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SERBIAN EXPORT TO THE EU MARKET: A DYNAMIC SHIFT-SHARE ANALYSIS

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Abstract

The paper deals with the analysis of Serbian export competitiveness in regards to the EU market in the period between 2012 and 2021, using the location quotient and dynamic shift-share analysis, which breaks down changes in exports into three components: the national, the industrial, and the regional component. The results show that EU countries are suitable destinations for Serbian products. Also, products from several Serbian sectors are attractive in the European market. The location quotient shows that the most important export destinations are Bulgaria, Croatia, Romania, and Slovenia. The dynamic shift-share analysis results show that there was an increase in the competitiveness of Serbian exports to the European Union market in the observed period, mostly thanks to the national component. The regional component is expressed in some countries, such as Poland and Hungary, while the industrial component is the least represented.

Key words: export competitiveness, Republic of Serbia, EU market, location quotient, dynamic shift-share analysis.

ИЗВОЗ РЕПУБЛИКЕ СРБИЈЕ НА ТРЖИШТЕ ЕВРОПСКЕ УНИЈЕ: ДИНАМИЧКА *SHIFT-SHARE* АНАЛИЗА

Апстракт

Рад се бави анализом конкурентности извоза Србије на тржишту ЕУ у периоду између 2012. и 2021. године применом локацијског квоцијента и динамичке *shift-share* анализе, која промене у извозу расчлањава на три компоненте: националну, индустријску и регионалну компоненту. Резултати показују да су земље ЕУ погодне дестинације за српске производе, и то за производе из више сектора. Локацијски квоцијент показује да су најзначајније дестинације Бугарска, Хрват-

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ска, Румунија и Словенија. Резултати динамичке *shift-share* анализе показују да је у посматраном периоду дошло до пораста конкурентности извоза Србије на тржиште Европске уније, и то највише захваљујући националној компоненти. Регионална компонента је изражена у појединим земљама, као што су Пољска и Мађарска, док је индустријска компонента најмање заступљена.

Кључне речи: извозна конкурентност, Република Србија, тржиште ЕУ, локацијски квоцијент, динамичка *shift-share* анализа.

INTRODUCTION

International trade has become an important factor in the development of economies around the world, especially in the period of globalisation. Countries try to find products which they can specialise in exporting, but it is also important to find geographically suitable destinations for their products. It raises the question of the competitive advantages that countries achieve. It is especially important for developing countries, for which foreign trade flows are the main way of being included in the world economy. It is critical to examine the possibilities of further export orientation or geographical diversification of exports for countries facing large balance of payments deficits.

Considering the importance that Serbian exports to the EU have for Serbia's foreign trade exchange and its economic development, this study focused on the structure and regional distribution of Serbian exports. It is the reason for the application of economic base analysis. Economic base analysis is a straightforward but useful technique that may be used to comprehend the state of the economy. It is based on the calculation of the location quotient, and the application of shift-share analysis. The location quotient is a way of quantifying the export concentration to certain EU countries in relation to the entire Union. In addition to showing the concentration of exports, the location quotient was chosen because it also determines the most suitable markets for exports. The shift-share analysis is an analytically suitable tool for examining the competitiveness and degree of specialisation of Serbian exports to the EU market. Given that the EU is Serbia's most valuable foreign trade partner, it is important to observe in which export segments Serbia records the most significant results, and with which countries it achieves the highest volume of trade. This research makes it possible to identify the factors that influence the competitive position of Serbian products on the European market. At the same time, the factors that influence the results are divided into several component: the national, the industrial and the regional component. It enables us to determine what percentage of Serbian exports to the EU is due to the characteristics of the union itself, how much is due to the commodity structure of exports or the specificity of foreign demand, and how much is

due to regional specificities or the geographical characteristics of individual EU member states.

The paper aims to analyse the production and geographical structure of the exports of the Republic of Serbia to the EU countries, in order to identify the specificities of certain export commodity groups and countries in which Serbia achieves a higher export value. The subject of the research is the export of the Republic of Serbia, broken down by sections and classified by EU countries. The paper contributes to understanding the importance of improving Serbian exports to the EU market, and to identifying future export directions. The research started with the research question of identifying the competitive position of exported Serbian products on the EU market between 2012 and 2021.

