THE IMPACT OF INTERNATIONAL TRADE FREEDOM ON ECONOMIC GROWTH: EMPIRICAL EVIDENCE OF THE WESTERN BALKANS COUNTRIES

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Abstract

The influence of international trade freedom on economic growth is a significant factor. International trade promotes trade freedom (Unger, 2007), and most studies show the positive impacts of trade freedom on economic growth (Mercan et al., 2013). In this study, we search for the effects of international trade freedom on the Western Balkan countries' economic growth using the Fraser Institute annual data from 2000 to 2021. The paper consists of panel data, and the results are analyzed with the following models: pooled ordinary least squares (OLS), fixed effect, random effect, and generalized method of moments (GMM). Our findings show a positive relationship between the freedom of international trade and economic growth. High tariffs on international commerce, trade barrier control, and domestic trade freedom all impacted growth; on the other hand, tariffs and trade barrier regulations harm economic growth. The gross domestic product (GDP) coefficient per capita at lag one is 0.9535, implying that a unit increase in GDP per capita at lag one increases GDP per capita by 0.9535. The ultimate conclusion is that more trade liberalization with a preference for exports, institutional reforms, foreign direct investment (FDI) inflows, structural improvements, and strengthened collaboration with the European Union have a long-term influence on the Western Balkans nations' quicker economic growth.

Keywords: International Trade Freedom, Tariffs, Trade Barrier Regulations, Growth

Authors' individual contribution: Conceptualization — K.B., R.B., and M.H.; Methodology — R.B.; Software — R.B.; Validation — K.B.; Formal Analysis — R.B.; Investigation — K.B., R.B., and M.H.; Resources — K.B. and M.H.; Data Curation — R.B.; Writing — Original Draft — K.B., R.B., and M.H.; Writing — Review & Editing — K.B., R.B., and M.H.; Visualization — K.B. and M.H.; Supervision — K.B.; Project Administration — R.B.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

Economic growth is one of the main factors of interest of a country (Razmi & Rafaei, 2013; Tran, 2019). Different countries have different economic development. Namely, many factors make one country's economic development different from another; among them is the freedom of international

trade. Thus, the impact of international trade freedom on economic growth will be the main topic of this study. Firstly, through the analytical and empirical part, the study will contribute to the extensive literature on the economic development of Western Balkan countries over a period that ranges from 2000 to 2010. Secondly, with great importance and valuable contribution to our findings, in the study, we will also deal with the issues of tax policy changes and regulations of international trade barriers and their impact on economic growth. Heckelman (2000) in his paper had the issue of whether trade freedom impacts economic growth or the opposite. His results were that trade freedom has a positive impact on economic growth. In this study, due to analytical and empirical research, the results will reflect and argue on a scientific basis of the facts which support the presented topic of the study. For the topic we have chosen, many researchers have given their contributions. However, in addition to others, our contribution will provide more detailed specifications, thus analyzing the influence of the freedom of the international market in the Western Balkan countries by reviewing and extending the empirical evidence on the relationship between international trade freedom and economic growth. The freedom of trade and its impact on the economy is a much-studied and important topic for many authors (Naanwaab, 2018; Dollar & Kraay, 2002).

In addition to the reason that economic growth is essential for the functioning of a state, the large number of factors that influence economic growth is one of the reasons for the fact that there is much research in the field of economic growth (Emara & Rebolledo, 2019).

International trade freedom is a multidimensional field to be studied and is very important in economic growth and development. There are many studies by different authors in the literature (Razmi & Rafaei, 2013). Considering that not all countries have the same development, stability, and economic policies, a heterogeneous situation is created here for researchers since a strategy for international trade freedom may not work the same for all countries. In an economic growth, individuals and companies and the whole country benefit. Consequently, the well-being of citizens increases, the employment rate, investments in technology and businesses increase (Razmi & Rafaei, 2013). This chain growth increases the confidence of individuals and businesses to invest further. Generally, in most of the research, the authors find that the relationship between international trade freedom and economic growth is positive (Kandogan & Johnson, 2016). That is the main reason why global organizations and financial organizations support international trade freedom. Global organizations focused on increasing international market freedom are the reason for the significant global increase in the international market freedom from 5.92 in 2008 to 6.86 in 2018 (Emara & Rebolledo, 2019). Meanwhile, financial organizations support the freedom of the international market by attempting to improve its conditions. Through projects for economic growth, the World Bank projects the reduction of financial and other types of challenges for countries facing these difficulties (The World Bank, 2022). According to Boockmann and Dreher (2003), there is a positive correlation between the World Bank projects and international trade freedom. The freedom of international trade brings competition to domestic markets and increases the impact and use of technology. These parameters positively impact the economy (Mercan et al., 2013). Wu (2008) in his study showed that international trade freedom not only increases the impact of technology but also changes the structure of production technology. Adding further, authors such as Kandogan and Johnson (2016) argue that International trade freedom is not only known as a factor of economic growth but also as a significant factor in supporting other economic growth factors such as innovation and entrepreneurship. As mentioned above, in this paper, an empirical analysis of the influence of international trade freedom on economic growth in Western Balkan Countries will be made. The data will be obtained at the Fraser Institute (index of freedom) (Fraser Institute, 2021), and pooled ordinary least squares (OLS), fixed effect, random effect and generalized method of moments (GMM) models will be used for their analysis. In order to have more realistic conclusions, practices from other countries will also be included in the literature review. How the other countries support the freedom of international trade and what effect the freedom of international trade has on the growth of their economies will be analyzed because it is instructive to compare this study's result with similar findings of other articles. While in this section, we discuss all the pathways through which international trade freedom impacts economic growth. We also explicitly discuss the research questions and hypotheses tested on the links between international trade freedom and economic growth. In order to help identifying the relationship between the international free market and economic growth, the article deals with three research questions:

