing countries will positively affect the value of agricultural exports from these countries.

Through the presented theoretical framework, research questions, methodology, results, and discussion, the study arrives at conclusions that identify theoretical and practical applications, limitations, and opportunities for the models proposed for further research.

LITERATURE REVIEW

MARKET POSITION OF THE REPUBLIC OF SERBIA IN GLOBAL RASPBERRY EXPORTS

Chile, as a competitor in raspberry exports, initiated efforts in the 1980s to adapt raspberry production to international quality standards. As a result of these measures, when comparing the three largest global competitors in raspberry exports—Chile, Serbia, and Poland—we observe that Chile has achieved the highest level of modernization, traceability, quality control, and adherence to production standards.

A successful export strategy was achieved by Chilean enterprises through local and international networking. To enhance the profitability and income of raspberry farms, it is essential to improve management practices and the capabilities of small-scale farmers ([25].

Trends such as the reduction in the production cost gap between developing and developed countries, technological changes, increasingly environmentally conscious consumption patterns, investor pressure to invest in clean industries, growing awareness of supply chain risks associated with climate change, and supply chain risk management significantly influence the location patterns of foreign direct investment (FDI) and trade ([26] [27].

Observing the data in Charts 1 and 2, a discrepancy in Serbia's ranking in both the quantity and value of raspberry exports from 2015 to 2021 is apparent.

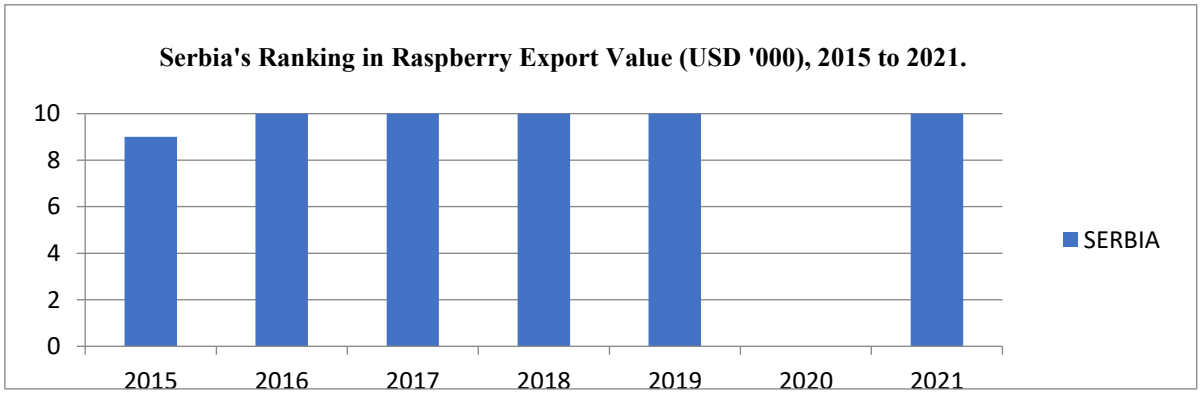

Chart 1. Serbia's Ranking in Raspberry Export Value (USD '000), 2015–2021.
Source: [28]

Chart 2. Serbia's Ranking in Raspberry Export Quantity, 2015–2021.
Source: [28]

Observing the period from 2015 to 2021, Serbia achieved the highest quantity in raspberry exports in 2015 and 2019, ranking 6th. However, its best performance in terms of export value was in 2015, ranking 9th. Data for the rank of raspberry exports in USD for 2020 are not available. The significant difference between quantity-based and value-based rankings indicates the presence of comparative, but not competitive, advantages. The Russian Federation is the world's largest raspberry producer, but it produces exclusively for domestic consumption ([29.

The significance of intrafirm trade for transnational companies—facilitating easier access to foreign markets through developed distribution networks of the parent company—is exemplified by Roger Descours Group's successful foreign direct investment in Serbia.

Frucom Food, a subsidiary of Roger Descours Group in Serbia, faces no obstacles in placing its products on international markets, as evidenced by the export of 99% of its goods. An additional advantage for Yugent Food stems from Roger's operations in countries that also produce raspberries. Since acquiring Yugent Food doo and Frucom Food doo, Roger Descours Group has shortened the marketing channel by conducting business without intermediaries, consolidating profit margins under the Roger brand.

