Economic Horizons, May - August 2024, Volume 26, Number 2, 127 - 142
UDC: 33 ISSN: 1450-863 X

Original scientific paper
UDC: 339.564(497.11)
doi:10.5937/ekonhor2402133C

FIRM EXPORTS AND PERFORMANCE: EVIDENCE FROM SERBIA

Milan Čupić and Stefan Vržina*

University of Kragujevac, Faculty of Economics, the Republic of Serbia

Despite exports having been the subject of academic attention for decades, associating exports with firm performance is unclear. Previous studies have produced two opposite theories. The learning-by-exporting hypothesis states that exports improve firm performance due to knowledge transfers from foreign markets to exporters, on the one hand, whereas on the other, those advocating the self-selection hypothesis argue that firms with better financial performance are more likely to export. This paper aims to examine the relationship between exports and the performance of firms in Serbia. The results of this research study show that exports are statistically significantly associated with productivity, this finding being robust to changes in the productivity measure and the sample size. Associating exports with firm profitability, however, is sensitive to changes in profitability measures. In addition, the research results are more typical of the manufacturing sector. Several reasons for the poor performance of Serbian exports and several recommendations with respect to that are offered in this paper.

Keywords: international trade, exports, productivity, profitability, Serbia

JEL Classification: F14, F23, M21

INTRODUCTION

The share of exports in the world's GDP has been growing almost constantly for several decades and has been exceeding 25% since 2004 (World Bank, 2023). Firms have increasingly been integrated into global value chains and engaged in different global activities (Baldwin & Yan, 2021). It is, therefore, no surprise that many authors set out to investigate the relationship between exports and firm performance (Sharma & Mishra, 2012). F. Morais and J. Ferreira (2020), however, find that the effects of internationalization on firm performance are less investigated than the internationalization process and the specific factors/variables influencing internationalization. Nevertheless, the relationship between exports and firm performance attracts some research given its relevancy, especially in insufficiently investigated transitioning and developing economies.

Ever since A. Bernard and B. Jensen (1999), there has been an almost unanimous agreement in the literature that exporters outperform nonexporters (Haidar, 2012; Benkovskis, Masso, Tkacevs, Vahter &

* *Correspondence to:* S. Vržina, University of Kragujevac, Faculty of Economics, Liceja Kneževine Srbije 3, Kragujevac, the Republic of Serbia; e-mail: stefan.vrzina@kg.ac.rs

Yashiro, 2020; Segarra-Blasco, Teruel & Cattaruzzo, 2022). Exporters are considered to be more resilient to economic downturns than non-exporters due to their higher productivity and efficiency and their tendency to have access to more diversified markets (World Trade Organization, 2021). Exports are found to be an important factor in the economic development and industrial growth of developing economies (Lee & Dolfriandra, 2020; Bilas & Franc, 2022). For example, X. Diao, M. McMillan and D. Rodrik (2017) argue that South Korea, Taiwan, and China grew through export-oriented industrialization, while J. LiPuma, S. Newbert and J. Doh (2013) point out the fact that the firms seeking to grow through exports contribute more to economic growth than firms in general.

This paper aims to examine the relationship between exports and the performance of firms operating in Serbia. Fixed-effects panel regression analysis is used to examine the relationship between exports and labor productivity and the profitability of large firms in Serbia. The research is based on the Chamber of Commerce and Industry of Serbia's (CCIS) data and covers as many as 500 firms in the period from 2014 to 2018. In general, the results show that exports are associated with the productivity and profitability of Serbian firms. In addition, the relationship between exports and labor productivity is stronger than their relationship with profitability.

The paper focuses on exporters from Serbia because of their respective specificities and the specificities of the Serbian economy. The competitiveness of the Serbian economy is weak mostly due to underdeveloped institutions, the poor infrastructure, and the complexity of the business environment (Tmušić, 2023). The value of Serbian exports is almost constantly growing (Statistical Office of the Republic of Serbia, 2023), but is constrained by a lack of affordable capital to finance and ensure exports, the slow introduction of new and technologically advanced products (Trajković & Stošić Mihajlović, 2021), and insufficient convergence to the European Union's import demand (Nikolić & Nikolić, 2020). Z. Jeremić, M. Milojević and I. Terzić (2015) point out the fact that Serbia is characterized by a small number of competitive net exporters and exports dominated by a small segment of firms, mostly foreign-owned. In addition, the Serbian economy is small, open, import-oriented, and characterized by a strong exchange rate spillover effect (Čupić, 2015).

The paper contributes to the prior literature in two ways. First, it contributes to filling the gap in the literature on exporting by investigating the relationship between exports and firm performance in a small European transitioning and developing economy. There are many studies on this relationship, but relatively few on the samples of firms from developing and transitioning economies (Sharma & Mishra, 2012; Xuefeng & Yasar, 2016; Reggiani & Shevtsova, 2018). The transition of the Serbian economy began at the end of 2000 (European Bank for Reconstruction and Development, 2007), later than in most other European post-communist countries, which, along with the economic isolation during the 1990s, significantly influenced the Serbian business environment (Stančić, Todorović & Čupić, 2012; Čupić, Todorović & Benković, 2023). A. Filip and B. Raffournier (2010) argue that transitioning economies cannot be seen as a homogenous group, because each economy has its own specificities arising from its pre-communist history, cultural influences, and level of economic development.

Second, given the fact that the exports of Serbian firms are mostly labor-intensive (Gligorijević, Ćorović & Manasijević, 2020), labor productivity is used in the paper as a measure of firm performance. Labor intensity makes Serbian exports relatively unattractive in the European Union (EU) market, where demand is greater for goods at a higher level of processing. D. Fu, Y. Wu and Y. Tang (2009) find that the firms operating in export-oriented and labor-intensive industries of the Chinese transitioning economy are more likely to export, more export-intensive, and more persistent exporters. D. Lu (2010) finds that exporters are less productive than non-exporters in labor-intensive sectors, whereas exporters are more productive than non-exporters in the capital-intensive sectors of the Chinese economy. The results of this paper contribute to the literature in that they provide insights into the specificities of the export–performance relationship in an economy dominated by labor-intensive exports.