RQ1: Does the freedom of international trade positively impact economic growth?

RQ2: Do high taxes on international trade negatively impact economic growth?

RQ3: Do regulations of international trade barriers negatively impact economic growth?

The paper is organized as follows: Section 2 refers to the material and methods used in the literature review; Section 3 shows the methodology; here the research design, the dependent-independent and control variables, the source of data collection, the analysis technique, and dynamic analysis are discussed. Section 4 refers to the results and discusses the impact of international trade freedom on economic growth, and Section 5 concludes.

2. LITERATURE REVIEW

In this section, we discuss all the ways through which international trade freedom impacts economic growth. There is a wide range of literature and empirical evidence that approve the positive influence of the freedom of the international market on economic growth (Emara & Rebolledo, 2019), but, although in a minimal number, there are authors who oppose this (Carlsson & Lundström, 2002).

As mentioned above, many authors have contributed by researching the relationship between the freedom of the international market and economic growth since this is a very dimensional field of great importance.

International trade freedom is a significant factor for the economy (Doucouliagos & Ulubasoglu, 2006) because it stimulates and has a positive impact on economic growth (Nadeem et al., 2019; Cole, 2003; Emara & Rebolledo, 2019; Berggren, 2003; Berggren & Jordahl, 2005; Mercan et al., 2013; Sachs & Warner, 1995; Razmi & Refaei, 2013). International trade freedom affects economic growth by raising incomes, affecting human capital investment and development, raising foreign direct investment (FDI) (Cebula, 2013; Quazi, 2007; Naanwaab, 2018), increasing gross domestic product (GDP) (Okunlola & Akinlo, 2021), and affecting the overall quality of life (Nikolaev, 2014). Majeed et al. (2021) specify in their study the positive impact of international trade freedom on economic growth in the long term.

There are known strategies efforts for the freedom of the international trade system, which are: privatization to restrict the government, which supports the freedom of the international market, deregulation to enhance efficiency and liberalization which contains the lowering of tariff barriers and non-tariff, as a consequence permitting the development of the freedom of the international trade (Kandogan & Johnson, 2016). Classical and neoclassical economists emphasize the importance and contribution of international trade and the freedom of international trade to economic growth (Mercan et al., 2013). Miller and Kim (2017), showed a positive correlation between economic growth and international trade freedom in their study. In this line, Frankel and Romer (1999) studied the relationship between the international market and economic growth and concluded that countries with more developed international trade had more remarkable economic growth. Moreover, Medina-Moral and Montes-Gan (2018) utilized panel probity analysis from 1996 to 2011 on three groups of countries classified by evolution levels (less developed, intermediate and advanced), showing that the freedom of international trade is essential and impacts economic growth.

Similarly, Altman (2008), during the measurements in his paper for the period 1990 to 2004 in 113 countries, convincingly emphasized the importance of international trade freedom in economic growth. Countries with higher trade freedom have lower poverty rates (Gwartney & Connors, 2010). Based on data from 78 countries from 1970 to 2000, Berggren and Jordahl (2005) confirmed positive results of international trade freedom on economic growth by using OLS and two-stage least squares (2SLS) regressions. Meanwhile, Mercan et al. (2013) conducted their research in 5 developing countries during 1989–2010, where they found that a 1% increase in trade freedom affected economic growth with a 0.27% increase by using the two-way fixed effect model to estimate the data in the research. Considerable studies on the correlation between the freedom of the international market and economic growth, have been done via the causality test called Granger (Emara & Rebolledo, 2019).

