

# ANALYSIS OF THE TRADE RELATIONS BETWEEN THE COUNTRIES BEING PART OF THE OPEN BALKAN INITIATIVE

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## Abstract

This paper's objective is to identify the sectors in which the Republic of North Macedonia has a comparative advantage regarding its export to other countries that are part of the Open Balkan initiative. The revealed comparative advantage of the Republic of North Macedonia in relation to the Republic of Serbia and the Republic of Albania was calculated for the time period of 2011-2020 by having used the Standard International Trade Classification, Revision 4 (SITC, Revision 4). The quantitative methods that were used during the research are the following: the Index of Trade Openness (ITO), the Trade Balance Index (TBI), and the export index of Revealed Comparative Advantage (Balassa's RCA). The results of the research point to the fact that regarding the case of the Republic of North Macedonia, a high index of trade openness was registered in comparison to the other countries being part of the Open Balkan initiative. Furthermore, the Trade Balance Index shows that in the course of the analyzed period, the Republic of North Macedonia had been continuously present in the capacity of a net exporter of products of the category of tobacco and beverages, whereas the RCA index indicates positive values in the category of the food sector, beverages and tobacco, crude materials, except fuels as well as animal and vegetable oils, fats and waxes.

## Keywords

Competitiveness, Revealed comparative advantage, Trade

## 1. Introduction

The Open Balkan (OB) initiative stems from the Berlin process, and it was conceived as an economic zone between Macedonia, Serbia, and Albania in the beginning phase, but later on the countries of the Western Balkans region would join it. The aim is to strengthen regional economic cooperation and to extend the freedom of movement of people and goods. At the same time, the initiative has to provide certain benefits to the citizens and businesses

through increased opportunities in the field of trade, joint investments, the development of tourism, and the appearance of third markets, and it also has to encourage the integration of the Open Balkan countries into the European Union. Moreover, the Open Balkans will promote regional market development to attract investments. On one hand, this situation will increase the foreign companies' interest due to the common market's size and labor supply. On the other hand, it will eliminate the mutual competition between the Open Balkan countries. All these actions should have a positive effect on the three countries' economies and on the realization of higher rates of economic growth.

To estimate the progress expected to be achieved by the Open Balkans, it is necessary to see what the current situation is. The foreign trade analysis should show how significant the trade is and what needs to be done to improve the trade exchange between these two countries of the "Open Balkan" initiative.

Having in mind the fact that the Republic of North Macedonia is traditionally linked and dependent on the economic cooperation and trade with the Western Balkan countries, the objective of this paper is to determine the comparative advantage of the Macedonian export in relation to the other countries that are part of the Open Balkan initiative by using the adequate methodology. This paper is divided into two parts. The first part presents the methodology applied upon the calculation of comparative advantage. The second part presents the results of the empirical analysis of comparative advantage in export of the Republic of North Macedonia in relation to the other countries that are part of the Open Balkan initiative.

## 2. Measurement of revealed comparative advantage

The significance of following the changes in terms of the comparative advantage of export brought to the development of a model of comparative advantage in the second half of the twentieth century. The analysis of international trade by using ex-post data was first carried out by Liesner who had made an attempt to calculate the comparative advantage of the industrial products' export from Great Britain to her European competitors [1]. Even though Liesner was the first scientist who made an attempt to calculate the comparative advantage of export, this model was especially highlighted by Balassa B. in 1965. Balassa B. was the first who used the term "revealed comparative advantage" which is often called in practice Balassa index [2]. The Balassa index is shown by the following formula:

$$RCA = \left( \frac{X_{ij}}{X_{nj}} \right) / \left( \frac{X_{it}}{X_{nt}} \right) \quad (1)$$

where  $X$  is export,  $i$  - country index,  $j$  - commodity index,  $n$  - set of countries,  $t$  - set of commodities.

