Trade Liberalisation and Export Performance of the Western Balkans[1]

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ABSTRACT

Despite the seeming obviousness of an impact of trade liberalisation on trade values, there are substantial differences in results of empirical studies in that field. Thus, the aim of this research was to measure the influence of trade liberalisation processes on export performance of the Western Balkan countries (Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro and Serbia) in years 2001 - 2014. For this purpose, an imperfect substitutes model of trade was employed. It explained the value of export with the World GDP, real effective exchange rate, weighted average tariff rate and stock of FDI. This demand model was further extended by adding different supply-type variables in order to capture differences in production capacities of the analysed countries. It was estimated twofold: as pooled data with OLS and as fixed effects model. The results were contrary to expectations. Trade liberalisation influenced export values to a very small extent. Expectedly, external demand played a crucial role, as well as additional, supply-type variables. Foreign direct investments also influenced export positively. Finally, big internal market, if proxied by population, not GDP, seemed to restrain local producers from selling abroad.

1. INTRODUCTION

An impact of trade liberalisation on trade values seems obvious and intuitive. Removing barriers to trade is supposed to result in its growth. However, empirical works in this field bring diverse findings. Thus, the main purpose of this paper is to investigate if and to what extent trade liberalisation processes, that have been taking place in the Western Balkan countries in the new millennium, influenced their export performance. Review of literature doesn't give an unique opinion on what to expect. Most of the pre-liberalisation studies anticipated trade growth

that was supposed to emerge as a result of regional economic integration processes (see for instance Busier et al., 2005; Herderschee and Qiao, 2007). However, others claimed that regional trade was close to potential, thus lowering barriers wasn't supposed to cause its significant increase (Damijan et al., 2006). Ex-post analysis of liberalisation show its strong (Peterski 2013; Pllaha, 2012) or relatively strong (Klimczak, 2014; Trivić and Klimczak, 2015) positive influence on trade.

The region of the Western Balkans[3] was chosen as a research object, because of the processes of trade liberalisation and economic integration that have been taking place in extraordinary economic and political circumstances. They were preceded by a highly unstable period of the 1990s, in which the peoples of the region suffered not only from warfare, but also from a significant decrease in industry output. On the other hand, negative effects of barriers to trade appeared in parallel with emergence of borders between countries that previously formed one country – Yugoslavia.

Unlike the above cited papers, in this study the imperfect substitutes model of trade was employed. This theory-based approach underlines the importance of the demand-driven factors, which have their strongest impact in short and medium term analysis[4]. Trade liberalisation was proxied by weighted average tariff rate. As a proxy for product quality level, foreign direct investments stock was added to the model (see Penkova-Pearson, 2011 for similar approach). The study was extended by adding three different supply-type variables to this demand model of trade, in order to capture differences in production capacities of the analysed countries. Controlling for changes in supply in the imperfect substitutes models seems to be especially important in the case of studies that encompass relatively long periods (thirteen years in our case), because adjustments in supply take place only in a long run (see Barteczko, Przystupa, 2006).

The remainder of this paper is structured as follows. After Introduction, in part two the main trade liberalisation processes in the Western Balkans were outlined. In part three, methodological aspects were highlighted and values of the main variables presented. In part four, results were displayed and discussed. The fifth part brought additional supply-type variables to the model. Its standard version was than tested for robustness in part six, which was followed by the main conclusions[5].

2. TRADE LIBERALISATION IN THE WESTERN BALKANS

Since the breakdown of the Socialist Federal Republic of Yugoslavia (SFRY) the newly evolved countries experienced profound changes of economic, political and sociological type. Among them, trade liberalisation processes seemed to play a significant role. They have been carried out in four main directions:

- Stabilisation and Association Process (SAP),
- bilateral free trade agreements,
- CEFTA-2006 and
- World Trade Organisation (WTO).

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[3] The Western Balkan region geographically covers Albania and majority of the countries that emerged after the breakdown of the SFR Yugoslavia: Bosnia and Herzegovina, Croatia, Montenegro, Serbia and FYR of Macedonia. Due to lack of comparable data Kosovo was not taken into account in this analysis.
[4] Although according to Bobić (2010), the model serves well also in the long run.
[5] This article is an extended and up-dated version of the paper presented during the IV REDETE Conference, Graz, Austria, October 2015

As the conflict in Kosovo ended, in 1999 the European Union (EU) has begun the so-called Stabilisation and Association Process, which encompassed five countries of the South-Eastern Europe (SEE)[6]. The participants committed themselves to adjust their institutions and procedures to the standards of the EU and to gradually decrease barriers to trade. In return, the European Union offered apart from financial support, also free access to the common market and perspective of a membership (Kaminski, de le Rocha 2003). The SAP required from the participating countries an engagement in a regional co-operation, among others in an economic field (Pjerotić, 2008, p. 498).