Using the Granger causality test, Jin (2003) performed a study in North Korea between 1953 and 1999. The results of his study support the hypothesis that trade freedom supports economic growth. Another approval for the positive relationship between trade freedom and economic growth is made by de Haan and Sturm (2000). They claimed that international trade and the freedom to select and deliver resources are significant components of economic growth. Further on, Ahmad and Anorou (2000) demonstrated that the trade freedom and growth variables were integrated with a two-sided causality connection. The principal variables of trade freedom are the approaches that improve government integrity, decrease taxes, ensure the security of property rights, decrease trade barriers, and boost labor trade flexibility (Gouider, 2022). The study by Anorou and Ahmad (2000) was conducted from 1960 to 1997 in 5 countries by using the Johansen co-integration approach. Whereas Vamvakidis (1998) determined that free trade did not have a positive effect on growth since 1870, this condition switched in the 1930s, when it was identified as a positive effect of trade freedom on economic growth. This study was conducted with regression predicted for various periods, and the changing world trade regime explains the change in results. Similarly, Bahmani et al. (1999), in their study by sampling 59 countries during the 1960–1992 period using the Johansen co-integration method, found out that there is a positive relation between free trade and economic growth. Kurt and Berber (2008), Utkulu and Kahyaoglu (2005), and Yaprakli (2007) accomplished research on the impact of international trade freedom on Turkey's economic growth during different periods. These three studies conducted in Turkey, as mentioned above, came to the same conclusion: international trade freedom has a positive impact on economic growth. Kurt and Berber (2008) used vector autoregressive (VAR) analysis and analyzed data from 1989–2003, Utkulu and Kahyaoglu (2005) used non-linear time series and Markow modeling for their study, and they analyzed data from 1990–2004, and Yaprakli (2007) used the Johansen co-integration method for his study, and he analyzed data from 1990–2006. Likewise, Omisakin et al. (2009) argued that the relationship between international trade freedom and economic growth is positive.

In their study conducted in Nigeria during the time 1970–2006, using the Toda-Yamamoto causality and autoregressive distributed lag (ARDL) method, Omisakin et al. (2009) found out that with a 10% growth in trade freedom, there is a 7% increase in economic growth. Moreover, the same results had also Leite et al. (2019), using the same model (ARDL), in a sample of 121 countries. Furthermore, Depken and Sonora (2005) have a similar result for the relationship between trade freedom and economic growth. They utilized the Gravity equation model to study the effects of international trade freedom during 1999–2000 on U.S. economic growth. They investigated imports and exports between the U.S. and 119 other countries. Operating Fraser Institute's Economic Freedom of the World (EFW) index (EWF index) (Fraser Institute, 2021), they find out that international trade freedom positively affects

economic growth. This widely supported positive correlation between trade freedom and economic growth, is also supported from the founders of the Fraser Institute (Gwartney et al., 1996). Their study during 1980–1994 reasoned that countries with more prominent international trade freedom had annual GDP growth of 2.4%, while countries with more undersized international trade freedoms had annual GDP growth of 1.3%. Gwartney et al. (1996) executed a study that contained more than 100 countries, and the data from the research supports the theory that international market freedom helps economic growth. Similarly, Razmi and Refaei (2013) in their study discovered that trade freedom positively impacts economic growth. The study used data from 17 countries in the Middle East and East Asia during 2000–2009 by using the economic growth model to examine the data. As clarified at the beginning, many authors demonstrate and contend that the open country and the free market are favorable for the economy. Similarly, Edwards (1998), after researching 93 countries utilizing the least squares method, determined that productivity increased more in the more open countries.

Nevertheless, as we pointed out, some authors consider the opposite, among them Carlsson and Lundström (2002), Berggren and Jordahl (2005), Santiago et al. (2020), Unger (2007), etc. When we reviewed the international trade freedom-economic growth relationship literature, we found the issue of the negative relationship between the topics above, even though in a lower number.

International trade freedom can enable the penetration of foreign companies, which might threaten domestic companies because of the competition they bring. This position might debilitate domestic companies, thus directing to a decrease in economic growth (Hatfield & Kosec, 2013).

Carlsson and Lundström (2002) also highlighted that international trade freedom affects negatively the economic growth. They concluded that after obeying 78 countries for 25 years, distributing economic freedom as an element in 7 types, and examining the growth regressions per type in detail. Meanwhile, Berggren and Jordahl (2005) surveyed 78 countries during 1970–2000 concerning the freedom to trade with foreigners. After their regression analysis, the findings show that it harms economic growth, where the outcomes delivered due to taxes on international trade. This finding is for emerging countries. Also, Unger (2007) showed that the relationship between international trade freedom and economic growth had not been continuously positive. He pointed out that it is the type of trade freedom that affects economic growth. Meanwhile, he underlined that there had been more times when their relationship negatively impacted international trade freedom on economic growth. With this in mind, Santiago et al. (2020), utilizing the ARDL model, concluded that trade freedom harms economic growth in their study of 21 developing countries in Latin America and the Caribbean from 1996 to 2013.