The remainder of the research study is structured as follows: a review of the literature on the relationship between exports and firm performance is given in the first section, which is followed by the sections in which the research methodology is described, and the study results presented and discussed. The conclusions are presented in the last section of the paper.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In an integrative assessment of export research, L. Leonidou and C. Katsikeas (2010) stress that international engagement is justifiable on both the national and business grounds. They note that exports can help nations enhance their industrialization, obtain a foreign currency to finance imports and create more job opportunities. They further note that exports can help firms improve their competitiveness, achieve their financial goals, acquire new technology, spread business risks, and achieve sustainable growth. Empirical studies also find that exporting firms are characterized by better performance, most notably productivity and profitability, than non-exporting firms (Fryges & Wagner, 2010; Haidar, 2012; Kuivalainen & Sundqvist, 2018; Benkovskis *et al*, 2020; Segarra-Blasco *et al*, 2022; Vendrell-Herrero, Darko, Gomes & Lehman, 2022).

Exports and firm productivity

J. Wagner (2007) points to the "two alternative but not mutually exclusive hypotheses why exporters can be expected to be more productive than non-exporting firms". These are the learning-by-exporting and self-selection hypotheses. According to the learning-by-exporting hypothesis, knowledge transfers from foreign market participants help exporters improve their performance. J. Wagner (2002) explains that serving a larger market allows a firm to acquire economies of scale in production or reduce domestic variations in demand. In addition, exporters are exposed to more intense competition and must improve faster than the firms selling their products only domestically.

Some studies (Pisu, 2008; Reggiani & Shevtsova, 2018) show that the effects of learning depend on the destination country. The effects of learning are expected to be more pronounced when exports to highly developed economies are concerned because the firm will have the opportunity to learn about the latest technological advances. M. Pisu (2008), however, finds that learning-by-exporting effects also depend on the country of origin, not only on the destination country. A. Segarra-Blasco *et al* (2022) find that firms in leading economies are more sensitive to temporal (the length of time) learning, while spatial (the number of markets) learning has more influence on firms in less advanced economies.

Contrary to the learning-by-exporting hypothesis, where exporters become more productive after a company's entry into the export market, the self-selection hypothesis posits that more productive firms become exporters. J. Haidar (2012) explains that firms face additional costs in connection with selling goods in foreign markets, including "transportation costs, distribution or marketing costs, personnel with skills to manage foreign networks, or production costs in modifying current domestic products for foreign consumption," which provides an entry barrier that less productive firms cannot overcome. F. Bellone, P. Musso, L. Nesta and S. Schiavo (2010) support this hypothesis with the finding that the firms enjoying better financial health are more likely to become exporters, whereas N. Rehman (2017) argues that only highly productive firms can cover the sunk costs of entry into international markets.

The self-selection hypothesis can be questioned for at least two reasons. First, less financially constrained firms are not necessarily self-selecting into exports, i.e. export starters and never-exporting firms need not significantly differ in average liquidity or leverage (see Bellone *et al*, 2010). Second, a highly productive firm can enter the international market using foreign direct investment instead of exports (Oberhofer & Pfaffermayr, 2012). M. Grazzi (2012), nevertheless, points out the fact that, although there is the evidence

supporting both the learning-by-exporting and self-selection hypotheses, "the conjecture that firms are more productive before starting to export has gained consensus, also thanks to some theoretical models that incorporate such a hypothesis". F. Vendrell-Herrero *et al* (2022) connect the learning-by-exporting and self-selection hypotheses, stating that highly productive firms are more likely to export (self-selection) and, upon doing so, achieve greater productivity over time (learning-by-exporting).

Empirical studies on the relationship between the firm's export activity and its productivity usually analyze the total factor productivity (TFP) and/or labor productivity (LP) and find that exporting firms are more productive than non-exporting firms (Breinlich & Criscuolo, 2011; Benkovskis *et al*, 2020; Kiendrebeogo, 2020; Segarra-Blasco *et al*, 2022). Y. Kiendrebeogo (2020), for example, finds that labor productivity and the total factor productivity are 43% and 61% higher for exporting firms than for domestically oriented firms, respectively, mostly due to the learning-by-exporting process. Nevertheless, there are studies finding the statistically insignificant export-productivity relationship (Smeets & Warzynski, 2013; Zhou, 2020). Given the results of the largest number of previous research studies, the first hypothesis reads as follows:

H1: Exports are statistically significantly and positively associated with firm productivity.

Some studies investigate the factors affecting the positive export–productivity relationship. For example, J. Baldwin and W. Gu (2003) find that the positive relationship between export activities and productivity is more pronounced in domestically controlled and younger firms, while T. Mengistae and C. Pattillo (2004) and N. Trofimenko (2008) conclude that productivity is higher in firms exporting outside the continent and to the most developed economies. J. Damijan and Č. Kostevc (2006) reveal that productivity improvements are "a consequence of increased capacity utilization brought about by the opening of an additional market". H. Breinlich and C. Criscuolo (2011) find that higher labour productivity is associated with the higher value of firm-level exports and imports, exporting to and importing from a larger number of countries, exporting and importing more types of services, and higher export and import values per market and per service. K. Benkovskis *et al* (2020) show that the impact of exports on productivity is more pronounced in specific types of exports, such as the exports of knowledge-intensive services.

Exports and firm profitability

There are still relatively few studies on the relationship between firm exports and firm profitability. J. Wagner (2012b) believes that it is more appropriate to examine the relationship between export activities and profitability than productivity, given the fact that profitability rather than productivity is the company's main goal. Exports provide firms with the opportunity to increase sales and reduce costs by using economies of scale, which makes the expected relationship between the firm's exports and profitability positive. In addition, exporting firms are often entitled to some tax benefits; exports are exempt from value-added tax in many countries, and the firms that qualify as predominant exporters usually obtain the refund of value-added tax faster than other firms (Gourdon, Hering, Monjon & Poncet, 2022).

Exports are associated with some risks resulting from exchange rates changes (Nanda & Panda, 2018), trade barriers (Jiang, Liu & Zhang, 2022), cultural differences between the country of origin and the destination country (Escandon-Barbosa & Salas-Paramo, 2022), and a failure in the destination country (Cieslik, Kaciak & Welsh, 2010). To protect against these risks and improve their performance, firms often diversify their exports, i.e. they export to several countries. J. Wagner (2014) finds that "profits tend to be larger in firms with less diversified export sales over goods and in firms with more diversified export sales over destination countries."

The results of the empirical studies examining the export–profitability relationship are less consistent compared to those examining the export–productivity relationship. Some studies (Fryges & Wagner, 2010; Kuivalainen & Sundqvist, 2018; Lessoua, Mutascu & Turcu, 2020; Kao, Wu & Liu, 2023) find a positive

impact of export activities on profitability and conclude that export benefits outweigh export costs. There are also the studies finding no significant impact of export activities on profitability (Grazzi, 2012; Wagner, 2012a; Nanda & Panda, 2018). Finally, A. Vogel and J. Wagner (2010) find a negative impact of service exports on profitability. Given the results of the largest number of the previous research studies, the second hypothesis reads as follows:

H2: Exports are statistically significantly and positively associated with firm profitability.