Critics identified the weaknesses of the concept "revealed comparative advantage" both in a theoretical and empirical sense (for instance, Bowen [3]; Ballance et al. [4]; Vollrath [5]; Dalum et al., [6]; Proudman and Redding [7]; Laursen [8]; Yu et al. [9]; Laursen [10]). Although this index is quite often used for calculating comparative advantages, it is still related to a range of technical inconsistencies and problems, especially when comparing the received values [11]. For this reason, there have been made numerous attempts to adjust and transform this index, and suggestions for alternative indices of measuring the comparative advantage.

Widodo [12] and Lafay [13] formulated the Trade Balance Index (TBI) which is defined as a ratio of the export and the country's overall trade (export plus import). This index shows if the country is a net exporter or a net importer, the Trade Balance Index (TBI) is calculated in the following way:

$$TBI_{ij} = \frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}} \quad (3)$$

TBI shows the ratio in relation to the country's trade  $i$  of the product  $j$ . The TBI value varies between -1 and 1. When the TBI value equals 1, then the country shows up in the capacity of a net exporter. When the TBI value equals -1, then the country shows up in the capacity of a net importer. If the TBI value equals 0, it means that the export value is the same as the country's import value  $i$ . It is simply said, if the TBI value is positive, the country shows up in the capacity of a net exporter and vice versa, if the TBI value is negative, then the country shows up in the capacity of a net importer.

The index of trade openness (ITO) as an important indicator of the countries' competitiveness presents a supplement to the revealed comparative advantage. This index is calculated in the following way (Department for Business Innovation & Skills, 2013) [14]:

$$ITO = (X + M / GDP) \times 100 \quad (5)$$

The ratio between the trade and GDP is actually the sum of export and import divided by the GDP. The index measures the country's openness or its integration into the global economy. The index's largeness shows the overall trade of a certain country, the degree of dependence of domestic producers on the foreign markets and also the degree of dependence of domestic demand on the foreign supply of goods and services.

Laursen [15] compares RSCA to other measures of international trade specialization including the Michaely index, the Contribution to Trade Balance, Chi Square, and Bowen's Net Trade Index. The result of the analysis is that RSCA is the best measure of comparative advantage.

The objective of this paper is to identify the sectors in which the Republic of North Macedonia has a comparative advantage upon its export to the other countries that are part of the Open Balkan initiative. The revealed comparative advantage of the Republic of North Macedonia in relation to the other countries that are part of the Open Balkan initiative was calculated for the time period of 2011-2020 by having used the Standard International Trade Classification, Revision 6 (SITC, Revision 6) which classifies the goods into 10 groups:

0 – Food

1 - Beverages and tobacco

2 - Crude materials, except fuels

3 – Mineral fuels, lubricants and related materials

4 – Animal and vegetable oils and fats

5 – Chemical and related products

6 – Manufactured goods classified mainly by material

7 – Machinery and transport equipment

8 – Miscellaneous manufactured articles

9 – Special transactions and commodities not classified according to kind

The category "Special transactions and commodities not classified according to kind" in the SITC was not taken into account in the course of this research. The data used in the research is actually official data of the United Nations Commodity Trade Statistics (UN COMTRADE Database), Eurostat Statistics, State Statistical Office of the Republic of Macedonia, Institute of Statistics (Albania) and Statistical Office of the Republic of Serbia. In this paper, there are calculated the following indices:

The Index of Trade Openness (ITO);

The Trade Balance Index (TBI);

The export index of Revealed Comparative Advantage (Balassa's RCA).

### 3. Empirical analyses of revealed comparative advantage in trade of the countries that are part of the Open Balkan initiative

#### 3.1. The Index of Trade Openness (ITO)

The countries that are part of the Open Balkan initiative are aware of the importance of trade openness as one of the determinants of economic growth. The Index of Trade Openness of the countries that are part of the Open Balkan initiative for the time period of 2011-2020 is shown in Table 1:

**Table 1** The Index of Trade Openness (ITO) of the countries that are part of the Open Balkan initiative

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Albania	81.22	76.51	75.87	75.41	71.8	74.81	78.19	76.81	76.28	59.99
Macedonia	113.19	112.21	104.86	112.54	113.7	116.19	124.14	133.22	138.58	130.62
Serbia	78.81	85.47	87.92	92.23	97.4	101.86	107.53	109.49	111.95	104.76

Source: [https://www.theglobaleconomy.com/rankings/trade\\_openness/](https://www.theglobaleconomy.com/rankings/trade_openness/)

According to the data presented in the table, the highest index of trade openness in the analyzed period is recorded in the case of the Republic of North Macedonia (mostly due to the policies of attracting foreign direct investments, primarily in the sectors for the production of automotive components), whereas the lowest index of trade openness is evident in the case of the Republic of Albania.

#### 3.2. Trade Balance Index (TBI)

The Trade Balance Index (TBI) of the Republic of North Macedonia calculated for the time period of 2011-2020 is shown in Table 2:

**Table 2** Trade Balance Index (TBI) of the Republic of North Macedonia

Products	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Food products	-0.29	-0.33	-0.30	-0.28	-0.29	-0.28	-0.33	-0.32	-0.29	-0.29
Beverages and tobacco	<b>0.55</b>	<b>0.53</b>	<b>0.55</b>	<b>0.51</b>	<b>0.41</b>	<b>0.42</b>	<b>0.45</b>	<b>0.41</b>	<b>0.45</b>	<b>0.48</b>
Crude materials, except fuels	-0.12	-0.06	0.13	0.00	0.02	0.19	0.25	<b>0.22</b>	0.15	0.13
Mineral fuels, lubricants and related materials	-0.57	-0.69	-0.82	-0.85	-0.84	-0.83	-0.80	-0.77	-0.74	-0.76
Animal and vegetables oils and fats	-0.62	-0.67	-0.75	-0.64	-0.48	-0.49	-0.76	-0.69	-0.56	-0.70
Chemicals and related products	-0.05	-0.04	-0.02	0.12	0.15	0.18	0.22	0.23	0.22	0.12
Manufactured goods classified mainly by material	-0.23	-0.28	-0.33	-0.44	-0.48	-0.57	-0.58	-0.55	-0.57	-0.52
Machinery and transport equipment	0.54	-0.44	-0.34	-0.13	-0.07	-0.04	0.00	0.04	0.07	0.07

Miscellaneous manufactured articles	0.32	0.33	0.32	0.32	0.29	0.23	0.25	0.22	0.20	0.15
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Source: Authors' calculations

The table's data points out to the fact that in the course of the analyzed period, the Republic of Macedonia continuously comes up as a net exporter of products of the category of beverages and tobacco and the category of miscellaneous manufactured articles. It was registered a net export in terms of the category of crude materials not being food (except fuels) from 2013 and of the category of chemical products from 2014. It is dominant the export of tobacco and wine in terms of the category of beverages and tobacco. Tobacco production is based on the cultivation of oriental small-leaf aromatic tobaccos. Tobacco is the most significant agricultural product of the Republic of North Macedonia having the largest share in the overall export of agricultural and food products. The analysis of wine trade points out the following few countries as main destinations of exporting Macedonian wine: Germany, the Czech Republic, and Slovenia (as member states of EU), Serbia, Croatia, and Bosnia and Herzegovina (as former Yugoslavian markets), and the USA, and Russia as other markets. In spite of the fact that the largest part of Macedonian wine ends up at the markets of EU, the former Yugoslavian markets remain to be a very important export destination because the export value of these markets is larger as a result of the export of wine in bottles.