The company's procurement market spans 40 countries worldwide. Roger Descours Group operates four factories in France, three in Morocco, and two in Serbia, with brokerage offices in Canada, Chile, and Poland. Annually, the company exports 40,000 tons of frozen fruit destined for retail under brands such as Vivermont and Fruti d'Or ([30] available at: https://www.carina.rs/). Distribution involves packaging products for distributors such as Metro, Auchan, Leclerc, and Intermarché, or supplying semi-finished goods to the food industry for yogurt, jam, and confectionery production.

Given that sales are managed through inventory systems, a push strategy for raspberry products is deemed relevant. The horizontal integration of Frucom Food doo with Yugent Food doo represents a strategy to achieve successful outcomes amid fluctuating raspberry prices, thereby reducing operational costs. Management operations are based at Frucom Food doo.

STUDIES ON THE IMPACT OF FOREIGN DIRECT INVESTMENT ON EXPORTS

The first study was conducted by Djokoto, and subsequent researchers Verter and Babatunde explored the same research question. Djokoto conducted his study using Ghana as a case example [31] [32] [33]. Ilegbinosa et al., [35] [32] [33] analyzed Nigeria ([34].

Descriptive empirical studies, such as Lee's research, which uses descriptive statistics to analyze foreign direct investment in Korea from the United States and Japan, found that the impact of foreign direct investment primarily depends on the motives of investors, which vary significantly depending on the country in question. American investments are largely oriented toward the Korean market, while Japanese investments in South Korea are predominantly export-oriented [36]. Similarly, using a comparable approach, Sun (1998) concluded that a significant portion of China's exports can be attributed to foreign-owned companies ([37]. Barry and Bradley [39] [40] reached similar conclusions through descriptive analyses, studying cases from Ireland, Hungary, and Poland, respectively.

The significance of indirect effects within a region underscores the importance of geographic proximity in shaping these effects, which aligns with findings from studies by Alvarez et al. [41] [42].

Interestingly, based on the reviewed empirical literature at the micro level, it can be observed that the fruit sector has never been the subject of empirical research on the direct and indirect effects of foreign direct investment on raspberry exports using econometric models. This research aims to address precisely that gap.

According to the findings of Aggarwal (2002) and Kenh and Wei (2025), foreign ownership positively affects exports only in the case of firms operating in sectors where the host country has a comparative advantage (such as labor-intensive sectors in the case of India) [43] [44].

The absence of significant indirect effects suggests that transition economies experience a pronounced direct impact of foreign direct investment on exports. This may be due to their more developed infrastructure and closer geographical proximity to the European market compared to other developing countries, making them attractive for vertical and export-oriented foreign direct investments. Another reason is the strong supportive policy toward foreign investment within this group of countries [45] [46] [47].

There is a recognized opportunity for further investigation focusing on individual sectors—particularly the agricultural sector—to provide greater clarity on the relationship between FDI and exports in various contexts.

METHODOLOGY

APPLIED METHODOLOGICAL APPROACH

The research on the impact of foreign direct investment on raspberry exports is based on time series data analysis.

If there is a linear relationship among the variables according to the conditions set by the multiple regression equation, it is possible to construct a reasonably predictive multiple linear regression model ([48] .

The generic form of a linear regression model can be described as follows ([49]:

$$Y_i = \beta_0 + \beta_1 X_{i1} + \cdots + \beta_K X_{iK} + \varepsilon_i, i = 1, \ldots, n \quad (1)$$

In which Y is the dependent variable, Xj for j=1,…,k are the independent variables, and ϵ represents the error or deviation, while βj for j=0,1,…,k are unknown parameters. The number of independent variables is k. From the assumptions, we obtain that the expected value of the variable Yi

$$E(Y_i) = \beta_0 + \beta_1 X_{i1} + \cdots + \beta_K X_{iK}, \quad (2)$$

while its variance is:

$$Var(Y_i) = \sigma^2,$$

which implies:

$$Y_i : N(\beta_0 + \beta_1 X_{i1} + \cdots + \beta_K X_{iK}, \sigma^2) \quad (3)$$

This model is used to analyse linear relationships between variables and to predict the value of the dependent variable based on the values of the independent variables.