Y. Temouri, A. Vogel and J. Wagner (2013) show that the impact of export activities on profitability depends on the country of origin. They notice that exporters' profitability is significantly smaller in Germany, significantly greater in France and does not significantly differ from the profitability of non-exporters in the UK. Certain costs significantly influence the impact of export activities on profitability. Some previous studies (Fryges & Wagner, 2010; Vogel & Wagner, 2010; Temouri *et al*, 2013) find that exporting firms have higher labor costs than non-exporting firms. On the other hand, P. Sharma, L. Cheng and T. Leung (2020) find that the impact of exports on the firm profitability significantly depends on the firm's political connections and ownership structure.

RESEARCH METHODOLOGY

The sample

The sample was created using the information provided in the PKS Partner (www.pkspartner.rs), an application developed by the Chamber of Commerce and Industry of Serbia. Only non-financial firms were sampled, while the banking, insurance and similar firms were not included due to their specificities. Additionally, only the firms having been established before 2009 were sampled so as to avoid the potential volatility in the performance of the start-ups and young firms. Following those criteria, a list of the 500 largest firms was identified, according to their operating revenues in 2018. The sample period was from 2014 to 2018 and the initial dataset comprised 2500 observations. However, the final dataset was unbalanced since some observations were removed due to the negative value added, missing data, or outliers. The data had been collected from the annual reports of the sampled firms published from 2014 to 2018. The structure of the firms according to their industry is presented in Table 1. A total of 432 were limited liabilities, while 68 were joint-stock companies in 2018.

Table 1 The industry the sampled firms operate in

Industry	Number of the firms
Agriculture, Forestry, and Fishing	18
Mining	2
Manufacturing	174
Electricity, Gas, Steam and Air Conditioning Supply	3
Water Supply, Wastewater Management, Control of Remediation Pro-cesses and similar activities	3
Construction	40
Wholesale and Retail; Repair of Motor Vehicles and Motorcycles	198
Transportation and Storage	19
Accommodation and Food Services	2
Information and Communication	18
Real Estate	2
Professional, Scientific, Innovation, and Technical Activities	13
Administrative and Support Service Activities	6
Arts, Entertainment, and Recreation	2
Total	500

Source: Authors

The variables

The definitions of the variables used in the research are given in Table 2. The natural logarithm of the net sales per employee (PROD1) and the natural

logarithm of value added per employee (PROD2) were used as the productivity measures. M. Spence and S. Hlatshwayo (2012) define value added as the firm's sales less its purchased inputs, excluding labor and capital. Following this definition and given the specificities of financial reporting in Serbia, value added is calculated as the net sales less the costs of materials, the cost of goods sold, fuel and energy, the costs of production services (rent, advertising, R&D, etc.), and intangible costs (the insurance premium, taxes, representation, etc.). Return on total assets (ROA), return on equity (ROE), and return on sales (ROS) are used as the profitability measures.

Table 2 The definitions of the variables

Variable	Definition
PROD1	The natural logarithm of the ratio of net sales to the number of employ-ees
PROD2	The natural logarithm of the ratio of value added to the number of em-ployees
ROA	The net profit to total assets ratio
ROE	The net profit to total equity ratio
ROS	The net profit to net sales ratio
EXPORT	The export sales to net sales ratio
SIZE	The natural logarithm of total assets
FIXED	The fixed assets to total assets ratio
DEBTR	The total debt to total assets ratio
INFL	The consumer price index in Serbia (data.worldbank.org/country/serbia)

Source: Authors

If a firm generates export revenues in one year, it does not necessarily mean that it actively exports. Z. Fernández and M. Nieto (2005) believe that exports may be a sporadic activity, rather than the result of the firm's decision. Due to the possibly sporadic nature of exporting among Serbian firms, the export activity is measured by the export-to-sales ratio (EXPORT), not by an export dummy. EXPORT includes both the export of goods and the export of services. The following firm-specific control variables are used: the natural logarithm of total assets (SIZE), the share of fixed assets in total assets (FIXED), and the debt ratio (DEBTR). The inflation rate, measured by the consumer price index (INFL), is used as a macroeconomic control variable.

The methods

A panel regression model was used to analyze the relationship between exports and firm performance (PERF), the model reading as follows:

$$PERF_{i,t} = \beta_0 + \beta_1 EXPORT_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 FIXED_{i,t} + \beta_4 DEBTR_{i,t} + \beta_5 INFL_t + \varepsilon_{i,t} \quad (1)$$

where PERF refers to the productivity (PROD1 and PROD2) and profitability (ROA, ROE, and ROS) indicators. The Breusch-Pagan LM test was used to choose between the Ordinary Least Squares (OLS) and Random Effects (RE) regressions and the Hausman test was used to choose between the RE and Fixed Effects (FE) regressions. The multicollinearity problem was checked using Pearson's correlation coefficients and the Variance Inflation Factor (VIF). To mitigate the impact of the outliers, PROD1 and PROD2 were winsorized at the 99th per cent as they may take any value greater than zero. Similarly, ROA, ROE, and ROS were winsorized at the 1st and 99th per cent as they may take any value. Finally, the observations with the DEBTR higher than 100% were excluded as they referred to the overindebted firms.

RESEARCH RESULTS

Descriptive statistics

The results of the descriptive statistics are accounted for in Table 3. The annual averages of PROD1 and PROD2 increased in each of the five years, whereas the annual averages of ROA, ROE, and ROS declined only in 2018. In total, 239 observations have negative ROA, ROE, and ROS due to the net loss. There are 445 observations (17.87%) with the exports equal to zero and 788 (31.65%) with a share of exports in the total revenues less than 1%. The sales were entirely from

the exports in 24 observations (0.96%), whereas the share of the exports in the sales was higher than 90% in 187 observations (7.51%). There are 480 observations (19.28%) with EXPORT greater than 50%, representing predominantly the exporting firms. It is interesting to note that the firms' exports have not changed significantly over the years. The annual averages of EXPORT were 22.59% in 2014, 23.56% in 2015, 23.81% in 2016, 24.02% in 2017, and 23.62% in 2018. On average, the firms had used more debt than equity, and more of their current assets than of their fixed assets.