For this reason, the Western Balkan countries as well as Romania, Bulgaria and Moldova, signed on June 27th, 2001 an EU-supported document called *Memorandum of Understanding on Trade Liberalization and Facilitation* (MoU). The document obliged them to sign until the end of 2002 bilateral free trade agreements with one another and to follow the World Trade Organisation rules in this respect. For the countries of the former Yugoslavia the bilateral agreements were an important step towards liberalisation of trade, which used to be completely free, before the collapse of TFR Yugoslavia. However, the bilateral agreements constituted a complicated network, often referred to as "spaghetti bowl". Partly for the sake of simplicity, in December 2006 the WB countries together with Moldova signed the Central European Free Trade Agreement, which since then was re-called CEFTA-2006 (see Gressani, Mitra, 2002, pp. 14-15)[7]. The aims of the Agreement reached beyond typical goals of FTAs, as defined in the GATT article XXIV, because they encompassed (Miklaszewski, 2005, p.6; Molendowski, 2007, p. 95; Molendowski, 2012, p. 98):

– facilitating development of economic relations by promotion of trade;
– ensuring fair trade practices among the signatories;
– contributing to the harmonious development of the World trade.

However, it is important to notice, that at the beginning there was no consensus about a full trade liberalisation. Thus, the pace of the agreed trade liberalisation was relatively slow, taking into account an eight-year period of reaching fully liberalised trade.

On the other hand, non-discriminatory trade liberalisation has taken the form of joining the World Trade Organisation. All countries of the region took an effort to negotiate the conditions of becoming members of this organisation, with all consequences of liberalising trade outside of the FTAs. Apart from Bosnia and Herzegovina and Serbia, who are "in progress toward membership", all other Western Balkan countries are currently members of the WTO[8].

All these liberalisation processes resulted in a significant decrease in tariff barriers, as presented in Table A1 and in Graph 1. The values of weighted average tariff rate in 2001 varied from less than 5% to almost 12%. Thirteen years later, the values ranged just from ca. 1% to 2%. The most significant drop of tariff barriers was reported by Albania, which changed its position from the most closed, to the most open economy among the WB countries (if measured by an average tariff rate). In a contrary, the smallest changes were reported by Bosnia and Herzegovina (data for Croatia and Serbia awere not available for 2014 at the time when the analysis was done).

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[6] Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia and Serbia and Montenegro
[7] The initial CEFTA agreement was signed in Dec. 21st, 1992, by Poland, Hungary, Czech Rep. and Slovakia.
[8] The article was submitted in February 2016. Kosovo wasn't at that time taking part in the WTO-accession process.

Graph 1. Weighted average tariff rates in the Western Balkan countries in period 2001-2014.
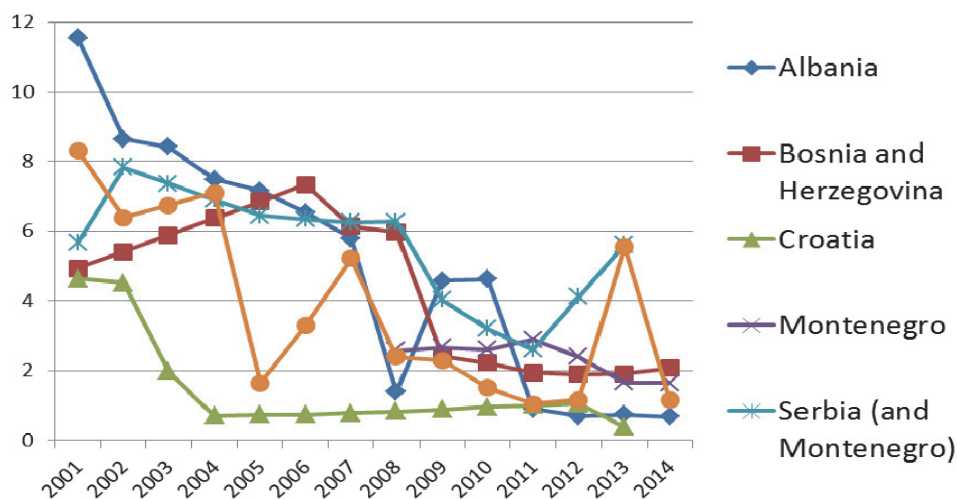
Note: A part of the missing data were linearly interpolated.
Source: http://unctadstat.unctad.org/EN/, accessed: 01.10.2015.