The interpretation of the coefficients in the regression model depends on the type of independent variable. If the independent variable Xj is continuous, then the coefficient βj represents the change in the dependent variable Ywhen Xj increases by one unit, holding all other independent variables constant.

$$\beta_j = \frac{\partial Y}{\partial X_j}.$$

If Xj is a categorical random variable, especially if it is binary, then the coefficient βj represents the difference in the dependent variable Y between the two observed categories of Xj.

(j=0, Xj=1), [50] [51] [52].

The procedure of the least squares method boils down to finding the minimum of the objective function:

$$S(\beta_0, \beta_1, \ldots, \beta_K) = \sum_{i=1}^{n} (Y_i - \beta_0 - \beta_1 X_{i1} - \cdots - \beta_K X_{iK})^2 \quad (4)$$

Thus, we solve the optimization problem:

$$\min_{\beta_0, \beta_1, \ldots, \beta_K} S(\beta_0, \beta_1, \ldots, \beta_K).$$

In the multiple linear regression model, computing the regression coefficients manually using formulas can be tedious and prone to error. Therefore, this study employs EViews software, which enables efficient estimation of the multiple linear regression equation and direct computation of the regression coefficients ([53].

STEPS OF IMPLEMENTATION

Data from various sources were consolidated into a unified relational database. Subsequently, the data were processed to fit a multiple regression analysis conducted using the econometric software EViews.

Time series data provide specific advantages compared to other types of data. Specifically, the use of time series enabled an increase in the number of observations, facilitating more efficient parameter estimation of the econometric model and reducing issues of harmful multicollinearity.

The analysis focused on competitive developing countries involved in raspberry production and exports, classified according to the International Monetary Fund's categorization of developing countries [54].

The time series used in the analysis do not have the same number of observations. Upon reviewing the available data, no systematic gaps were identified. Missing data appear sporadically across the time horizon and among explanatory variables. Most specifications were estimated using 29 annual observations.

The modelling approach employed an export equation describing the impact of various determinants on the total raspberry exports from the Republic of Serbia to the rest of the world.

The primary goal of the model is to assess the parameters associated with the variables in order to determine the influence of each potentially significant determinant on raspberry exports from the Republic of Serbia. In its most general form, the model explains the value of raspberry exports from Serbia in a given period t (EXPSit) as a function of foreign direct investment inflows into Serbia (FDISit), changes in weather conditions in Serbia (TSit), agricultural development aid donations to Serbia (DSit), and Serbia's previous-period raspberry exports (EXPS1it). It also considers raspberry production in Chile (PCit) and Poland (PPit), as well as the exports of competitive developing countries Chile (EXPCit) and Poland (EXPPit), and raspberry production in Serbia (PSit).

The dependent variable in the empirical model is the value of raspberry exports from Serbia (EXPSit), measured as total export volume expressed in kilograms. Foreign direct investment in the agriculture sector (FDISit) serves as the focal independent variable in the empirical analysis.

Before the model estimation, a correlation analysis was conducted, and the results are presented in Table 1. From Table 1, it can be observed that there exists a statistically significant correlation between Serbia's raspberry exports (EXPSit) and all independent variables. To mitigate multicollinearity and to construct the model equation for raspberry exports from Serbia as the dependent variable, it is necessary to incorporate independent (explanatory) variables with lower levels of correlation. The statistical significance of each independent variable can also be noted.

Table 1. Correlation Matrix

Variable	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
(1) DS mil USD	1	0.368	0.3	-0.144	0.266	0.1676	0.455	0.161	0.168
(2) FDIS mil USD	0.368	1	0.592	-0.634	0.303	0.2136	0.014	0.467	0.257
(3) EXPS kg	0.3	0.592	1	-0.893	0.672	0.2627	0.242	0.825	0.547
(4) EXPC kg	-0.14	-0.63	-0.89	1	-0.616	-0.209	-0.23	-0.84	-0.427
(5) EXPP kg	0.266	0.303	0.672	-0.616	1	-0.001	0.68	0.475	0.756
(6) PC t	0.168	0.214	0.263	-0.209	-0.001	1	-0.07	0.491	0.161
(7) PP t	0.455	0.014	0.242	-0.23	0.68	-0.07	1	0.128	0.43
(8) PS t	0.161	0.467	0.825	-0.841	0.475	0.4908	0.128	1	0.397
(9) TS °C	0.168	0.257	0.547	-0.427	0.756	0.161	0.43	0.397	1

Source: Author's calculations

In the following section, I will describe how the final specification of the model was determined, as well as the methods used in assessing its parameters.