Correlation analysis

Table 4 shows the Pearson correlation coefficients between the variables used in the study. There is a significant correlation between the labor productivity variables (PROD1 and PROD2) and between the profitability variables (ROA, ROE and ROS) as well. EXPORT appears to be significantly correlated with the labor productivity variables, ROA and ROS. Given the fact that no significant and strong correlation between any two independent variables was found, no multicollinearity problem was expected. It should

Table 3 The descriptive statistics

Variable	Mean	Minimum	Median	Maximum	Standard deviation
Panel A. The firm-specific variables					
PROD1	9.935	-4.415	9.858	13.277	1.227
PROD2	7.847	1.997	7.826	10.151	0.933
ROA	0.062	-0.193	0.052	0.342	0.071
ROE	0.175	-1.004	0.144	0.984	0.206
ROS	0.040	-0.453	0.030	0.294	0.069
EXPORT	0.236	0.000	0.085	1.000	0.307
SIZE	14.781	7.660	14.644	19.811	1.267
FIXED	0.366	0.000	0.353	0.987	0.230
DEBTR	0.545	0.011	0.568	0.992	0.235
Panel B. The macroeconomic variable					
Year	2014	2015	2016	2017	2018
INFL	0.021	0.014	0.011	0.031	0.020

Source: Authors

Table 4 The Pearson correlation coefficients

	PROD1	PROD2	ROA	ROE	ROS	EXPORT	SIZE	FIXED	DEBTR
PROD1									
PROD2	0.566*								
ROA	0.018	0.267*							
ROE	0.146*	0.220*	0.682*						
ROS	-0.036	0.299*	0.728*	0.459*					
EXPORT	-0.156*	0.126*	0.069*	0.024	0.114*				
SIZE	-0.006	0.196*	-0.185*	-0.204*	0.035	0.201*			
FIXED	-0.362*	0.125*	-0.069*	-0.233*	0.119*	0.139*	0.377*		
DEBTR	0.177*	-0.092*	-0.330*	0.183*	-0.358*	-0.103*	-0.125*	-0.238*	
INFL	0.016	0.013	0.017	0.035	0.032	0.002	0.042*	-0.008	-0.001

Note: Statistically significant at the 5% level (*).

Source: Authors

be noted that the strongest such correlation, although still relatively weak ($r = 0.377$, $p < 0.05$), was identified between SIZE and FIXED.

In addition, the presence of multicollinearity was checked using the VIF calculated for each independent variable in each regression model. Each VIF was close to one, thus indicating that no multicollinearity problem should be expected. In fact, the VIF was lower than 1.2 in each case.

Regression analysis

The Breusch-Pagan LM test showed that RE regression was more appropriate than the OLS estimation, whereas the Hausman test showed that FE regression had outperformed the RE regression estimates. The FE estimates are therefore shown in Table 5 and Table 6. Since five labor productivity and profitability variables were employed, the results of the five regression models were reported.

The results of the regression analysis show that the exports are positively and statistically significantly associated with labor productivity, on the one hand, whereas on the other, exports are positively and statistically significantly associated only with ROE, not with the other profitability variables, which means that the export firms fail to create value above the additional costs caused by exports. Given the fact that sales and certain operating expenses were included in measuring productivity, while the net profit was included in measuring profitability, the export-oriented firms may have higher financial and other expenses, which is in line with the debt ratio presented in Table 3, namely the reliance of the sample firms on the use of a debt. The results also show that larger, less capital-intensive, and less indebted firms have demonstrated significantly greater labor productivity and profitability, whereas the impact of inflation is not significant.

The analysis of the exports of the manufacturing industry

According to some previous studies (Baldwin & Gu, 2003; Fryges & Wagner, 2010), the relationship between the exports and productivity and profitability of only the manufacturing firms was further examined. Although the manufacturing industry is of particular

Table 5 The relationship between the exports and productivity and profitability

	PROD1	PROD2	ROA	ROE	ROS
Constant	5.298**	4.361**	10.739*	-25.700	-5.354
	(12.321)	(9.886)	(2.195)	(-1.600)	(-1.174)
EXPORT	0.011**	0.003*	0.018	0.131**	-0.004
	(8.884)	(2.000)	(1.180)	(2.690)	(-0.306)
SIZE	0.333**	0.269**	0.617	3.490**	1.326**
	(11.522)	(9.052)	(1.865)	(3.235)	(4.298)
FIXED	0.012**	-0.007**	-0.094**	-0.239**	-0.063**
	(-9.028)	(-4.987)	(-6.009)	(-4.737)	(-4.350)
DEBTR	-0.002	-0.005**	-0.185**	*-0.062	-0.133**
	(-1.924)	(-5.068)	(-16.354)	(-1.656)	(-12.801)
INFL	0.003	-0.005	-0.023	0.436	-0.060
	(0.234)	(-0.484)	(-0.184)	(1.080)	(-0.526)
F-value	50.416**	27.142**	9.918**	7.711**	9.169**
Adjusted R^2	0.912	0.850	0.653	0.585	0.632
Observations	2.341	2.275	2.348	2.338	2.349

Notes: The t-statistics are given in parentheses; statistically significant at the 5% (*) and 1% (**) levels.

Source: Authors

Table 6 The relationship between the exports and productivity and profitability of the manufacturing firms

	PROD1	PROD2	ROA	ROE	ROS
Constant	7.824** (6.819)	5.738** (5.535)	-6.264 (-0.514)	-46.870 (-1.223)	-19.831 (-1.605)
EXPORT	0.029** (11.361)	0.005* (2.029)	0.079* (2.552)	0.174* (2.072)	0.009 (0.300)
SIZE	0.107 (1.418)	0.163* (2.394)	1.420 (1.761)	4.414 (1.766)	2.380** (2.929)
FIXED	-0.014** (-5.216)	-0.005* (-1.990)	-0.074* (-2.543)	-0.219* (-2.423)	-0.086** (-2.973)
DEBTR	-0.008** (-4.335)	-0.007** (-3.780)	-0.172** (-8.331)	-0.097 (-1.441)	-0.127** (-6.107)
INFL	0.012 (0.494)	-0.016 (-0.748)	-0.075 (-0.299)	0.516 (0.659)	-0.351 (-1.403)
F-value	21.961**	16.205**	7.657**	4.592**	8.399**
Adjusted R^2	0.818	0.770	0.591	0.437	0.618
Observations	819	791	808	801	802

Notes: The t-statistics are given in parentheses; statistically significant at the 5% (*) and 1% (**) levels.