This significant drop in weighted average tariff rates can be associated with trade liberalisation processes that were taking place in the region of the Western Balkans.

3. METHODOLOGY & DATA

A question arose, how did those trade liberalisation processes influence export performance of the Western Balkan economies? The choice of the proper econometric model should result from an analysis of types of goods being traded (Mroczek, Rubaszek 2003). As countries of the Western Balkan region specialise in export of differentiated more than homogeneous products[9], the appropriate model describing their export seems to be the imperfect substitutes model.

The models of perfect and imperfect substitutes presented by M. Goldstein and M. Khan (1985) account for a complementary concept. The value of a country's export is explained especially with the World demand for exported goods. The possibility of substitution between domestic and imported good is in this case a discriminant enabling to choose between both models. In the case of the perfect substitutes, simultaneous export and import of the same type of goods does not take place. One country can be either an exporter or an importer of a certain good. This can be associated with trade with homogenous products, which implies limited practical application, as majority of products are differentiated. In reality, substitution of products is usually limited, which means that a country can be simultaneously exporter and importer of the same type of goods. The ground for such a case is the consumers' preference for product variation as a means of utility enhancement. In this event, the imperfect substitutes model is in use[10] (see Mroczek, Rubaszek 2003).

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[9] Even though in 2013 SITC section [333] "Petroleum oils, oils from bitumin. materials, crude" constituted as much as 28.1 % of Albania's exports, and section [334] "Petroleum oils or bituminous minerals > 70 % oil" constituted 10.2 % of Croatia's export.

[10] The imperfect substitutes model is used as an empirical approach i.a. by the Croatian National Bank (see Bobić 2010), National Bank of Albania (see Hoda 2011), National Bank of Poland (see Mroczek, Rubaszek 2003), Bulgari-

Assumptions of the imperfect substitutes model imply, that the value of export is in general a function of:

- external demand, which is usually proxied by the World GDP, and
- competitiveness of domestic goods abroad, which is proxied by real effective exchange rate (REER).

The latter one is calculated by correcting nominal exchange rate courses with the difference in levels of inflation and it takes into account shares of certain partners in the total export value of the reporting country. REER shows changes in purchasing power of the local currency and reflects competitiveness of domestic goods on the international market. In the utilised model, external demand and competitiveness were modified by:

- quality of exported goods, which was proxied by the stock of the foreign direct investment[11], and
- effects of trade liberalisation, which was proxied by the weighted average tariff rate.

The model was constructed as a power function which enabled to interpret estimated values of coefficients as elasticities.

$$EXP_{it} = GDP\_World_t^a * REER_{it}^b * FDI_{it}^c * WATR_{it}^d * e^\delta \tag{1}$$

where:

EXP_{it} - export of country i in year t

GDP_World_t - World GDP in year t

$REER_{it}$ - real effective exchange rate of country i in year t

FDI_{it} - stock of foreign direct investment in country i in year t

$WATR_{it}$ - weighted average tariff rate in country i in year t

a, b, c, d - coefficients

δ - error term.

The model was first log-linearized. The shape of the graph of the dependent variable suggested testing for stationarity (see Graph 2). Indeed, Levin-Lin-Chu test proved non-stationary character of the data. In order to deal with this problem, two alternative approaches were tested:

- a time trend was added to the log-linearized model;
- the initial log-linearized model was converted to first-differences[12].

In both cases, the dependent variable showed stationary character. The log-linearized model with a time trend was then estimated twofold:

- as pooled data with OLS,
- as a fixed-effects model.

The research encompassed five (or six, after the year 2006) Western Balkan countries: Albania, Bosnia and Herzegovina, Croatia, TFYR Macedonia and Serbia and Montenegro, in years 2001-2014[13]. Kosovo was not taken into account due to lack of comparable data.

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an National Bank (see Penkova-Pearson 2011) and The Foreign Trade Research Institute of Poland (see Barteczko, Przystupa, 2006).

[11] This approach was taken by Penkova-Pearson (2011).

[12] This approach is presented in the "Robustness check" part of the paper.