Table 2. Results of Data Estimation Using the Multiple Regression Model

	Dependent variable: Y – Quantity of raspberry exports from Serbia (kilograms)					
Independent variables	the equat. 1	the equat. 2	the equat. 3	the equat. 4	the equat. 5	the equat.6
Constant	(-14242170) (0.4209)	85954945 (0.0003)	4678704 (0.8187)	(-14248170) (0.4209)	20464646 (0.4699)	1182060 (0.9328)
(X1) FDIS mil USD			7709,542 (0.0072)			
(X2) DS mil USD		16569,9 (0.0066)				
(X3) EXPC kg		(-0.923503) (0.0064)			(-0.616943) (0.0492)	
(X4) EXPP kg	0.421379 (0.0138)			0.421379 (0.0138)		
(X5) PC t	3206.706 (0.002)		3083.948 (0.0139)	3206.706 (0.002)	3682.917 (0.000)	3011.402 (0.0008)
(X6) PP t					250.0348 (0.0307)	
(X7) PS t						
(X8) TS °C						17886310 (0.0037)
R^2	0.452117	0.539339	0.460544	0.452117	0.4109	0.445
Number of observations	27	24	28	27	26	28

Source: Author's calculations

Note: Standard errors were obtained using the Newey–West correction, which provides robust standard errors in the presence of autocorrelation.

Based on Table 2, it can be concluded that when testing the null hypothesis that the regressions are not statistically significant, the results yield $p < 0.05$. Therefore, all six regression equations are statistically significant overall. The R^2 coefficient of determination represents the proportion of variance in the dependent variable that can be explained by the independent variables. The minimum R^2 value among the selected equations is 41%, observed in the equation analyzing the impact of raspberry production in Poland and Chile, as well as raspberry exports from Chile, on Serbia's raspberry exports.

Agricultural donations to Serbia and foreign direct investments explain the highest percentage of variability in Serbia's raspberry exports, with agricultural donations explaining 54% and foreign direct investments explaining 46%.

The estimated coefficients indicate how the dependent variable changes in response to a one-unit change in an independent variable, holding all other independent variables constant.

RESULTS

By analysing the effects of each independent variable within the framework of six relevant equations, while holding all other independent variables constant, the following results are obtained:

An increase in raspberry exports from Poland by 1 kg leads to an average increase in raspberry exports from Serbia of 0.42 kg, while an increase in raspberry production in Chile by 1 ton results in an average increase in Serbian raspberry exports of 3206 kg.

An increase in agricultural development aid donations to Serbia by 1 million USD leads to an average increase in exports of 16,570 kg, whereas an increase in raspberry exports from Chile by 1 kg contributes to an average decrease in Serbian raspberry exports of 0.92 kg.

An inflow of foreign direct investment of 1 million USD results in an average increase in exports of 7709 kg. Similarly, an increase in raspberry production in Chile by 1 ton leads to an average increase in Serbian raspberry exports of 3084 kg.

An increase in raspberry exports from Poland by 1 kg results in an average increase of 0.42 kg in raspberry exports from Serbia, while an increase in raspberry production in Chile by 1 ton leads to an average increase of 3206 kg in exports from Serbia.

A rise in raspberry production in Poland by 1 ton leads to an average increase in Serbian raspberry exports of 250 kg. An increase in raspberry exports from Chile by 1 kg results in a decrease in Serbian raspberry exports, whereas an increase in raspberry production in Chile by 1 ton leads to an average increase in Serbian raspberry exports of 3683 kg.

A temperature change in Serbia of 1 degree Celsius causes an average increase in exports of 17,886 kg. Additionally, an increase in raspberry production in Chile by 1 ton results in an average increase in Serbian raspberry exports of 3011 kg.