LITERATURE REVIEW

The export of smaller, economically insufficiently developed countries is imperative when it comes to strengthening the factors of economic growth. For a country like Serbia, it is a driver of regional integration, as well as a great European perspective (Pervaz et al., 2018, p. 966). The country's aspiration to join the EU is, among other things, inspired by joining the EU single market, so the benefits of foreign trade in such a market can be a stable source of economic prosperity. Damijan et al. (2011) show that the increase in exports is one of the characteristics of the process of transition and European integration of developing countries. It is necessary to improve exports and stimulate those sectors that dominate the structure of exports to the EU, i.e. stimulate the export of those products in which Serbia can satisfy the demand of the EU member states (Lojanica, 2016, p. 296).

Stigliz (2006) points out that a country's ability to expand its exports is a stronger driver of economic growth than the implementation of a free trade policy. Marković and Marković (2015) argue that export is a fundamental determinant of economic growth. Increased foreign trade can significantly increase the competitiveness of developing countries with less developed institutional infrastructure, because it encourages reforms and a greater degree of specialisation (Bolaky & Freund, 2004). By entering the international market, companies are also encouraged to spend more on technological progress, which leads to an increase in innovation (Mladenović et al., 2016, p. 236).

The Republic of Serbia had a poor economic structure and underwent disorganised structural changes, which caused a poor structure of export (Marjanović & Marjanović, 2019, 507). The totality of Serbian exports, including its exports to the EU, increased significantly after the conclusion of the Stabilization and Association Agreement, which initiated the establishment of a free trade zone. Foreign trade with EU countries

accounts for more than half of Serbian exports and imports. However, the foreign trade volume is not as large as it could be, given that these countries are geographically relatively close to Serbia. One of the aspects of such tendencies in the foreign trade between Serbia and the European Union is that Serbia lags in the application of technology in production. Also, developing countries that are not yet members of the European Union are considered risky. Doing business with such countries in conditions of disruptions and crises can be unfavourable (Stanojević & Jovancai, 2015, p. 286). In addition, there are numerous technical measures that the European Union employs to protect its market. For example, there are numerous requirements for the modernisation of the production process, and harmonisation with European quality standards, among others (Rapaić & Dabić, 2013, p. 357).

The location quotient and shift-share analysis are used to assess the attractiveness of a country's products and sectors in a particular market. Theoretical and empirical studies that examined export competitiveness using these methods mainly refer to African and Asian countries. Only a small number of studies have dealt with the export of a country to the European market in this way.

Shift-share analysis was applied in examining the export market at the global level, and the prospects for the export of electrical and electronic products of Malaysia to fifteen selected countries in the periods between 2006 and 2008, and between 2009 and 2011 (Al-Mamun et al., 2015). Akkemik (2011) examined the export competitiveness of Turkish products on the European Union market using a dynamic shift-share analysis of the period between 1987 and 2006 in order to examine the effects of the establishment of the customs union. Ecel et al. (2014) analysed the possibilities of improving the export of agricultural products in Uganda by applying shift-share analysis with four components: global share, geographic share, structural share, and performance share. Shift-share analysis was a useful tool for assessing the export potential of IT services in regions of India during the periods between 2004/5 and 2008/9, and between 2009/10 and 2013/14 (Nachnani & Swaminathan, 2017). Oyewole (2021) analysed the export performance of Latin America and the Caribbean in the period between 2002 and 2017 by monitoring their market share in the global market. Using shift-share analysis, Zayani and Helali (2017) examined Tunisian export competitiveness, and identified the factors that caused the inequality of export competitiveness in relation to the main competitors – Turkey and Morocco, between 1990 and 2012. A study that dealt with the EU export competitiveness between 1995 and 2009 showed that the EU was able to resist new and strengthened competitors on the international market thanks to the stable demand for European products, which the EU countries specialised in exporting (Cheptea et al., 2012).