Source: Authors

importance to the Serbian economy, it has been facing the foreign trade deficit issue. Table 6 shows that the FE estimates for the manufacturing firms are almost identical to those found for the entire sample. Nevertheless, it should be noted that the slope coefficients for the relationship between EXPORT and labor productivity are greater than in the initial regression model. In addition, the exports are statistically significantly associated with two of the three profitability variables (ROA and ROE), not only one. The further analysis of the statistical significance of the differences between the regression coefficients for EXPORT shows that the relationship between EXPORT and PROD1 and ROA is statistically significantly greater for the manufacturing firms than for the other firms included in the sample. Such findings imply that the relationship between exports with firm performance is stronger in the manufacturing industry than in the other industries.

Capital-intensive vs. labor-intensive firms

According to some prior studies (Fu *et al*, 2009; Lu, 2010; Edwards, Sanfilippo & Sundaram, 2018), whether the relationship between the exports and firm performance was stronger in capital- or labor-intensive firms was examined. Therefore, the moderating variable CLI (capital- or labor-intensity) was also included, taking the value 1 (if the firm was capital-intensive) and 0 (if the firm was labor-intensive). According to Y. Cui and B. Liu (2018), capital intensity is determined depending on the fixed assets to the number of employees ratio. One-half of the observations with the highest values of this ratio were treated as capital-intensive, whereas the other observations were treated as labor-intensive. The formulated alternative regression model reads as follows:

$$PERF_{i,t} = \beta_0 + \beta_1 EXPORT_{i,t} + \beta_2 (EXPORT_{i,t} \times CLI_{i,t}) + \beta_3 SIZE_{i,t} + \beta_4 FIXED_{i,t} + \beta_5 DEBTR_{i,t} + \beta_6 INFL_t + \varepsilon_{i,t} \quad (2)$$

The FE regression estimates of the model 2 are presented in Table 7. The impact of the moderator CLI is not clear. The CLI moderator appears to significantly be moderating only the relationship between the exports and PROD1, not PROD2; it enhances the relationship with PROD1. On the other hand, CLI does not significantly moderate the relationship between EXPORT and profitability, regardless of the employed profitability measure. The further analysis of the statistical significance of the differences between the regression coefficients for EXPORT

Table 7 The moderating role of capital intensity in the relationship between the exports and labor productivity and profitability

	PROD1	PROD2	ROA	ROE	ROS
Constant	5.529** (12.936)	4.318** (9.747)	10.903* (2.213)	-24.869 (-1.556)	-5.615 (-1.220)
EXPORT	0.008** (6.212)	0.003* (2.223)	0.014 (0.843)	0.117* (2.270)	-0.003 (-0.223)
EXPORT*CLI	0.006** (6.129)	-0.001 (-1.045)	-0.001 (-0.005)	-0.006 (-0.168)	-0.011 (-0.968)
SIZE	0.321** (11.155)	0.272** (9.105)	0.606 (1.820)	3.411** (3.180)	1.339** (4.299)
FIXED	-0.013** (-9.896)	-0.007** (-4.758)	-0.093** (-5.830)	-0.240** (-4.754)	-0.059** (-4.040)
DEBTR	-0.002* (-2.218)	-0.005** (-4.989)	-0.184** (-16.122)	-0.046 (-1.255)	-0.131** (-12.552)
INFL	0.005 (0.449)	-0.006 (-0.521)	-0.018 (-0.142)	0.472 (1.185)	-0.061 (-0.533)
F-value	51.385**	27.091**	9.817**	7.838**	9.087**
Adjusted R^2	0.914	0.850	0.653	0.592	0.632
Observations	2.341	2.275	2.329	2.319	2.329

Notes: The t-statistics are given in parentheses; statistically significant at the 5% (*) and 1% (**) levels.

Source: Authors

shows that the relationship between EXPORT and PROD1 is statistically significantly greater for the capital-intensive than for the labor-intensive firms.

DISCUSSION

The finding that the exports are positively related to firm productivity is consistent with the biggest number of previous studies (Benkovskis *et al*, 2020; Kiendrebeogo, 2020; Segarra-Blasco *et al*, 2022). Additionally, the finding that the exports are weakly related to firm profitability or absolutely unrelated to it is consistent with some previous studies (Grazzi, 2012; Wagner, 2012a). These findings are not surprising given the specificities of the Serbian business environment and exports. According to the findings, H1 and H2 should not be rejected.

J. Vapa-Tankosić, S. Ignjatijević and J. Gardašević (2015) believe that the exports made by Serbian firms are unsatisfactory due to the high transportation costs, the complexity of the export documentation, the poor organization of firms' export offices, poor product design, and inadequate promotion. P. Radojević, D. Marjanović and T. Radovanov (2014) also point to the need to improve the quality and design of products and increase investment in research and development. The performance of Serbian exporters could also be improved through their cooperation within clusters.

The unfavorable export structure may be an additional reason for the unsatisfactory export performance of Serbian firms. Serbian firms mostly produce and export less manufactured products, such as agricultural products (Trpeski, Kozheski & Merdzan, 2024), which causes the transfer of value added to firms in importing countries.

The largest foreign trade partners of Serbian firms are in the countries that are not characterized by the highest living standards, such as Bosnia and Herzegovina, Romania, or Russia (Domazet, Filimonović & Pantić, 2014), which means that Serbian firms need to be price competitive as they sell products in low-wage markets. Given the countries

which Serbian firms export to, it is no surprise that the research results are consistent with the studies (Pisu, 2008; Reggiani & Shevtsova, 2018) pointing out that the more developed the destination country, the more pronounced the effect exports have on firm performance.

The insufficient geographic diversification of exports is yet another problem for Serbian exporters. The majority of the exports are placed in the neighboring Balkan countries, as well as Germany and Italy (Stanojević & Jovancai, 2015). Therefore, the results are consistent with A. Segarra-Blasco *et al* (2022), who argue that the number of foreign markets which firms export to is particularly important for firms in less developed economies.

It is also worth noting that the share of the exports from Serbia to countries outside the European continent is relatively negligible. Therefore, the results are consistent with some previous studies (Mengistae & Pattillo, 2004; Trofimenko, 2008) indicating that exports have a stronger relationship with firm performance if they are directed outside the continent. In the last few years, the Serbian government has developed policies to support firms to export to remote territories outside the continent, such as the United Arab Emirates or China.

The results are consistent with the studies (e.g. Pisu, 2008) pointing out the fact that, not only the level of the economic development of the destination country is important, but the economic development of the country of origin is important as well. Since Serbia is a developing and transitioning economy, the weak relationship between exports and firm performance is not surprising.

The results are also consistent with the findings of J. Baldwin and W. Gu (2003), who say that the relationship between exports and productivity is stronger in domestically controlled and younger firms. The weak relationship between exports and firm performance in Serbia can be explained by the fact that many sampled firms are controlled by foreign owners and well-established (younger firms excluded).