### 3.3 The export index of Revealed Comparative Advantage (Balassa's RCA)

The calculated index of revealed comparative advantage of Macedonian export in relation to the Republic of Albania is shown in Table 3:

**Table 3** The export index of Revealed Comparative Advantage (Balassa's RCA)

Products	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Food products	1.42	1.36	1.27	1.81	1.85	1.59	0.01	1.85	1.43	1.23
Beverages and tobacco	1.21	1.20	1.29	0.57	0.48	0.57	0.00	1.08	0.48	1.00
Crude materials, except fuels	1.66	2.46	2.92	2.79	1.42	1.22	0.02	2.84	2.69	3.16
Mineral fuels, lubricants and related materials	0.11	0.01	0.05	0.08	0.63	0.37	0.00	0.49	0.31	0.27
Animal and vegetables oils and fats	36.66	37.89	34.79	31.62	24.50	22.66	0.00	34.43	16.70	12.00
Chemicals and related products	1.37	1.31	0.97	0.77	0.59	0.67	0.00	0.54	0.45	0.70
Manufactured goods classified mainly by material	0.79	0.69	0.81	0.82	1.11	1.07	0.00	1.05	0.46	1.10
Machinery and transport equipment	0.77	0.58	0.41	0.22	0.20	0.18	0.00	0.11	0.09	0.12
Miscellaneous manufactured articles	0.26	0.24	0.22	0.18	0.16	0.23	0.00	0.17	0.16	0.24

Source: Authors' calculations

The trade exchange between the Republic of North Macedonia and the Republic of Albania is not at the desired level and it has to be intensified through closer meetings and cooperation between businessmen. Empirical analyses point to a continuous trade surplus on behalf of the Republic of North Macedonia in terms of the trade exchange with the Republic of Albania. The main precondition for a bigger trade exchange and economic cooperation between Macedonia

and Albania presents the building of road infrastructure that the governments of both countries need to put some bigger efforts into. In the analyzed period of time (2011-2020), the Republic of North Macedonia had an expressed comparative advantage in the trade with the Republic of Albania in the next few sectors: the food sector, beverages and tobacco, crude materials, except fuels as well as animal and vegetable oils, fats and waxes. The calculated comparative advantage is confirmed by the increased export of petroleum and petroleum oils, iron and steel products, portland cement, medicines, etc. The key sectors which can set in motion the low trade exchange between Macedonia and Albania are agriculture, tourism, building industry, wood processing, and furniture manufacturing. The improvement of exchanging information in terms of both countries' economic and trade activities, intensification of activities needed for promoting the export of Macedonian products on the Albanian market, mutual touristic offer of the cross-border region, development of a uniformed methodology for classifying objects associated with the tourism between Macedonia and Albania, strengthening the quality and laboratory testing control, support for improving the exchange of information between the national statistic organizations, and also support for including innovations in the sector of small and medium-sized enterprises in Macedonia and Albania are activities which would enable to a certain extent the intensification of trade exchange between these two countries both in short and medium terms. What is also necessary is intensifying the communication between the business sector and the local and central authorities in the direction of creating and improving the business leading conditions mutually.

The calculated index of revealed comparative advantage of Macedonian export in relation to the Republic of Serbia is shown in Table 3:

**Table 4** The export index of Revealed Comparative Advantage (Balassa's RCA)

Products	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Food products	1.70	2.03	1.61	1.61	1.34	1.46	0.01	1.56	1.43	1.50
Beverages and tobacco	1.20	0.98	0.82	0.95	0.79	0.87	0.00	0.81	0.78	0.84
Crude materials, except fuels	0.25	0.23	0.19	0.22	0.20	0.22	0.00	0.14	0.12	0.18
Mineral fuels, lubricants and related materials	4.43	4.77	4.24	3.96	3.49	4.14	0.35	3.79	3.36	2.89
Animal and vegetables oils and fats	0.95	1.30	1.29	1.73	2.23	3.12	0.00	1.44	3.05	3.92
Chemicals and related products	0.53	0.65	0.44	0.37	0.29	0.35	0.01	0.29	0.25	0.35
Manufactured goods classified mainly by material	0.82	0.99	0.76	0.87	0.73	1.11	0.00	1.08	0.97	0.99
Machinery and transport equipment	0.55	0.39	0.24	0.16	0.11	0.10	0.00	0.07	0.08	0.08
Miscellaneous manufactured articles	0.17	0.20	0.16	0.21	0.17	0.19	0.00	0.18	0.17	0.21