This research was conducted according to the model used by Mejia et al. (2018). They analysed Panama's export competitiveness on the EU market in the period between 2011 and 2016 by applying static and dynamic shift-share analysis.

METHODOLOGY

The paper deals with the analysis of the Republic of Serbia's export to the EU market using the economic base analysis, namely the location quotient and the dynamic shift-share analysis. The study covered a period of ten years – between 2012 and 2021. Data on Serbian export to the EU market, and export data by sections and trade partners were taken from the database of the Statistical Office of the Republic of Serbia. The Standard International Trade Classification (SITC, Rev. 4) accepted by the United Nations Statistical Commission in 2006 was used, according to which the following sections exist: 0 – food and live animals; 1 – beverages and tobacco; 2 – crude materials, inedible, except fuels; 3 – mineral fuels, lubricants and related materials; 4 – animal and vegetable oils, fats and waxes; 5 – chemicals and related products, not elsewhere specified; 6 – manufactured goods classified chiefly by material; 7 – machinery and transport equipment; 8 – miscellaneous manufactured articles; and 9 – commodities n.e.s. in the SITC Rev. 4.

The Location Quotient

The location quotient shows the sales markets of export products. This indicator shows product dominance in certain markets that are sensitive to economic diversity, size, and economies of scale. A location quotient is an analytical instrument mostly used with shift-share analysis as its complement. It shows the relative concentration and degree of specialisation of the selected economic activity through a comparative approach (Suarmanayasa et al., 2019, p. 71). According to Miller (1991) the location quotient is an effective instrument for determining the comparative advantage of a region in order to identify successful sectors. It is calculated according to the following equation:

$$LQ = \frac{x_i / x}{X_i / X},$$

where x stands for Serbian exports to individual EU countries, X for Serbian exports to the EU, and i for the section according to the SITC Rev. 4.

If the location quotient is equal to 1, the observed economic category is equal to both the regional level and the level of the whole. In this case, it would mean that the export share of a section is equal to the total export of Serbia to individual countries, and at the level of the EU. A lo-

cation quotient lower than 1 indicates the greater importance of exports from Serbia to the EU, while a value greater than 1 shows the importance of a specific country as an export destination.

Shift - Share Analysis

Shift-share analysis was originally introduced by Daniel Creamer in the 40s. Later, the method was improved and refined by Dunn (1960), and modified by Esteban (1972). Dinc (2002) states that shift-share analysis reveals the overall economic change that is simultaneously attributed to the growth of the national economy, the industrial structure of the region, and the competitiveness of local industries. Shift-share analysis is suitable for international trade evaluation, export market growth analysis, and export competitiveness analysis (Rahman et al., 2014, p. 3). In this paper, shift-share analysis will be applied to analyse the exports of the Republic of Serbia to the countries of the EU, where the member states will be viewed as regions, while the European Union will be viewed as a whole.

Shift-share analysis, as a descriptive statistical tool, is used for economic, regional, sectoral, and political variables that break down their growth or decline into several components (Matlaba et al., 2014). These are the national share, the industrial share and the regional share. The national share explains changes in the observed variable as a result of national trends. It presents the growth or decline of the observed regional variable if it changes at a rate equal to the rate at which the variable changes at the national level (Tervo & Okko, 1983). The industrial share explains changes in the analysed variable that can be attributed to the industrial structure, i.e. the characteristics of the selected sections. It explains the changes in the sectoral structure of the region compared to the national level (Oyewole, 2016, p. 5). This component actually explains the specialisation level when talking about exports and imports. The regional share of variable change is explained by regional specificities, i.e. regional competitiveness. The regional share will show the extent of the change in the Republic of Serbia's exports to different EU countries due to their locational advantage and national specificity. Shift-share analysis is calculated according to the following formula:

$$TS = NS + IS + RS \,,$$

where *TS* stands for total shift, *NS* for the national share, *IS* for the industrial share and *RS* for the regional share. They are calculated according to the following formulas:

$$NS = x_{i,t-1} \frac{X_t - X_{t-1}}{X_{t-1}} \,;$$

$$IS = x_{i,t-1}\left(\frac{X_{i,t}-X_{i,t-1}}{X_{i,t-1}}-\frac{X_{t}-X_{t-1}}{X_{t-1}}\right); \text{ and}$$

$$RS = x_{i,t-1}\left(\frac{X_{i,t}-X_{i,t-1}}{X_{i,t-1}}-\frac{X_{i,t}-X_{i,t-1}}{X_{i,t-1}}\right),$$

where x represents Serbia's exports to individual EU countries, X stands for Serbia's exports to the EU, t for the end of the period, t-1 for the beginning of period t, and i for the sector that is the focus of the research.

There is a difference between static and dynamic shift-share analyses. Static analysis implies the decomposition of the selected variable at the beginning and at the end of the observed period. However, it does not take into account the continuous changes that occur in the meantime. This is how a dynamic analysis is created. It actually only introduces dynamics into the static analysis by calculating the static analysis for each year in relation to the previous one, thus achieving continuity instead of focusing only on the beginning and end of the observed period. (Barff & Knight, 1988).

RESULTS AND DISCUSSION

EU countries are the most important foreign trade partners of the Republic of Serbia. Exports to the EU amount to more than 60% of the total exports of the Republic of Serbia, with a slight decline in the share noted during the last two years, mainly due to the growth of the share of China and other countries in the total exports of Serbia. The record value of Serbian exports to the EU was reached in 2021, when it amounted to around 16.5 billion US dollars. At the beginning of the observed period, the value of exports was 6.9 billion US dollars (Figure 1). The highest export growth rates were recorded in 2013 and 2021, at 33% and 30%, respectively (https://data.stat.gov.rs/?caller=SDDB).

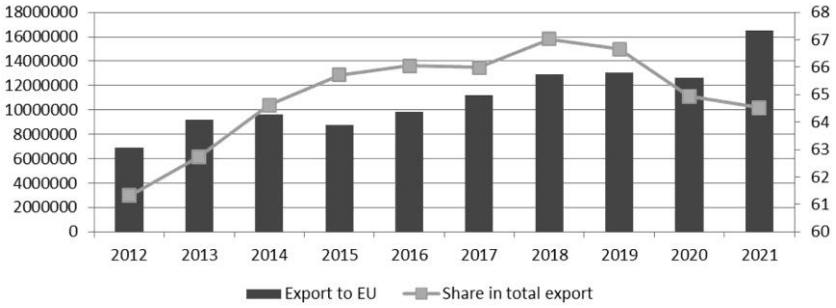

Figure 1. Exports of the Republic of Serbia to the EU and share in total export
Source: Authors, based on data of Statistical Office of the Republic of Serbia https://data.stat.gov.rs/?caller=SDDB accessed on April 11, 2022

When talking about the structure of exports by sections, the largest share of Serbian exports to the EU is the export of machinery and transport equipment, with an average of about 34.5% during the entire observed period (between 2012 and 2021), followed by manufactured goods classified chiefly by material, with a 23% average participation in exports to the EU. The Serbian export share of food and live animals to the EU averages over 10% of Serbia's total exports to the EU. The export of other sections generally records an average participation below 10%. The highest average growth rate was recorded in the export of chemical and related products, and it amounted to 18%, while the lowest average rate was recorded in the export of animal and vegetable oils, fats and waxes. The value of the export of food and live animals increased from 1.2 billion US dollars in 2012 to around 2.1 billion US dollars in 2021. A high export value is also achieved by manufactured goods classified chiefly by material, whose value increases significantly year by year, reaching a value of 3.8 billion US dollars in 2021. It is a significant increase compared to 2012, when it was around 1.7 billion US dollars. Mineral fuels, lubricants and related materials also record high export values, while Serbia has the lowest export value for miscellaneous manufactured articles (section 8). Machinery and transport equipment has a high export value by default. There was a decline in Serbian export of machinery and transport equipment in 2020, which is a consequence of the pandemic caused by the COVID-19 virus. In addition to the service sector, the automotive industry was the most affected. However, the value of the Serbian export of machinery and transport devices to the EU reached around 5.4 billion US dollars in 2021 (Table 1).