In the period 2001-2014 the value of export (the dependent variable) showed a similar trend in almost all of the analysed countries (Graph 2)[14]. After its significant increase in years 2001-2008, a one-year sharp drop occurred in 2009, which was probably caused by the World economic crisis. This short downturn was followed by five years of a recovery. In a consequence, in all of the countries except Croatia and Montenegro the value of export in 2014 was higher than before the crisis, in 2008.

Graph 2. Export (million USD)
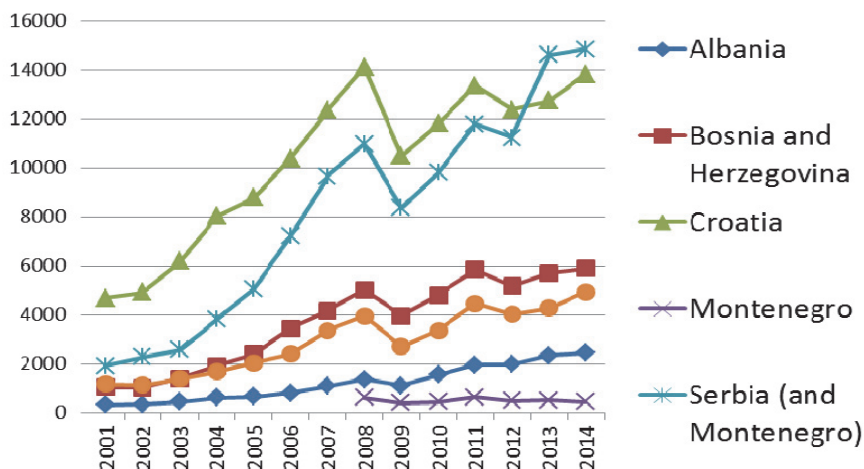
Source: http://unctadstat.unctad.org/EN/, accessed: 01.12.2015.

Graph 3. World GDP (billion USD, constant prices)
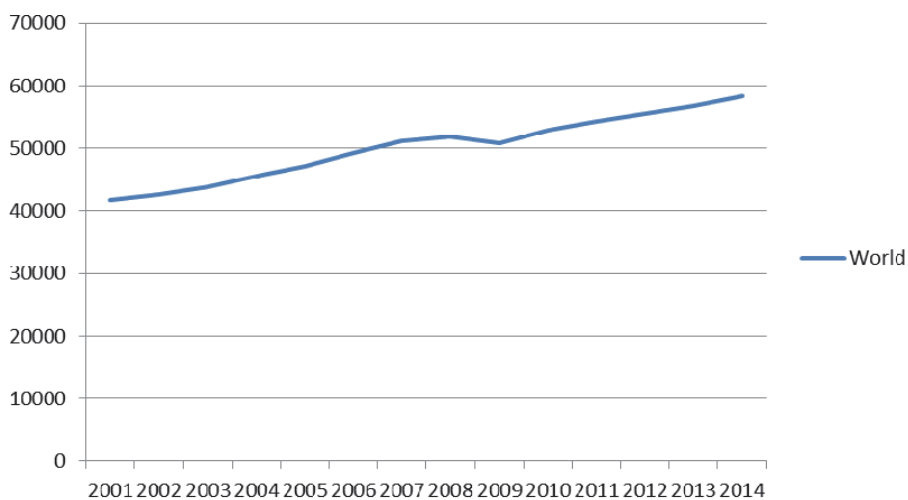
Source: http://unctadstat.unctad.org/EN/, accessed: 01.12.2015.

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[13] For econometric purposes, Serbia and Montenegro after 2006 were in this model still treated as a one country. Values of export and FDI stock of Montenegro after 2006 were added to the corresponding values of Serbia. The values of the two other variables (REER and WATR) after 2006 were taken just of Serbia.

[14] Values of all variables apart from WATR, were presented in Table A3.

Similarly to the export variable, also the World GDP (Graph 3), which represented external demand, underwent an upward trend until 2008. Then, after a one-year drop, the growth continued until the end of the examined period. Expectedly, similarity of trends resulted in a relatively high positive correlation of 0.56 between export and the World GDP (see Table A2).

Changes of the real effective exchange rate shown on Graph 4. were not easy to interpret. Very high short-term changes of the REER were recorded in the case of the FYR Macedonia and Croatia, but they were both anticipated and followed by relative stabilisation of the level of this variable. A lack of data occurred in case of:

− Serbia (and Montenegro) in years 2001 – 2003 and 2006 – 2007, and
− Bosnia and Hercegovina in years 2001 – 2004.