Source: Authors' calculations

The Republic of Serbia is the biggest trading partner of Macedonia in comparison with all the countries of the Western Balkans region where only about 5% of the overall Macedonian export is traded. Empirical analyses show a continuous trade deficit on behalf of Macedonia when regarding its trade exchange with the Republic of Serbia. When observed as a whole, the trade exchange between Macedonia and Serbia has had an upward trend over the past few years. There is constant growth when regarding the export and import expressed in absolute volumes. However, Serbia's share in Macedonia's overall foreign trade and separately in the export and import is still at a moderate level. In the analyzed period (2011-2020), the Republic of North Macedonia had an expressed comparative advantage in its trade with the Republic of Serbia in the following sectors: food and live animals as well as mineral fuels, lubricants, and related

materials. The calculated comparative advantage of Macedonian products being present on the Serbian market is one more proof that there is a great possibility for cooperation, especially in the metal, chemical, and agricultural sectors.

## Conclusion

It can be seen from the existing levels of trade exchange that there is a huge potential for its increase and improvement. Therefore, which economy will succeed in increasing the export and market share depends on the current and future level of competitiveness of economies and companies. The opportunities offered by the CEFTA initiative up to now have not been used properly. Therefore, some morals need to be drawn to see which future reform measures could increase the competitiveness of the Macedonian economy, on the whole, especially in terms of the sectors that either have lost or decreased their market share in export over the last 10 years. In order to operationalize the Open Balkan, at the Economic Forum for Regional Cooperation in Skopje at the end of July 2021, the prime ministers of the three countries signed an agreement on ensuring the free movement of people, goods, services, and capital within the framework of the internal market, and an agreement on cooperation in disaster prevention and rescue. At the "Open Balkan" summit held in Tirana on 20 and 21 December 2021, there were signed more multilateral and bilateral agreements with the purpose of realizing the fundamental rights for free movement of people, products, and capital as a part of the arranged gains to greater regional cooperation and improvement in terms of relating the countries of the initiative. It was particularly important the signing of the Agreement on criteria for free access to the Western Balkans labour market, the Agreement on interconnection of schemes for electronic identification of the citizens of the Western Balkans, and the Agreement between the governments of the Republic of Albania, the Republic of Serbia, and the Republic of North Macedonia on cooperation in the field of veterinary, food safety, and phytosanitary policy. In addition, at the meetings, there were also signed bilateral agreements on recognition of permissions for an authorized economic operator of safety and security between the Republic of North Macedonia and the Republic of Albania and between the Republic of Albania and the Republic of Serbia. Regarding foreign trade, in the analyzed period of time (2011-2020), the Republic of North Macedonia had an expressed comparative advantage in the trade with the Republic of Albania in the following few sectors: the food sector, beverages and tobacco, crude materials, except fuels as well as animal and vegetable oils, fats and waxes. The calculated comparative advantage is confirmed by the increased export of petroleum and petroleum oils, iron and steel products, portland cement, medicines, etc. The comparative advantage of the Macedonian export in relation to the Republic of Serbia is present in the following sectors: food and live animals as well as mineral fuels, lubricants, and related materials. The calculated comparative advantage of Macedonian products on the Serbian market is one more proof that there is a great possibility for cooperation, especially in the metal, chemical, and agricultural sectors.

The "Open Balkan" initiative has to preserve, improve, and intensify the started changes for advancing the regional cooperation through CEFTA, which will further enable an even greater regional connection for cooperation and free transport of passengers, goods, capital, and services between Macedonia, Serbia, and Albania. Therefore, an additional value of the initiative presents the overcoming of non-trade barriers and other administrative obstacles restricting a greater trade exchange with Serbia and Albania. Free movement through the borders should facilitate trade, the movement of citizens, and the transfer of services between the three countries. Harmonized border crossing procedures and recognized work permits and qualifications of employees between Macedonia, Serbia and Albania are the main economic benefits enabling greater regional cooperation.

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