Table 1. Exports of the Republic of Serbia to the EU by sections between 2012 and 2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
0	1238002.7	1152244.5	1215584.9	1080685.2	1202578.9	1109372.5	1173141.8	1408108.0	1632285.8	2100196.4
1	77799.5	67266.0	108583.4	86450.1	91701.2	107159.1	126211.3	166180.1	131234.0	165831.3
2	375261	447207.3	362046.6	304083.8	356345.6	396279.3	423524.5	377311.8	419688.2	665058.1
3	178912.4	343267.6	320669.3	213520.4	206569.6	234588.9	312854.5	222402.4	192231.1	299375.1
4	123454.3	121382.1	92045.5	93019.6	104621.4	83615.2	85092.0	127761.2	143837.1	215161.5
5	416853.5	680556.3	653357	642140.1	793934.2	976542.9	1178311.6	1122931.4	1190892.9	1701727.4
6	1660774.2	1885919	2084814.3	1997344.6	2039036.7	2769053.1	3429834.6	3246705.1	2754655.9	3802631.4
7	1848271.0	3351165.9	3501007.0	3126160.5	3626834.4	3925332.1	4402798.0	4549880.7	4407194.3	5455149.8
8	931204.0	1073108.7	1233567.7	1216465.1	1387649.5	1587500.3	1734982.8	1804226.5	1734471.5	2052733.8
9	34441.7	43234.7	22252.4	29755.3	22296.7	27793.0	29254.4	61375.5	56623.7	34983.0

*data is presented in thousands (US dollars)

Source: Statistical Office of the Republic of Serbia
https://data.stat.gov.rs/?caller=SDDB accessed on April 11, 2022

Considering that several EU partner countries dominate the exports of the Republic of Serbia, the location quotient is calculated for those whose share in Serbian exports exceeds 5%. The aim is to determine which EU countries are the most important destinations for significant export sections of the Republic of Serbia. Marked fields indicate trade partners where the location quotient of Serbian exports is greater than 1. The most important Serbian foreign trade partners are the following EU countries: Bulgaria, the Czech Republic, Germany, Croatia, Hungary, Italy, Poland, Romania, and Slovenia. When looking at the location quotient, it can be noticed that the products of each section have markets where the value of this indicator exceeds 1. In some cases, it even exceeds the value of 3. The highest location quotient for food and live animals export was recorded for Romania, with constant growth year by year. In 2021, there was also a higher share of food and live animal exports in Croatia, Hungary, and Italy than at the EU level. According to the location quotient for the Serbian export to Bulgaria, the following sections are significant: beverages and tobacco; crude materials, inedible, except fuel; mineral fuels, lubricants and related materials; animal and vegetable oils, fats and waxes; chemical and related products; manufactured goods classified chiefly by material; and commodities n.e.s in the SITC (Rev. 4). The Croatian market is attractive for food and live animals; beverages and tobacco; mineral fuels, lubricants and related materials; animal and vegetable oils, fats and waxes; chemical and related products; and miscellaneous manufactured articles. It is interesting that, although Germany is Serbia's most important export partner among all of the EU member states, there is no high degree of concentration on the German market. The location quotient for Germany was greater than 1 only for the export of machinery and transport equipment during the entire observed period (Table 2).

The following table shows the results of the dynamic shift-share analysis and its individual components for all EU countries to which Serbia exports its products. The dynamic shift-share analysis results show an increase in Serbia's exports to most EU countries, except for Cyprus and Luxembourg, in the observed period. The highest increase in Serbian exports in the total shift of the shift-share analysis was recorded in Austria, Germany, France, Hungary, Italy, Poland, and Romania (highlighted fields in Table 3). The highest increase during the observed period was in Germany, with a high negative value in the regional share. It points to the fact that no specifics of the German economy contribute to the increased import of Serbian products, but the economic characteristics of the European Union and the demand for products from specific sections dominate. In particular, German import from Serbia is growing due to the increase of the EU's import from Serbia.