The research results show that capital intensity is not related to the export performance of the firms operating in Serbia. Capital-intensive firms may offer more advanced products and services to foreign customers, thus achieving higher value added and better financial performance. However, due to relatively low labor prices in Serbia, labor-intensive firms may be more competitive than the firms operating in the capital-intensive industries, which cancels out the advantages of capital-intensive firms. For example, average hourly labor costs in Serbia were 5.1 euros in 2012 and 4.9 euros in 2016, while they were 24.5 and 26.0, respectively, in the European Union (Eurostat, 2024).

CONCLUSION

The research on a sample of 500 firms from Serbia in the period from 2014 to 2018 was conducted so as to examine the relationship between exports and firm performance. The results show that there is a statistically significant positive relationship between exports and labor productivity but a relatively weak relationship between exports and some profitability measures. The relationship between exports and firm performance was also found to be stronger in the manufacturing industry than in the other industries. In general, no differences in the relationship between exports and firm performance were found to exist between the capital- and labor-intensive firms.

The research results could be of interest to firm owners and managers, as well as economic policymakers. First, the reasons for such poor export performance can be found in the internal organization, the underdeveloped production capacity, the unsatisfactory design, quality, and marketing of products, as well as insufficient investments in research and development. Owners and managers can improve export performance by addressing these aspects of the firm. For instance, they should invest more in research and development in order to develop and produce high-technology products and obtain greater value added from exporting. A more detailed investigation of foreign markets may enable

firms to better satisfy foreign consumers' demand, thus simultaneously increasing product prices and firm profitability. Firms from developing economies should also consider entering and operating in foreign markets together, thus simultaneously addressing the problem of the insufficient production capacity and high marketing costs of individual firms.

Second, policymakers in developing and transitioning economies should encourage the export of products at a higher processing level of processing, i.e. high technology products. By producing and exporting less processed products, firms lose a significant part of value added, which spills over to foreign firms importing the products. To encourage firms to produce and export more profitable high technology products, the government may undertake several actions. For instance, it can provide guarantees for the bank loans granted to the firms focusing on exporting high technology products and encourage firms to participate in foreign high-tech trade fairs as well.

This research study, however, is not deprived of certain limitations indicating possible directions for future research. The sample includes the firms from only one country in the period of only five years. The results of the research study could have been different if the sample had included firms from more countries and covered a longer period. To avoid extreme values, the sample excludes start-ups and young firms, on the one hand, whereas on the other, this possibly prevented the identification of certain relevant internationalization patterns. Only the data about the total exports were used, which limited a more detailed examination of the influence of the export destination (e.g. inside vs. outside the continent, developed vs. developing countries) and the export structure (e.g. goods vs. services) on the relationship between exports and firm performance. Additionally, the sample includes the branches of multinational companies that export to related legal entities, so there is a risk of inadequate transfer pricing when valuing the exports. Since prior research was mostly conducted in developed countries, future research should be focused on having such research conducted in developing countries as well. Firms from more than one economy should be included and a longer period should be covered.

REFERENCES

Baldwin, J., & Gu, W. (2003). Export-market participation and productivity performance in Canadian manufacturing. *Canadian Journal of Economics, 36*(3), 634-657. https://doi.org/10.1111/1540-5982.t01-2-00006

Baldwin, J., & Yan, B. (2021). Globalization, productivity performance, and the transformation of the production process. *The Scandinavian Journal of Economics, 123*(4), 1088-1115. https://doi.org/10.1111/sjoe.12454

Bellone, F., Musso, P., Nesta, L., & Schiavo, S. (2010). Financial constraints and firm export behavior. *The World Economy, 33*(3), 347-373. https://doi.org/10.1111/j.1467-9701.2010.01259.x

Benkovskis, K., Masso, J., Tkacevs, O., Vahter, P., & Yashiro, N. (2020). Export and productivity in global value chains: Comparative evidence from Latvia and Estonia. *Review of World Economics, 156*(3), 557-577. https://doi.org/10.1007/s10290-019-00371-0

Bernard, A., & Jensen, B. (1999). Exceptional exporter performance: Cause, effect, or both? *Journal of International Economics, 47*(1), 1-25. https://doi.org/10.1016/s0022-1996(98)00027-0

Bilas, V., & Franc, S. (2022). The contribution of foreign direct investment to economic growth in the selected emerging European countries: The evidence based upon the panel cointegration model. *Economic Horizons, 24*(3), 217-229. https://doi.org/10.5937/ekonhor2203229B

Breinlich, H., & Criscuolo, C. (2011). International trade in services: A portrait of importers and exporters. *Journal of International Economics, 84*(2), 188-206. https://doi.org/10.1016/j.jinteco.2011.03.006

Cieslik, J., Kaciak, E., & Welsh, D. (2010). The effect of early internationalization on survival consistency, and growth of export sales. *Journal of Small Business Strategy, 21*(1), 39-64.

Cui, Y., & Liu, B. (2018). Manufacturing servitisation and duration of exports in China. *The World Economy, 41*(6), 1695-1721. https://doi.org/10.1111/twec.12614

Čupić, M. (2015). *Ekonomska izloženost deviznom riziku - upravljanje u funkciji maksimiziranja vrednosti preduzeća*. Kragujevac, RS: Ekonomski fakultet Univerziteta u Kragujevcu.

Čupić, M., Todorović, M., & Benković, S. (2023). Value relevance of accounting earnings and cash flows in a transition economy: The case of Serbia. *Journal of Accounting in Emerging Economies, 13*(3), 541-565. https://doi.org/10.1108/jaee-12-2021-0411

Damijan, J., & Kostevc, Č. (2006). Learning-by-exporting: Continuous productivity improvements or capacity utilization effects? Evidence from Slovenian firms. *Review of World Economics, 142*(3), 599-614. https://doi.org/10.1007/s10290-006-0083-7

Diao, X., McMillan, M., & Rodrik, D. (2017). The recent growth boom in developing countries: A structural change perspective. *Working paper w23132*. Cambridge, MA: National Bureau of Economic Research.