As mentioned above, one of the principal variables of market freedom is the approach to decreasing taxes (Gouider, 2022). Manwa and Wijeweera (2016) reasoned that international trade freedom simulates positive economic growth in the long time when trade liberalization withdraws several tariffs and reduces taxes. According to Tosun (2016), improving tax systems improves the country's GDP. The international trade taxes during the 90s were so decreased that they almost went off existence. That was so to help the development of international trade freedom, consequently, for helping economic growth (Tosun & Abizadeh, 2005). However, the tax system has changed during periods due to different factors and adding to different situations, always having an undisputed impact on the economy. Economic growth contains a long-lasting connection with the total tax revenue (Zeng et al., 2013). According to Tosun and Abizadeh (2005), the taxes will be higher if incomes are higher and the opposite. Furthermore, according to them, this positively impacts economic growth. These outcomes are the study's findings by investigating the movements in taxation of different countries at different periods of economic evolution utilizing taxation proportions. Berggren and Jordahl (2005) do not have the same conclusion after their research. Their findings about the effect of international trade taxes on economic growth are related to developing countries. They consider the taxes on international trade the reason for not having a positive relationship with economic growth. This conclusion is after the regression analyses surveying 78 countries during 1970–2000.

The other factor known as another negative effect on economic growth is trade barriers; this is why since the World War II, trade barriers, such as tariffs, have been convincingly reduced (York, 2018). This approach to reducing trade barriers is a crucial factor in supporting free international trade and, therefore, economic growth. Reducing barriers as a positive consequence of the freedom of international trade for emerging countries and entrepreneurs is a very positive element (Vargas-Hernández, 2017). Okunlola and Akinlo (2021) had the same finding as Vargas-Hernández (2017); they claimed the need for countries to reduce these barriers, which, among other things, would obtain positive results also, increase economic growth and improve the quality of life. Analyzing labor trade constraints, some authors approximate the components of free trade with some components of political democracy (O'Driscoll et al., 2001), and some create a correlation between international trade freedom and political democracy (Doucouliagos & Ulubasoglu, 2006). On the other hand, other studies show further verdicts regarding political diplomacy and its impact on economic growth. In their study, Alesina et al. (1996) showed the impact of political democracy on economic growth, for which topic Cohen (2013) argued that political democracy had zero direct effect on economic growth. While Baum and Lake (2003) in their study said that political diplomacy had an indirect positive effect on economic growth. To conduct this research, we hypothesize that:

H1: International trade freedom positively impacts economic growth.

H2: High taxes in international trade negatively impact economic growth.

H3: Trade barrier regulations negatively impact economic growth.

During the literature review, the literature

findings mainly support the hypotheses we have established in this study. Authors such as Emara and Rebolledo (2019), Asamoah et al. (2019), Sheikh et al. (2018), and many others support our *H1* by arguing in different ways the positive impact of international trade freedom on economic growth. Taxes on international trade damage economic growth according to the research done by Berggren and Jordahl (2005), an analysis that included 78 countries in a time panel for 30 years. Gouider (2022) in his study showed how tax reduction affects economic growth through international trade freedom. The authors mentioned above are some of those who support our *H2* that high taxes in international trade negatively impact economic growth.

Our *H3*, that trade barrier regulations negatively impact economic growth, is supported by Gouider (2022), Vargas-Hernández (2017), and some others. They emphasized that reducing trade barriers improves and promotes international trade freedom and economic growth. Thuy (2019) had a suggestion for developing countries on how they can have higher economic growth. His suggestion supports our hypotheses by recommending higher international trade freedom and decreasing taxes to have fast economic growth. These suggestions come after the results he got in the study of 65 countries for the period 1995–2014.

3. RESEARCH METHODOLOGY

This section describes the technique used in the investigation. This covers the research design, the study's population, the sampling size and procedure, and the research equipment for data collection.

3.1. Research design

The technique that specifies the framework of the study and how the research is arranged is known as research design. It describes and defends the many types and techniques of data collection, information sources, and sample methods employed (Pandey & Pandey, 2015). The International Monerary Fund (IMF) world economic outlook database (IMF, 2021) was utilized the most in this research, from which the data on GDP growth and trade openness was derived. The data on institutional advancement has been adapted from the CEIC's data global database[1]. The data on the year that Western Balkans nations signed their Candidate status is the foundation for dummy variables, and it was obtained from the European Commission website[2]. Data for freedom to trade internationally and their components are collected from Fraser Institute's dataset[3] (Fraser Institute, 2021).

Independent variables are as follows:
- *freedom to trade internationally*;
- *tariffs*;
- *revenue from trade taxes* (% of trade sector);
- *mean tariff rate*;
- *standard deviation of tariff rates*;
- *regulatory trade barriers*;
- *non-tariff trade barriers*;

- *compliance costs of importing and exporting*;
- *dependent variable*;
- *GDP per capita*, constant prices.

Control variable are:
- *black market exchange rate*;
- *financial openness*;
- *capital controls*;
- *freedom of foreigners to visit*;
- *controls of the movement of capital and people.*

The analysis was mostly based on secondary data from the World Bank and the International Monetary Fund and Fraser Institute from 2000 through 2021, data on all factors was gathered.