Real effective exchange rate, reflecting price competitiveness of domestic goods abroad, showed positive correlation with export (0.15), but the coefficient of variation was relatively small (0.056).

Graph 4. Real effective exchange rate
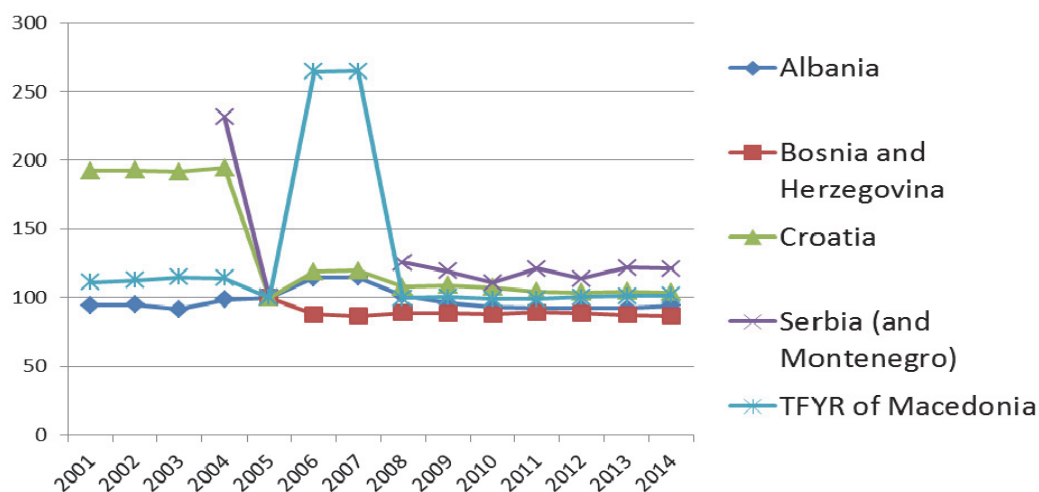
Source: http://unctadstat.unctad.org/EN/, accessed: 01.12.2015.

The stock of foreign direct investment, which was the last of the explanatory variables (Graph 5), was characterised by an upward trend in almost all countries and in almost all periods. The main exception was Croatia, which recorded a sharp decrease in 2008. In the following years the level of the FDI stock was stable. Although this variable was highly correlated with export (0.96), causality cannot be assumed due to various ways of possible interactions between FDI and export. The relation depends on the type of the FDI, as horizontal investments may restrain trade, whereas vertical ones may facilitate it, especially with the investing country (Camarero and Tamarit, 2003). Regarding the region of the South-Eastern Europe, Mehić and Babić-Hodović (2011) found positive and statistically important influence of the FDI on exports of the SEEs, which was in a contrary to results of Estrin and Uvalic (2013).

Graph 5. Stock of the FDI (million USD, at current prices and current exchange rates)
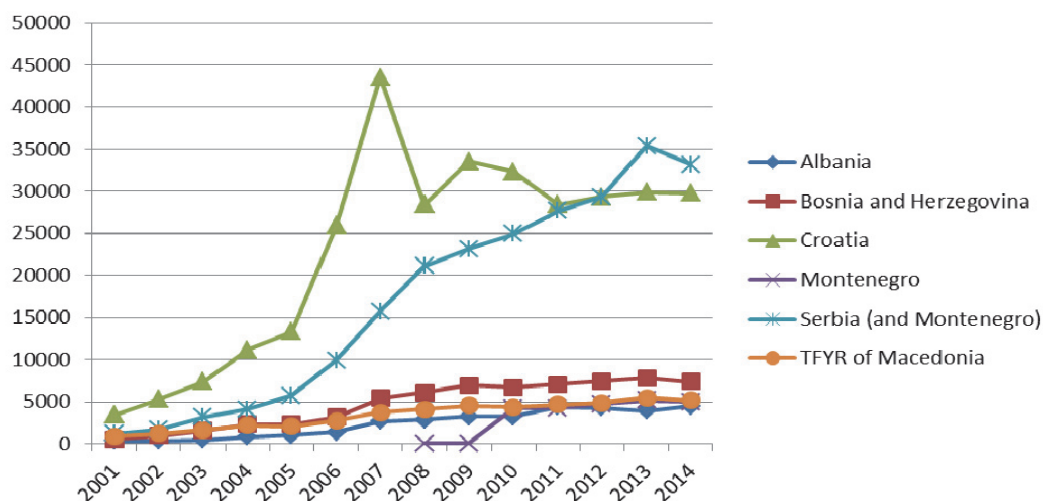
Source: http://unctadstat.unctad.org/EN/, accessed: 01.12.2015.