Domazet, I., Filimonović, D., & Pantić, O. (2014). Trade and EU accession: The case of Serbia. *Ekonomika preduzeća, 62*(3-4), 217-227. https://doi.org/10.5937/ekopre1404217d

Edwards, L., Sanfilippo, M., & Sundaram, A. (2018). Importing and firm export performance: New evidence from South Africa. *South African Journal of Economics, 86*(S1), 79-95. https://doi.org/10.1111/saje.12154

Escandon-Barbosa, D., & Salas-Paramo, J. (2022). The effects of cultural dimensions on export performance: Vietnam and Colombia cases. *Heliyon*, *8*(12), e11785, https://doi.org/10.1016/j.heliyon.2022.e11785

European Bank for Reconstruction and Development. (2007). *Commercial Laws of Serbia: An Assessment by the EBRD*. Retrieved June 15, 2024, from: https://www.ebrd.com/documents/legal-reform/read-the-ebrds-serbia-country-law-assessment.pdf

Eurostat. (2024). *Labour cost levels by NACE Rev. 2 activity*. Retrieved June 15, 2024, from: https://ec.europa.eu/eurostat/databrowser/view/lc_lci_lev/default/table?lang=en

Fernández Z., & Nieto, M. (2005). Internationalization strategy of small and medium-sized family businesses: Some influential factors. *Family Business Review, 18*(1), 77-89. https://doi.org/10.1111/j.1741-6248.2005.00031.x

Filip, A., & Raffournier, B. (2010). The value relevance of earnings in a transition economy: The case of Romania. *The International Journal of Accounting, 45*(1), 77-103. https://doi.org/10.1016/j.intacc.2010.01.004

Fryges, H., & Wagner, J. (2010). Exports and profitability: First evidence for German manufacturing firms. *The World Economy, 33*(3), 399-423. https://doi.org/10.1111/j.1467-9701.2010.01261.x

Fu, D., Wu, Y., & Tang, Y. (2009). The effects of ownership structure and industry characteristics on export performance. *University of Western Australia Discussion Paper 10.09*. Perth, AU: UWA Business School.

Gligorijević, Z., Ćorović, E., & Manasijević, A. (2020). Development processes in the industry of the Republic of Serbia during the first decade of the 21st century. *Teme*, *44*(2), 565-583. https://doi.org/10.22190/teme191106040g

Gourdon, J., Hering, L., Monjon, S., & Poncet, S. (2022). Estimating the repercussions from China's export value-added tax rebate policy. *The Scandinavian Journal of Economics, 124*(1), 243-277. https://doi.org/10.1111/sjoe.12453

Grazzi, M. (2012). Export and firm performance: Evidence on productivity and profitability of Italian companies. *Journal of Industry, Competition and Trade, 12*(4), 413-444. https://doi.org/10.1007/s10842-011-0102-9

Haidar, J. (2012). Trade and productivity: Self-selection or learning-by-exporting in India. *Economic Modeling, 29*(5), 1766-1773. https://doi.org/10.1016/j.econmod.2012.05.005

Jeremić, Z., Milojević, M., & Terzić, I. (2015). Business performance of the largest exporters in Serbia during the period 2008-2014. *Ekonomika preduzeća*, *63*(5-6), 293-305. https://doi.org/10.5937/ekopre1506293j

Jiang, L., Liu, S., & Zhang, G. (2022). Digital trade barriers and export performance: Evidence from China. *Southern Economic Journal*, *88*(4), 1401-1430. https://doi.org/10.1002/soej.12572

Kao, E. H. C., Wu, C. Y., & Liu, J. T. (2023). Extensive margins of trade and profitability: Evidence from Taiwan. *Applied Economics Letters*, 1-5. https://doi.org/10.1080/13504851.2023.2203894

Kiendrebeogo, Y. (2020). Learning by exporting or self-selection into exporting? *Middle East Development Journal, 12*(2), 304-325. https://doi.org/10.1080/17938120.2020.1756105

Kuivalainen, O., & Sundqvist, S. (2018). Profitability of rapid internationalization: The relationship between internationalization intensity and firms' export performance. In J. Larimo (Ed.), *Contemporary Euromarketing: Entry and Operational Decision Making* (pp. 59-69). New York, NY: Routledge. https://doi.org/10.4324/9781315866284-5

Lee, C. W., & Dolfriandra, H. A. (2020). Revisiting the foreign direct investment-led and export-led growth hypotheses in ASEAN+ 3 countries. *Economic Horizons*, *22*(3), 209-219. https://doi.org/10.5937/ekonhor2003209L

Leonidou, L., & Katsikeas, C. (2010). Integrative assessment of exporting research articles in business journals during the period 1960-2007. *Journal of Business Research*, *63*(8), 879-887. https://doi.org/10.1016/j.jbusres.2010.01.005

Lessoua, A., Mutascu, M., & Turcu, C. (2020). Firm performance and exports: Evidence from the Romanian wine industry. *Journal of Wine Economics, 15*(2), 207-228. https://doi.org/10.1017/jwe.2020.28

LiPuma, J., Newbert, S., & Doh, J. (2013). The effect of institutional quality on firm export performance in emerging economies: A contingency model of firm age and size. *Small Business Economics, 40*(4), 817-841. https://doi.org/10.1007/s11187-011-9395-7

Lu, D. (2010). Exceptional exporter performance? Evidence from Chinese manufacturing firms. *Job Market Paper*, University of Chicago.

Mengistae, T., & Pattillo, C. (2004). Export orientation and productivity in Sub-Saharan Africa. *IMF Staff Papers, 51*(2), 327-353.

Morais, F., & Ferreira, J. (2020). SME internationalisation process: Key issues and contributions, existing gaps and the future research agenda. *European Management Journal, 38*(1), 62-77. https://doi.org/10.1016/j.emj.2019.08.001

Nanda, S., & Panda, A. (2018). The determinants of corporate profitability: An investigation of Indian manufacturing firms. *International Journal of Emerging Markets, 13*(1), 66-86, https://doi.org/10.1108/ijoem-01-2017-0013

Nikolić, G., & Nikolić, I. (2020). The structural changes of the Serbian merchandise trade during transition process: Comparative analysis of main trade indicators. *Ekonomika preduzeća, 68*(5-6), 383-399. https://doi.org/10.5937/ekopre2006383n

Oberhofer, H., & Pfaffermayr, M. (2012). FDI versus exports: Multiple host countries and empirical evidence. *The World Economy, 35*(3), 316-330. https://doi.org/10.1111/j.1467-9701.2011.01403.x

Pisu, M. (2008). Export destination and learning-by-exporting: Evidence from Belgium. *Working Paper Research 140*, Brussels, BE: National Bank of Belgium.