3.2. Analysis technique

Panel analysis is one of the econometric approaches employed in this article. Four panel models are examined, and the best model is chosen based on the results of the necessary tests. Panel data, as opposed to multiple regression analyses, allows us to design and test complex econometric models; panel data lowers the problem of multicollinearity. There are several models available, including independently pooled panels, a fixed effect model, and a random effect model. The purpose of this study is to describe panels with fixed and random effects.

The fixed effect model is a linear model in which the constant member changes with each observation unit, maintaining consistency across time, and is defined as:

$$Y_i = X_i\beta + i\alpha_i + \varepsilon_i \qquad (1)$$

Where, Y_i is a $T \times 1$ column of observations on m individual (group) i over T time periods. Hence the total sample size is mT. I is the unit vector $\{1,1,....,1\}$ an identity matrix.

A fixed effect model can be formulated by means of the analytical form of a dummy variable:

$$Y = X\beta + D\alpha + \varepsilon \qquad (2)$$

The random effect model assumes a basic linear model with the premise that observation units are chosen at random, such that differences between units are random. As a result, the random effect model is as follows:

$$Y_{it} = X_{it}\beta + (\alpha + u_i) + \varepsilon_{it} \qquad (3)$$

3.3. Dynamic analysis

This study examines the influence of the distinguishing variable values from the preceding period on the current and future values. The general form of the dynamic VAR model with N variables and k lags is as follows: n is the dimensional vector of potentially endogenous variables of the series $(n \times 1)$, $A_1,...,A_k$ are square matrices of the autoregressive parameters of the series $(n \times n)$, D_t is the vector of non-stochastic exogenous variables with parameter matrix, and ε_{it} is the innovation vector, that is, an *n*-dimensional vector process of white noise with an expected value of zero and a covariance matrix. Arellano-Bond dynamic panel-data estimation is used in this paper's dynamic analysis approach.

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[1] https://info.ceicdata.com/en-products-global-database
[2] https://commission.europa.eu/index_en
[3] https://www.fraserinstitute.org/economic-freedom/dataset

4. RESULTS

Prior to the formation of the econometric model, the correlation between the explanatory variables was examined in order to discover the possible problem of collinearity. This problem can disturb the estimate of parameter values, their significance and the direction of impact on the dependent variable. According to experience so far, there is no adjusted test for discovering multicollinearity in panel models. According to Popovic et al. (2020), empirical studies that use panel models for discovering multicollinearity problems deploy the correlation coefficients between pairs of potential independent variables.

Table 1. Correlation coefficients, using the observations

	Tariffs	*Regulatory trade barriers*	*Financial openness*	*Capital controls*	*Freedom of foreigners to visit*	*Controls of the movement of capital and people*	*Freedom to trade internationally*	*GDP per capita*
Tariffs	1.0000							
Regulatory trade barriers	0.0914	1.0000						
Financial openness	-0.0314	-0.1003	1.0000					
Capital controls	0.1804	0.2271	0.3997	1.0000				
Freedom of foreigners to visit	0.1748	0.6746	-0.1557	-0.0174	1.0000			
Controls of the movement of capital and people	0.1689	0.3967	0.6072	0.6986	0.3305	1.0000		
Freedom to trade internationally	0.2878	0.6888	0.2803	0.5920	0.6262	0.8093	1.0000	
GDP per capita	0.1390	0.3195	0.3937	0.2425	0.3423	0.4294	0.5557	1.0000

Source: Authors' calculation.

The correlation test shows that the explanatory variable pairs should not cause the multicollinearity problem because the correlation is markedly weak in all cases. Therefore, correlation coefficients are not at the level which could lead to the multicollinearity problem.

Table 2. Result of the pooled OLS, fixed and random effect models

Variables	*Pooled OLS Model 1*	*Fixed effect Model 2*	*Random effects Model 3*	*Arellano-Bond dynamic panel-data estimation Model 4*
GDP per capita (-1)				0.9535 (0.000)
Tariffs	-2596.429 (0.170)	-2383.695 (0.039)	-2596.429 (0.167)	-683.2897 (0.068)
Regulatory trade barriers	-2824.071 (0.072)	-2841.416 (0.002)	-2824.071 (0.069)	-311.5292 (0.314)
Freedom to trade internationally	16316.08 (0.002)	10733.11 (0.001)	16316.15 (0.002)	1413.212 (0.151)
Control variable				
Financial openness	960.4069 (0.122)	-1422.503 (0.001)	960.4069 (0.120)	-227.9627 (0.075)
Capital controls	-338.8276 (0.682)	-1117.556 (0.019)	-338.8276 (0.681)	-322.7001 (0.020)
Freedom of foreigners to visit	-379.4441 (0.544)	-715.7741 (0.050)	-379.4441 (0.543)	-151.4727 (0.158)
Controls of the movement of capital and people	-1665.096 (0.028)	1097.141 (0.025)	-1665.096 (0.026)	328.0725 (0.072)
Observation	132	132	132	120
R-squared	0.4050	0.2042	0.4050	
F-value	12.06 (0.0000)	9.16 (0.0000)		
Wald chi2			84.41 (0.0000)	1760.15 (0.0000)

Source: Authors' calculation.