4. ESTIMATION RESULTS

At the beginning the panel data model was estimated twofold: as pooled data with OLS and as a fixed-effects model, in both cases with a time trend variable. In case of each of the estimation types, a very high explanatory power was attained – the values of the adjusted R-squared amounted to 0.92 and 0.99 respectively.

In case of the majority of coefficients they appeared to have expected signs (see Table 1). External demand, proxied by the World GDP, only in the pooled model had a negative sign (-0.92), the coefficient was statistically not significant, though. In the fixed effects model the sign was positive (5.15) and the coefficient was statistically significant. This goes in line with findings of V. Bobić (2010) and confirms the assumption of the imperfect substitutes theory, that external demand plays an important role in countries' export.

Similarly, the signs of the REER coefficients, proxying competitiveness of domestic products abroad, were positive. The values, which ranged just from 0.13 to 0.25, were not high, and in both models they were statistically insignificant. When commenting these results it must be noticed, that according to Đozović and Pripužić (2013), REER as a measure of price competitiveness produces more exact results when data are disaggregated into industry levels.

The stock of the FDI, which was the third explanatory variable, appeared to have a positive and relatively strong influence on export. The values of its coefficients ranged from 0.33 to 0.79 and in both types of the model they were statistically significant, which confirmed findings of Mehić and Babić-Hodović (2011). However, they were in a contrary to the results of Estrin and Uvalic (2013) who argue that inflow of the FDI to the SEEs didn't stimulate their export growth.

Finally, the values of the coefficients standing by the WATR variable took expectedly negative, but very low values (from -0.05 to -0.01). In both models they were statistically insignificant. The fact that the influence of the lowered tariff barriers on export was so limited was a surprising outcome of this research. Taking into account findings of Klimczak (2014) and Trivić and Klimczak (2015), who argued that trade liberalisation had relatively strong influence on trade within the region of the Western Balkans, one can conclude that those intra-regional ef-

fects of trade liberalisation were higher than the effects for trade with further-located coun-tries[15].

Table 1. Estimation results

Estimation type	POOLED – OLS (time trend)	FIXED EFFECTS (time trend)
const	10.13 (21.91)	-50.43*** (11.44)
GDP	-0.92 (2.07)	5.15*** (1.10)
REER	0.25 (0.16)	0.13 (0.08)
FDI	0.79*** (0.04)	0.33*** (0.05)
WATR	-0.01 (0.05)	-0.05 (0.03)
time	0.01 (0.05)	-0.07** 0.03
No. of observations:	70	70
R-squared:	0.922352	0.985521
Adjusted R-squared:	0.916287	0.983350

Notice: ***, ** and * indicate significance 1, 5 and 10 per cent levels accordingly.
Source: Own calculations

A test for differing group intercepts suggested that the model with fixed effects was more ap-propriate. On the other hand, a model with random effects could not be estimated due to insuf-ficient degrees of freedom for regression.

5. SUPPLY FACTORS IN A DEMAND MODEL

There is a big difference between a standard imperfect substitutes models for one country and for more countries. In the latter case, the standard panel data model doesn't anyhow cap-ture differences in production outputs or potential of the reporting countries. This shortcoming is partly addressed by including country-fixed effects. Just partly, because these effects encom-pass all country-specific factors, not only production potential. For this reason they can be treated as the so-called *multilateral resistance* of a country.

In order to control for production potential of each of the analysed countries, additional supply-type variables were added to the model:

- GDP, proxying supply potential of an economy,
- GDP per capita, proxying quality level of exported goods and
- population, proxying supply of labour factor.

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[15] For effects of trade liberalisation in the Western Balkans seen from the different stakeholders' perspective (con-sumer, producer, government), see Holzner 2004.

Introducing them should inform about importance of trade determinants when supply side is controlled for.