Table 2. Location quotient for the most important export partners of the Republic of Serbia by sections in 2012, 2017 and 2021

Section	Bulgaria			Czech Republic			Germany		
	2012.	2017.	2021.	2012.	2017.	2021.	2012.	2017.	2021.
0	0.289	0.972	0.720	0.149	0.248	0.172	0.596	0.860	0.677
1	4.598	4.690	3.298	4.467	0.234	0.095	0.117	0.215	0.102
2	5.485	3.041	2.164	0.438	0.299	0.271	0.677	0.832	0.865
3	3.432	4.757	3.297	1.071	0.120	0.040	0.227	0.061	0.038
4	3.098	1.874	3.489	0.650	0.212	0.289	0.212	0.663	0.264
5	1.950	1.306	1.276	1.197	1.083	0.871	1.133	0.881	0.925
6	0.915	1.746	1.985	2.552	0.931	0.899	0.707	0.721	0.671
7	0.214	0.096	0.137	0.379	1.190	1.454	1.720	1.405	1.618
8	0.254	0.304	0.332	0.438	1.540	1.474	1.061	0.925	0.710
9	4.312	6.838	3.187	2.074	0.018	0.180	0.122	0.015	0.023

Section	Croatia			Hungary			Italy		
	2012.	2017.	2021.	2012.	2017.	2021.	2012.	2017.	2021.
0	1.034	1.339	1.303	1.409	1.197	0.647	0.534	0.566	1.148
1	2.020	2.613	3.261	1.718	0.829	0.841	0.028	0.134	0.591
2	0.641	1.002	0.628	0.638	1.143	0.654	0.455	0.665	0.549
3	0.769	2.930	3.148	3.373	1.089	0.869	0.157	0.005	0.035
4	3.637	2.900	4.228	0.621	0.959	0.476	0.326	0.247	0.592
5	1.953	1.225	1.480	1.757	1.710	1.438	0.549	0.516	0.725
6	1.049	1.336	0.834	1.121	1.191	0.844	1.015	0.824	1.072
7	0.490	0.334	0.365	0.654	0.871	1.440	1.090	1.276	0.741
8	1.224	1.199	1.592	0.304	0.393	0.333	2.168	1.549	1.992
9	0.544	0.544	0.035	0.008	0.006	0.002	1.070	1.392	1.138

Secton	Poland			Romania			Slovenia		
	2012.	2017.	2021.	2012.	2017.	2021.	2012.	2017.	2021.
0	0.413	0.836	0.618	3.134	2.338	2.806	0.327	0.687	0.448
1	0.120	0.350	0.214	0.215	1.059	0.778	0.271	0.225	0.619
2	1.101	1.032	0.692	1.078	1.067	0.353	1.807	1.677	1.460
3	0.125	0.198	0.085	3.619	3.020	3.389	0.286	4.189	2.461
4	0.006	0.715	1.499	0.012	0.007	0.129	2.495	2.941	2.687
5	0.969	1.224	0.946	0.833	1.381	1.302	1.228	0.970	1.081
6	2.303	1.499	1.406	0.654	0.858	0.856	1.030	0.700	0.891
7	0.568	0.767	1.102	0.105	0.680	0.421	1.135	0.963	0.830
8	0.696	0.848	0.609	0.327	0.614	0.695	1.132	1.171	1.698
9	0.012	1.274	3.894	0.121	0.366	0.038	1.345	0.330	0.874

Source: Authors' calculations

Table 3. Shift-share analysis of Serbia's exports to the EU between 2012 and 2021