Table 2, Model 1 indicates that *controls of the movement of capital and people* and *freedom to trade internationally* are statistically insignificant at a 5% level of significance, but *financial openness* has a positive impact on economic growth. The coefficient of *tariffs* is -2596.429 and it implies that a unit increase in tariff reduces *GDP per capita* by 2596.42. The coefficient is insignificantly different from zero. The coefficient of *regulatory trade barriers* is -2824.071 and it implies that a unit increase in *regulatory trade barriers* reduces *GDP per capita* by 2824.07. The coefficient is insignificantly different from zero. The coefficient of *freedom to trade internationally* is 16316.08 and it implies that a unit increase in *freedom to trade internationally* increases *GDP per capita* by 16316.08. The coefficient is significantly different from zero. The R-square value of 0.4050 indicates that about 40.5% of the total variation in economic growth is jointly explained by *tariffs*, *regulatory trade barriers*, *financial openness*, *capital controls*, *freedom of foreigners to visit*, *controls of the movement of capital and people* and *freedom to trade internationally*. About 59.5% of the variation is explained by variables not used in this study.

Model 2 also indicates that *tariffs, regulatory trade barriers, financial openness, capital controls, freedom of foreigners to visit, controls of the*

movement of capital and people and *freedom to trade internationally* are statistically insignificant at a 5% level of significance, but that *tariffs, regulatory trade barriers, financial openness, capital controls, freedom of foreigners to visit* have a negative impact on economic growth. The coefficient of *tariffs* is -2383.695 and it implies that a unit increase in tariff reduces *GDP per capita* by 2383.69. The coefficient is significantly different from zero. The coefficient of *regulatory trade barriers* is -2841.416 and it implies that a unit increase in *regulatory trade barriers* reduces *GDP per capita* by -2841.42. The coefficient is significantly different from zero. The coefficient of *freedom to trade internationally* is 10733.11 and it implies that a unit increase in *freedom to trade internationally* increases *GDP per capita* by 10733.11. The coefficient is significantly different from zero. The R-square value of 0.2042 indicates that about 20.42% of the total variation in economic growth is jointly explained by *tariffs, regulatory trade barriers, black market exchange rate, financial openness, capital controls, freedom of foreigners to visit, controls of the movement of capital and people* and *freedom to trade internationally*. About 79.58% of the variation is explained by variables not used in this study. The important thing to keep in mind here is that the coefficient reflects the effect of the time variation. The fixed effects model controls for the individual effects, so only changes in the independent variable across time are captured and not differences in the independent variable between countries.

Model 3 indicates that *controls of the movement of capital and people* and *freedom to trade internationally* are statistically insignificant at a 5% level of significance, but *tariffs, regulatory trade barriers, capital controls, freedom of foreigners to visit*, and *controls of the movement of capital and people* has a positive impact on economic growth. The coefficient of *tariffs* is -2596.429 and it implies that a unit increase in tariff reduces *GDP per capita* by 2596.429. The coefficient is significantly different from zero. The coefficient of *regulatory trade barriers* is -2824.071 and it implies that a unit increase in *regulatory trade barriers* reduces *GDP per capita* by -2824.071. The coefficient is significantly different from zero. The coefficient of *freedom to trade internationally* is 16316.15 and it implies that a unit increase in *freedom to trade internationally* increases *GDP per capita* by 16316.15. The coefficient is significantly different from zero. The R-square value of 0.2042 indicates that about 20.42% of the total variation in economic growth is jointly explained by *tariffs, regulatory trade barriers, black market exchange rate, financial openness, capital controls, freedom of foreigners to visit, controls of the movement of capital and people* and *freedom to trade internationally*. About 79.58% of the variation is explained by variables not used in this study.

Model 4 indicates that *GDP per capita at lag* 1 and *capital controls* internationally are statistically insignificant at a 5% level of significance, but *tariffs, regulatory trade barriers, financial openness, capital controls and freedom of foreigners to visit* has a negative impact on economic growth. The coefficient of *GDP per capita at lag* 1 is 0.9535 and it implies that a unit increase in *GDP per capita*

at lag 1 increases *GDP per capita* by 0.9535. The coefficient is significantly different from zero. The coefficient of *tariffs* is -683.2897 and it implies that a unit increase in tariff reduces *GDP per capita* by 683.2897. The coefficient is insignificantly different from zero. The coefficient of *regulatory trade barriers* is -311.5292 and it implies that a unit increase in *regulatory trade barriers* reduces *GDP per capita* by 311.5292. The coefficient is insignificantly different from zero. The coefficient of *freedom to trade internationally* is 1413.212 and it implies that a unit increase in *freedom to trade internationally* increases *GDP per capita* by 1413.212. The coefficient is insignificantly different from zero.