Radojević, P., Marjanović, D., & Radovanov, T. (2014). The impact of firms' characteristics on export barriers' perception: A case of Serbian exporters. *Prague Economic Papers, 23*(4), 426-445. https://doi.org/10.18267/j.pep.492

Reggiani, C., & Shevtsova, Y. (2018). Trade and productivity in a transition economy: The role of industry and export destination. *Journal of Industry, Competition and Trade, 18*(3), 395-428. https://doi.org/10.1007/s10842-018-0271-x

Rehman, N. (2017). Self-selection and learning-by-exporting hypotheses: Micro-level evidence. *Eurasian Economic Review, 7*(1), 133-160. https://doi.org/10.1007/s40822-016-0063-8

Statistical Office of the Republic of Serbia. (2023). Trends, I Quarter, 2023. Retrieved May 16, 2023, from: https://www.stat.gov.rs/en-US/publikacije/publication/?p=15250

Segarra-Blasco, A., Teruel, M., & Cattaruzzo, S. (2022). Innovation, productivity and learning induced by export across European manufacturing firms. *Economics of Innovation and New Technology, 31*(5), 387-415. https://doi.org/10.1080/10438599.2020.1823673

Sharma, C., & Mishra, R. (2012). Export participation and productivity performance of firms in the Indian transport manufacturing. *Journal of Manufacturing Technology Management, 23*(3), 351-369. https://doi.org/10.1108/17410381211217416

Sharma, P., Cheng, L., & Leung, T. (2020). Impact of political connections on Chinese export firms' performance – Lessons for other emerging markets. *Journal of Business Research, 106*(1), 24-34. https://doi.org/10.1016/j.jbusres.2019.08.037

Smeets, V., & Warzynski, F. (2013). Estimating productivity with multi-product firms, pricing heterogeneity and the role of international trade. *Journal of International Economics, 90*(2), 237-244. https://doi.org/10.1016/j.jinteco.2013.01.003

Spence, M., & Hlatshwayo, S. (2012). The evolving structure of the American economy and the employment challenge. *Comparative Economic Studies, 54*, 703-738. https://doi.org/10.1057/ces.2012.32

Stančić, P., Todorović, M., & Čupić, M. (2012). Value-based management and corporate governance: A study of Serbian corporations. *Economic Annals, 57*(193), 93-112. https://doi.org/10.2298/eka1293093s

Stanojević, N., & Jovancai, A. (2015). Diversification of Serbia's export markets - Potentials for export to the countries of Caspian basin. *Economic Themes, 53*(2), 278-297. https://doi.org/10.1515/ethemes-2015-0016

Temouri, Y., Vogel, A., & Wagner, J. (2013). Self-selection into export markets by business services firms - Evidence from France, Germany and the United Kingdom. *Structural Change and Economic Dynamics, 25*(1), 146-158. https://doi.org/10.1016/j.strueco.2012.02.004

Tmušić, M. (2023). Misuse of institutions and economic performance: Some evidence from Serbia. *Post-Communist Economies, 35*(6), 546-573. https://doi.org/10.1080/14631377.2023.2209344

Trajković, S., & Stošić Mihajlović, Lj. (2021). Analysis of the export potential of small and medium enterprises in the Republic of Serbia. *International Journal of Business and Economics Research, 10*(5), 171-177. https://doi.org/10.11648/j.ijber.20211005.12

Trofimenko, N. (2008). Learning by exporting: Does it matter where one learns? Evidence from Colombian manufacturing firms. *Economic Development and Cultural Change, 56*(4), 871-894, https://doi.org/10.1086/588156

Trpeski, P., Kozheski, K., & Merdzan, G. (2024). Labor productivity in the selected SEE countries: Trends and determinants. *Economic Horizons, 26*(1), 79-97. https://doi.org/10.5937/ekonhor2401079T

Vapa-Tankosić, J., Ignjatijević, S., & Gardašević, J. (2015). Analysis of export performance factors of enterprises from the Republic of Serbia in the process of European integration. *Teme, 39*(4), 1257-1276.

Vendrell-Herrero, F., Darko, C., Gomes, E., & Lehman, D. (2022). Home-market economic development as a moderator of the self-selection and learning-by-exporting effects. *Journal of International Business Studies, 53*(7), 1519-1535. https://doi.org/10.1057/s41267-021-00481-8

Vogel, A. & Wagner, J. (2010). Exports and profitability - First evidence for German business services enterprises. *Applied Economics Quarterly, 56*(1), 7-30. https://doi.org/10.3790/aeq.56.1.7

Wagner, J. (2002). The causal effects of exports on firm size and labor productivity: First evidence from a matching approach. *Economics Letters, 77*(2), 287-292. https://doi.org/10.1016/s0165-1765(02)00131-3

Wagner, J. (2007). Exports and productivity: A survey of the evidence from firm-level data. *The World Economy, 30*(1), 60-82. https://doi.org/10.1111/j.1467-9701.2007.00872.x

Wagner, J. (2012a). Exports, imports and profitability: First evidence for manufacturing enterprises. *Open Economies Review, 23*(5), 747-765. https://doi.org/10.1007/s11079-011-9235-z

Wagner, J. (2012b). International trade and firm performance: A survey of empirical studies since 2006. *Review of World Economics, 148*(2), 235-267. https://doi.org/10.1007/s10290-011-0116-8

Wagner, J. (2014). Is export diversification good for profitability? First evidence for manufacturing enterprises in Germany. *Applied Economics, 46*(33), 4083-4090. https://doi.org/10.1080/00036846.2014.950797

World Bank. (2023). Exports of goods and services (% of GDP). Retrieved May 15, 2023, from: https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS

World Trade Organization. (2021). World Trade Report 2021: Economic resilience and trade. Retrieved May 15, 2023, from: https://www.wto.org/english/res_e/publications_e/wtr21_e.htm

Xuefeng, Q., & Yasar, M. (2016). Export market diversification and firm productivity: Evidence from a large developing country. *World Development, 82*(1), 28-47, https://doi.org/10.1016/j.worlddev.2016.01.017

Zhou, C. (2020). The effects of outward FDI and export on firm productivity in emerging markets: Evidence from matching approach. *Economics Letters, 195*, 109462, https://doi.org/10.1016/j.econlet.2020.109462

Received on 12th February 2024,
after revision,
accepted for publication on 10th July 2024.
Published online on 29th August 2024.

Milan Čupić is an associate professor at the Department of Accounting, Auditing and Business Finance, Faculty of Economics, University of Kragujevac. He is the author of more than 40 scientific papers. His areas of scientific interest are foreign exchange risk management, performance management, public financial management and corporate governance.

Stefan Vržina is a teaching assistant at the Department of Accounting, Auditing and Business Finance, Faculty of Economics, University of Kragujevac. He is the author of more than 30 scientific papers. His areas of scientific interest are corporate finance, tax accounting and financial analysis and planning.