	NS	SS	RS	TS
Austria	396.311,41540	16.292,52547	59.391,75914	471.995,7
Bulgaria	170.718,09550	3.693,25200	16.268,75249	190.680,1
Belgium	461.727,93260	-8.556,24764	88.358,51509	541.530,2
Republic of Cyprus	59.707,69063	19.260,42359	-156.845,81420	-77.877.7
Czech Republic	397.816,31580	-30.887,60630	352.047,29050	718.976,0
Germany	1.870.766,15800	154.615,14170	-92.432,09922	1.932.949,2
Denmark	47.841,03587	164,10280	21.597,66133	69.602,8
Spain	162.361,36940	12.597,83081	155.615,29980	330.574,5
Finland	20.335,59036	-814,90307	45.857,71271	65.378,4
France	408.655,71160	1.453,86058	24.919,22782	435.028,8
UK	244.523,39070	3.215,52971	30.646,57958	278.385,5
Greece	174.273,41710	-18.587,57173	-41.396,14534	114.289,7
Croatia	514.958,34110	-22.468,78557	-77.402,55551	415.087,0
Hungary	556.496,77160	-10.136,12743	426.996,25590	973.356,9
Ireland	9.080,65418	2.422,67136	-3.224,72554	8.278,6
Italy	1.653.147,55700	-1.451,63881	-672.969,81860	978.726,1
Lithuania	29.693,30320	6.665,00073	735,89606	37.094,2
Luxembourg	7.546,81572	2.303,62193	-14.810,83767	-4.960,4
Latvia	5.394,06797	859,50578	3.598,82623	9.852,4
Malta	3.106,83491	506,14291	678,32217	4.291,3
Netherlands	239.795,79370	9.673,0141	52.002,89214	301.471,7
Poland	369.053,75010	15.384,30285	351.259,74710	735.697,8
Portugal	18.959,37036	3.475,86096	1.754,96867	24.190,2
Romania	961.521,52250	-191.325,26420	-264.115,05830	506.081,2
Sweden	132.666,79460	-9.247,13278	168.027,4382	291.447,1
Slovenia	495.018,39330	11.626,02021	-117.650,5135	388.993,9
Slovakia	292.015,25300	35.807,59802	-58.350,35106	269.472,5
Estonia	5.220,25011	-905,09888	16.268,75249	20.583,9

Source: Authors' calculations

Negative results appear in the industrial share and the regional share, while the national share has positive values for all countries. The negative values of the industrial share were recorded for the following countries: Belgium, the Czech Republic, Finland, Greece, Croatia, Hungary, Italy, Romania, Sweden, and Estonia. An extremely high negative value of the industrial share exists in Serbian exports to Romania, which indicates that the commodity structure of Serbian exports to Romania is quite different from the commodity structure of Serbian exports to the European Union. The highest positive value of the industrial share is related to export to Germany, which shows that the export of certain Serbian sections to Germany is growing much faster than the export of the same sections to the European Union. When it comes to the regional share, negative values were observed for Cyprus, Germany, Greece, Croatia, Ireland, Italy, Luxembourg, Romania, Slo-

venia, and Slovakia. There is a high negative regional share for export to Italy, but a very high positive value in the total share. Given that Italy is an important export partner of the Republic of Serbia, it is clear that the influence of the national and industrial share dominates in the shift-share analysis, similar to the case of exports to Germany.

CONCLUSION

The location quotient and shift-share analysis results show that Serbia has developed mechanisms for exporting certain categories of products to certain EU countries. Also, the results show that certain sections have a lot of potential to become crucial export points for Serbia. The location quotient showed that Serbia has the potential to export to many EU members. The importance of the export destinations of Serbian products changed in the period between 2012 and 2021, as indicated by the location quotient change. For many countries, although it still has a value greater than 1, the location quotient shows a tendency to decrease, which may indicate a gradual re-orientation of Serbian export to some other markets. The dynamic shift-share analysis results show the strong dominance of the national share in the growth of Serbian export to all EU members. It is interesting that those EU members who are Serbia's greatest foreign trade partners record high negative values of the regional share, as is the case with Italy and Germany. This can be explained by the fact that Serbia carries out the highest foreign trade volume with them. They have a high share of total Serbian export to the EU, so exports to these countries strongly determine export to the EU. However, it can be noted that the regional share dominates in most countries (when it is positive) in relation to the industrial share. The total shift shows that there has been an increase in export competitiveness in most countries, except in the case of Cyprus and Luxembourg. Based on the presented results, it can be concluded that there was an increase in the competitiveness of Serbian exports to the EU market in the period between 2012 and 2021.