5. CONCLUSION

Every country's primary concern is economic growth. High GDP growth rates, structural adjustments, and social reforms are all activities that every transitional country must do on its route to a market economy and democratization. This also applies to Western Balkans nations. Previous studies have established that the Western Balkans nations' GDP development and welfare are dependent on the growth, continuity, and efficacy of investment in a variety of industries. Aside from economic initiatives, more investments in the public sector are also essential. The majority of Western Balkans nations have failed to complete institutional changes. Institutions are less effective than they should be. Corruption and other types of degrading societal standards have yet to be eradicated. This is a significant impediment to higher GDP growth. Even if it is changing, the general business environment in the Western Balkans countries is not conducive to further expansion. This puts GDP per capita, employment, exports, other macroeconomic metrics, and the overall welfare state in jeopardy.

Using panel analysis, a result was reached that is consistent with key scientific and theoretical viewpoints in this field. Tariffs, regulatory trade barriers, financial openness, capital restrictions, freedom of foreigners to visit, limits on the movement of money and people, and freedom to trade internationally were all shown to be statistically significant in a panel analysis with fixed effects. Tariffs, regulatory trade barriers, financial openness, capital restrictions, and the freedom of foreigners to visit are factors having a negative sign in the explanation of fluctuations in the dependent variable at the 5% significance level. In the explanation of the changes of the dependent variable, trade openness is the only significant variable with a positive sign. Because of collinearity, the influence of the black-market exchange rate was not deemed statistically significant. The F-test value of 9.16 and probability of less than 5% point to the conclusion that the chosen explanatory factors influence GDP as the dependent variable simultaneously and significantly. As a result, high tariffs on international commerce, trade barrier control, and domestic trade freedom all had an impact on growth between 2000 and 2021.

The ultimate conclusion is that more trade liberalization with a preference for exports, institutional reforms, FDI inflows, structural improvements, and strengthened collaboration with

the European Union have a long-term influence on the Western Balkans nations' quicker economic growth.

The paper has some limitations. Firstly, the analysis of the paper is based on the indicators that are determined by the Fraser Institute and the indicators from other sources of determining international trade are not taken into analysis. Secondly, the analysis was made only for the countries of the Western Balkans and not for other countries, which makes the results relevant only for the countries of the Western Balkans.

This paper is of great importance firstly for future researchers and secondly for the construction of policy-making in the countries of the Western Balkans. For future research, this paper has sufficient analysis and basis for comparing the indicators of the freedom of international trade, taking into account other factors as well. For policy-making and the regulation of international trade, there are sufficient analyzes for decision-making to facilitate free trade measures.

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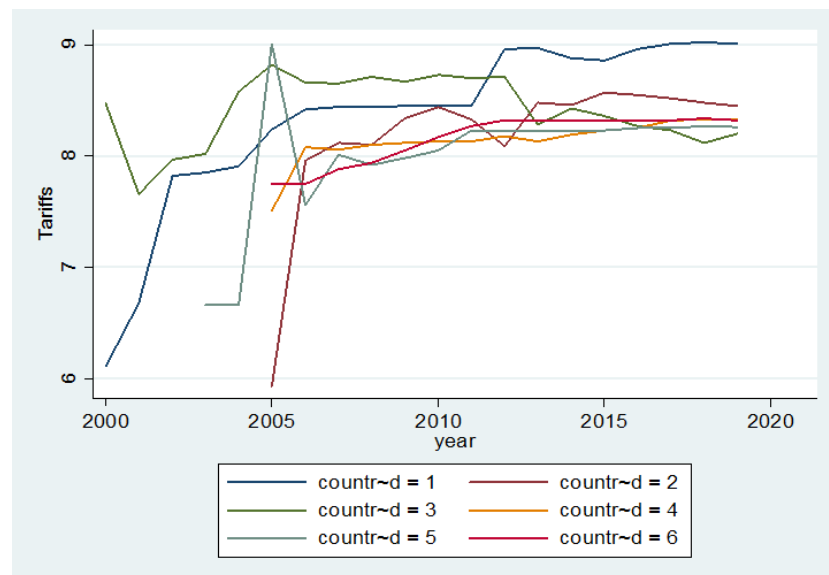
APPENDIX