Table 3. Estimaton results with additional supply-type variables

Estimation type	FIXED EFFECTS (time trend)	FIXED EFFECTS (time trend)	FIXED EFFECTS (time trend)
const	-54.94*** (8.75)	-56.44*** (8.40)	-46.29*** (13.40)
GDP_WORLD	4.07*** (0.86)	4.29*** (0.81)	5.35*** (1.16)
REER	0.05 (0.06)	0.04 (0.06)	0.12 (0.08)
FDI	0.14*** (0.05)	0.08 (0.05)	0.32*** (0.05)
WATR	0.01 (0.03)	0.01 (0.03)	-0.04 (0.03)
time	-0.05** (0.02)	-0.06*** (0.02)	-0.07*** (0.03)
GDP	1.86*** (0.28)	-	-
GDP pc	-	2.15*** (0.29)	-
POP	-	-	-0.75 (1.24)
No. of observations:	70	70	70
R-squared:	0.991716	0.992391	0,985610
Adjusted R-squared:	0.990312	0.991101	0,983171

Notice: ***, ** and * indicate significance 1, 5 and 10 per cent levels accordingly.
Source: Own calculations

The relatively high values of coefficients standing by GDP (1.86) and GDP per capita (2.15) confirmed the suspicion, that differences in supply potential among countries can influence export values strongly. Especially that countries of the Western Balkans differ significantly not only by size of their economies, but also and especially by richness of their nations. On the other hand, a negative role of population in an absence of any variable controlling for its economic condition, could suggest that in the case of relatively low-income countries (as the WB ones), bigger internal market discourages a part of local producers from seeking their opportunities abroad. The significance of the GDP and GDP per capita variables also confirms the long-run character of changes in supply and an importance of including supply-type variables in the models with a wide time-frame.

6. ROBUSTNESS CHECK

The non-stationary character of the initial data was the reason for verifying if the estimation results were robust. Firstly, an alternative approach towards non-stationarity problem was tested. Instead of adding a time trend to the log-linearized data, they were first differentiated. The
54

results of the estimation (see Table 4) were not significantly different from the ones of the model with a time-trend. The sign of the REER variable became negative (as expected from theory) and on the other hand, the coefficient standing by the FDI variable lost its significance.

Table 4. Estimation results of the alternative model No.1. (with first differences)

Estimation type	POOLED - OLS
const	-0.11*** (0.03)
diff GDP	8.37*** (0.83)
diff REER	-0.04 (0.06)
diff FDI	0.08 (0.06)
diff WATR	-0.03 (0.02)
No. of observations:	65
R-squared:	0.671935
Adjusted R-squared:	0.650064

Notice: ***, ** and * indicate significance 1, 5 and 10 per cent levels accordingly.
Source: Own calculations

In order to verify robustness of the results the model was also tested for presence of influential observations. No outliers were recorded. Another subject worth checking was the reason for big differences in the REER values over time. Untypical shape of the REER curve suggested possibility of existence of leverage points. Indeed, two observations with a leverage point were recorder. After excluding them from the model, estimation of the REER coefficients didn't show any bigger changes comparing to the standard model in the pooled OLS specification (see Table 5). However, in the fixed-effects model the value of the coefficient was higher and significant.

Table 5. Estimation results of the alternative model No.2 (without leverage points)

Estimation type	POOLED – OLS (time trend)	FIXED EFFECTS (time trend)
const	8.30 (24.95)	-58.40*** (11.77)
GDP	-0.76 (2.33)	5.81*** (1.12)
REER	0.28 (0.22)	0.26** (0.11)
FDI	0.79*** (0.05)	0.33*** (0.05)

WATR	-0.01 (0.05)	-0.05** (0.03)
time	0.00 (0.06)	-0.08*** (0.03)
No. of observations:	68	68
R-squared:	0.922347	0.986741
Adjusted R-squared:	0.916085	0.984683

Notice: ***, ** and * indicate significance 1, 5 and 10 per cent levels accordingly.
Source: Own calculations

As the missing data problem was encountered in the case of weighted average tariff rates, a number of observations were interpolated or extrapolated. To insure that the model including these interpolated and extrapolated data was robust, an alternative one was tested, in which the missing data were simply omitted. The estimation results are presented in Table 6.

Table 6. Estimation results of the alternative model No.3 (without missing data)

Estimation type	POOLED – OLS (time trend)	FIXED EFFECTS (time trend)
const	16.55 (24.92)	-42.55*** (11.95)
GDP	-1.54 (2.36)	4.41*** (1.15)
REER	0.28 (0.19)	0.15* (0.08)
FDI	0.80*** (0.05)	0.32*** (0.05)
WATR	0.00 (0.06)	-0.06* (0.03)
time	0.03 (0.06)	-0.05* 0.03
No. of observations:	59	59
R-squared:	0.912872	0.987002
Adjusted R-squared:	0.904653	0.984615

Notice: ***, ** and * indicate significance 1, 5 and 10 per cent levels accordingly.
Source: Own calculations

Estimation results of the model with omitted missing observations were quite similar to the one with interpolated and extrapolated data. The main difference was statistical significance of the coefficients standing by REER and WATR variables in the fixed-effects model. Very slightly higher values of (adjusted) R-square statistics in the alternative model suggest that the interpolation wasn't necessary.