Based on the analysis, we conclude that climatic conditions have the greatest impact on raspberry exports from Serbia, serving as a crucial production factor. Donations contribute to an increase in exports of 16,569 kg, while foreign direct investments lead to an export increase of 7709 kg. Raspberry exports from Chile can potentially undermine Serbian raspberry exports and lead to a decline in export levels. Raspberry production in Poland and Chile, as well as raspberry exports from Poland, do not threaten the placement of Serbian raspberries on the global market.

Table 3: Linear Correlation Coefficients of Raspberry Exports from Serbia with Explanatory Variables

Explanatory Variables	**Exports of raspberries Serbia (kg) R^2**
(1) DS mil USD	0.300155218
(2) FDIS mil USD	0.591812028
(3) EXPS kg	1
(4) EXPC kg	-0.892930222
(5) EXPP kg	0.671578429
(6) PC t	0.262723921
(7) PP t	0.241882018
(8) PS t	0.824623376
(9) TS °C	0.743757857

Source: Author's calculations

The linear correlation coefficients in Table 3, where the dependent variable is the quantity of raspberry exports from Serbia, indicate that raspberry exports from Chile have the greatest negative impact on Serbian raspberry exports (R = –0.89). Raspberry production in Serbia (R = 0.82) and climatic conditions in Serbia (R = 0.74) follow in significance, while raspberry exports from Poland (R = 0.67) also show a strong positive association. The influence of foreign direct investment (R = 0.59) follows thereafter.

DISCUSSION

The findings concerning the impact of foreign direct investment (FDI) on exports differ from those of related studies that have also analysed the agricultural sector. Discrepancies in results may stem from inaccuracies in measuring FDI in the aforementioned case studies or from the small sample sizes used. For instance [31], which focused on Ghana's agricultural sector, approximated FDI values based on planned (but unrealized) projects within the sector. Conversely, [32] employed a notably small sample of only 36 observations to evaluate a model featuring six independent variables, which may explain the lack of statistical significance regarding the influence of FDI on exports.

Differences in the findings compared to studies focusing on individual countries such as Ukraine ([55], Armenia [56] and Ghana [31] may be attributed to the specific characteristics of the countries analysed, including political instability and unfavourable geographic location. Variability in results also characterizes studies examining cases in Turkey ([57] and Brazil ([58], which may reflect other country-specific factors such as large market size, leading to a prevalence of horizontal foreign direct investments [59] .

Regarding their alignment with relevant theory, the presented results concerning foreign direct investment (FDI) support the model of [18], which directly links FDI to exports in the agricultural sector. Additionally, the identified positive impact of FDI on exports aligns with the vertical FDI model by [60]

and the export platform model by [61] . The empirical findings also corroborate predictions from [62] paradigm. Furthermore, indications of indirect effects of FDI on exports are consistent with the theoretical implications proposed by [63].

The research applied both econometric methods and comparative analysis to perform appropriate comparisons among developing countries, as well as between Serbia, Poland, and Chile, and between foreign and domestic companies in the Serbian agricultural sector. The comparative analysis highlighted differences among the analysed subjects, contributing further to the understanding of various aspects of the research topic.

The backward vertical integration of the sales channel, achieved through the partnership between the French company Roger Descours Group and the Serbian cold-storage facility Frucom Food doo, places Frucom Food doo among the most successful enterprises in the Republic of Serbia. Their constant aim is to be a reliable producer and exporter of frozen raspberries. The horizontal integration of Frucom Food doo with Yugent Food doo represents a strategy to achieve successful outcomes amid fluctuations in raspberry prices by reducing overall business costs.

The operational approach of Frucom Food doo incentivizes producers to strengthen their application of agricultural techniques aimed at producing high-quality raspberry fruits.

CONCLUSIONS

THEORETICAL IMPLICATIONS

Theoretical models suggest conflicting conclusions regarding the relationship between foreign direct investment (FDI) and exports, which can be either complementary or substitutional. The prevailing relationship depends on the initial assumptions of the model and, particularly, on the characteristics of the host country and its industries. In developing countries, a complementary relationship is more likely due to the lesser attractiveness of the domestic market.