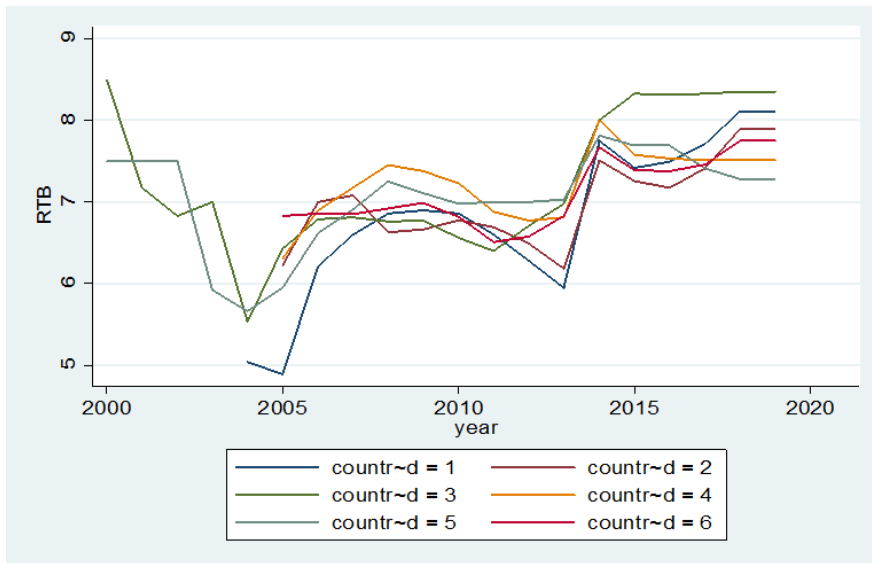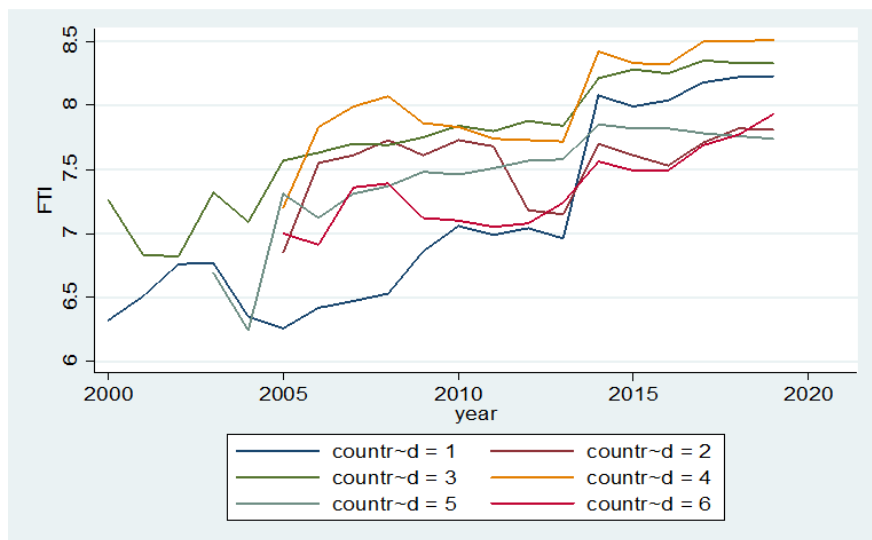**Figure A.1.** GDP per capita for Western Balkan
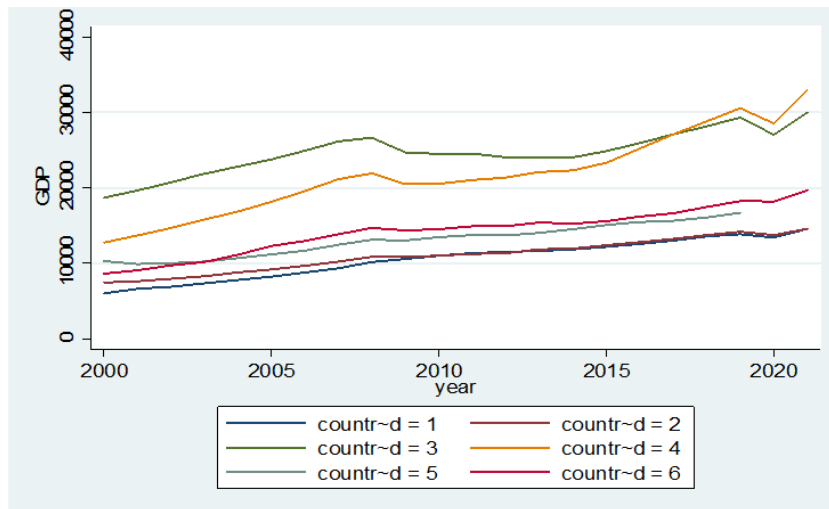
Note: countr~d1 — Albania, countr~d2 — Bosnia and Herzegovina, countr~d3 — Croatia, countr~d4 — Montenegro, countr~d5 — North Macedonia, countr~d6 — Serbia.
Source: IMF (2021).

Figure A.2. Tariffs

Note: countr~d1 — Albania, countr~d2 — Bosnia and Herzegovina, countr~d3 — Croatia, countr~d4 — Montenegro, countr~d5 — North Macedonia, countr~d6 — Serbia.
Source: Fraser Institute (2021).

Figure A.3. Regulatory trade barriers

Figure A.4. Freedom to trade internationally