Although there are limitations to this research, reflected in the limitation of the applied methods in the form of dynamic analysis, which actually represents a cross-section of the state for each year, the results highlight the importance of the EU market structure for Serbian exports. These results point to the conclusion that Serbia exports products in high stages of processing to its most important foreign trade partners, who enjoy the largest share in the total export from Serbia. On the other hand, countries that are less developed than the most successful EU members are the destination for Serbian products in the lower stages of processing. This research can be understood as a kind of guide for economic policymakers, which can help stimulate the export of products of higher processing stages to these countries with appropriate measures.

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ИЗВОЗ РЕПУБЛИКЕ СРБИЈЕ НА ТРЖИШТЕ ЕВРОПСКЕ УНИЈЕ: ДИНАМИЧКА *SHIFT-SHARE* АНАЛИЗА

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Резиме

Најважнији спољнотрговински партнери Србије су земље ЕУ, што је и разумљиво с обзиром на тежњу Србије да приступи ЕУ и потписивању Споразума о придруживању и стабилизацији. Из тог разлога, важно је проценити како се српски производи котирају на европском тржишту и који су потенцијали за даље унапређење извоза на тржиште ЕУ. При томе, интересантно је испитати шта утиче на тенденције извоза и да ли су то фактори који делују на нивоу ЕУ као целине, да ли су то национални фактори који су специфични за појединачне чланице Европске уније, или се пак ради о особеностима појединих привредних сектора. Циљ истраживања је испитати производну и географску структуру извоза Републике Србије са аспекта конкурентности извозних производа у периоду између 2012. и 2021. године. Наиме, испитује се конкурентност српског извоза у појединачне земље ЕУ, али се испитује и њихова конкурентност са секторског аспекта.

Локацијски квоцијент је показао да се као значајна дестинација за производе попут пића и дувана, минералних горива и мазива произведних у Србији издваја Бугарска. Хрватска је погодна дестинација за извоз животињских и биљних уља, затим масти и воскова, док се храна и живе животиње највише извозе у Румунију. Резултати локацијског квоцијента, иако за сада повољни за поједине категорије производа, подстичу забринутост због тренда опадања овог показатеља. Наиме, оваква тенденција промене локацијског квоцијента указује на промену географске структуре извоза, односно на преоријентацију ка другим тржиштима. Резултати shift-share анализе показују да на извоз Републике Србије у Европску унију највише утичу карактеристике уније као целине. Овакав резултат се може објаснити чињеницом да постоји јединствено тржиште Европске уније. У том смислу, сви споразуми који су склопљени са Унијом се односе на сарадњу са свим њеним чланицама. Када се посматра регионална компонента (специфичности појединачних земаља чланица Европпске уније), негативне вредности су забележене за земље које су Србији најважнији спољнотрговински партнери – за Немачку и Италију. Извоз Републике Србије у ове земље чини највећи део извоза у Европску унију, па из тог разлога регионална компонента није изражена код ових земаља. Међутим, у оним земљама у којима регионална компонента бележи позитивне вредности, она доминира у односу на индустријску компоненту. То значи да особености појединачних земаља чланица Европске уније (као нпр. географско подручје, преференције и укуси потрошача и слично) интензивније детерминишу извоз Републике Србије у поређењу са специфичностима сектора. Када се посматра укупан ефекат добијен shift-share анализом, може се закључити да је дошло до пораста конкурентности извоза Републике Србије у већини земаља чланица Европске уније.

Резултати локацијског квоцијента и shift-share анализе указују на то да су земље чланице Европске уније погодне дестинације за српске производе. Развијене земље су погодне дестинације за производе високих фаза прераде, док се у

мање развијене земље претежно извозе производи нижих фаза прераде. Како доминантну улогу има национална компонента, било би пожељно да се унапреди структура извоза, односно да се повећа учешће извоза производа виших фаза прераде у укупном извозу.