Based on a review of the literature, this study represents the first investigation into the impact of FDI on raspberry exports focusing on an individual agricultural product across multiple developing countries. Global FDI flows in the agricultural sector have intensified in recent years, driven primarily by the rising global demand for agricultural products—particularly raspberries as antioxidants during the COVID-19 pandemic—global population growth, price volatility, and increasing biofuel consumption [64] [65] [66][67] [68].

Developing countries are often the primary destinations for foreign direct investment in agriculture, placing them at the centre of this research. Agriculture is particularly significant, especially given recent global dynamics whereby countries with large populations (e.g., India and China), countries with limited arable land (e.g., those in the Persian Gulf), and highly developed nations increasingly invest in agricultural production in developing countries. This trend aims to ensure a stable supply of strategically important raw materials for domestic production and consumption ([69].

Given the described dynamics and predictions of relevant theoretical models, as well as the findings of most related empirical studies, foreign direct investment (FDI) and exports in developing countries are more likely to be complementary rather than substitutive. Therefore, the solution to the research questions defined in the first and third hypotheses is that foreign direct investments in the fruit sector—with an emphasis on raspberries—in developing countries contribute to growth in export values. The second hypothesis was confirmed through data estimation using a multiple regression model. Based on a time series of 29 data points, factors influencing raspberry exports from the Republic of Serbia from 1995 to 2023 were analysed using the ordinary least squares method with the Newey–West correction to ensure robust estimates in the presence of autocorrelation.

Additionally, this research confirms several theoretical models—including vertical FDI models and export platform theories—demonstrating their relevance to the relationship between foreign direct investment and exports in the agricultural sector. The third hypothesis of the study was thus supported.

PRACTICAL IMPLICATIONS

A review of the literature suggests that empirical studies generally indicate a positive impact of foreign ownership on exports ([70]. Exceptions to this trend primarily relate to certain developing countries, such as India and Kenya, where this impact is not statistically significant. Many studies emphasize the importance of monitoring both the level of foreign ownership (not merely its presence) and the significance of the investor's home country. Both aspects may indicate the motives of investors, which, according to many theoretical models, represent a key factor determining the impact of foreign direct investment on exports.

Kneller & Pisu [71] analysed firms in the United Kingdom, while [72] examined German firms in the manufacturing and mining sectors. These researchers concluded that American capital has a significantly positive impact on the exports of the analyzed firms. The significance of the investor's country of origin is particularly relevant for developing countries ([73]. The positive impact of foreign ownership on exports is also demonstrated by the findings of [74], who studied over 1,000 firms based in Slovenia and Estonia from 1994 to 1998. Similar conclusions were reached by [75], who analysed 292 firms during the period 1998–1999. Additionally, [76] and [77] in their research on Italy and Tanzania, found that foreign ownership increases the probability of export and contributes to poverty reduction. These results suggest that, in the case of small and medium-sized enterprises, foreign ownership may facilitate the initiation of export activities, although the scale of these activities depends largely on other firm characteristics such as productivity and technology ([78] [79] [80] .

Chen et al. [81] found that foreign capital ownership positively influences both the initiation of exports and the intensity and overall value of firms' exports. Financial innovations contribute to economic development and expand opportunities available to financial institutions ([82][83] [84]. In a more recent study, [85] found mixed results regarding the impact of foreign ownership on export performance in India's manufacturing sector.

The research supports theoretical models implying complementarity particularly the model of vertical foreign direct investments which has proven relevant even in the fruit sector. Special attention is given to the policy implications for economic stakeholders in developing countries and Serbia, as well as for researchers in this field.

Regarding agricultural producers, empirical research indicates the potential for positive effects from the presence of foreign subsidiaries, provided there is effective networking and absorptive capacity. Encouraging foreign investments in the agricultural sector therefore represents a valid approach for enhancing export performance in many developing countries.

LIMITATIONS AND FURTHER RESEARCH

The positive impact of FDI on exports contradicts predictions from theories of horizontal foreign direct investment, which imply that market-access motives in the agricultural sector are not pronounced. Conversely, empirical evidence from macro-level analyses aligns with vertical FDI models, indicating the importance of resource-seeking motives for foreign investors in developing countries. Moreover, the positive impact of FDI on exports is also consistent with more complex export platform theories ([86] [62][63] [87] [88].

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