7. CONCLUSIONS

Although the influence of trade liberalisation on the value of trade seems obvious and intuitive, empirical works help to recognise the real impact. It much depends on the circumstances, especially on pre-liberalisation level of protection measures. In the case of the Western Balkan countries, liberalisation processes that took place in years 2001 – 2014 brought a significant drop in weighed average tariff rates (from 4.6 – 11.5 in 2001, to 0.7 – 2.1 in 2014). Surprisingly, it's influence on trade values appeared to be rather small. One of possible explanations could be that the imperfect substitutes model describes mostly short- and medium-term relations. And this 13-year analysis could well have been affected by changes in supply potential. However, including proxies of supply potential in the model didn't change the value of the WATR coefficient significantly. The demand from abroad turned out to be the main factor influencing export sales, far outpacing not only trade liberalisation, but also stock of the foreign direct investments.

A number of data limitations was faced in the research. A lack of data occurred for weighted average tariff rate and (to small extent) for real effective exchange rate. Interpolation and extrapolation of the missing observations of WATR turned out to be an almost meaningless step, though, as the estimated values were very similar to the ones of the model in which missing observations were omitted. Another limitation was the necessity to deal with the split of Serbia and Montenegro in 2006. For econometric purposes they were treated as a one entity in the entire research period. Finally, Kosovo was not taken into account at all, due to a lack of comparable data.

The study did not close the subject of an impact of trade liberalisation on trade values in the region of the Western Balkans. Further research should especially broaden the scope of potential trade determinants. Regarding approximation of the notion of "trade liberalisation", it would be worth exploring, how non-tariff barriers contributed to the observed trends in trade values. On the other hand, a breakdown of data into industry level would produce more precise results.

The research brought relatively clear policy implications. It suggested, that trade liberalisation, although positively seen from a political perspective, doesn't facilitate the overall export performance to a significant extent in a long term. One can suspect, that far more important job should be done in the institutional field. A favourable macro environment should be created in order to enable producers to develop modern and internationally competitive technologies, thus building and extending production capacities of the countries of the Western Balkans.

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Appendix 1

Table A1. Weighted average tariff rates in the Western Balkan countries in period 2001-2014.

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Albania	11.5	8.6	8.4	7.5	7.2	6.5	5.8	1.4	4.6	4.6	0.9	0.7	0.7	0.7
Bosnia and Herzegovina	4.9	*5.4*	*5.9*	*6.4*	*6.9*	7.3	6.1	6.0	2.4	2.2	1.9	1.9	1.9	2.1
Croatia	4.6	4.5	2.0	0.7	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.0	0.4	*0.4*
Montenegro	-	-	-	-	-	-	-	2.6	2.7	2.6	2.9	2.4	1.7	1.6
Serbia (and Montene-gro)	5.7	7.8	7.4	6.9	6.4	6.4	6.3	6.3	4.0	3.2	2.6	*4.1*	5.6	3.5
TFYR of Macedonia	8.3	6.4	6.7	7.1	1.6	3.3	5.2	2.4	2.3	1.5	1.1	1.2	5.6	1.2

Note: Data in *italics* were interpolated or extrapolated. "-" denotes not applicable data.
Source: http://unctadstat.unctad.org/EN/, accessed: 01.10.2015.

Table A2. Correlation Coefficients

EXP	GDP	REER	FDI	WATR	
1,0000	0,5627	0,1549	0,9553	-0,5140	EXP
.	1,0000	-0,3499	0,6536	-0,5783	GDP
.	.	1,0000	0,0801	0,1122	REER
.	.	.	1,0000	-0,5654	FDI
.	.	.	.	1,0000	WATR

Source: Own calculation

Table A3. Values of the variables used in the model

Country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Export (million USD)														
Albania	305	330	447	603	658	793	1078	1355	1088	1550	1948	1968	2332	2431
Bosnia and Herzegovina	1031	1015	1400	1912	2388	3428	4152	5021	3954	4803	5850	5162	5687	5892
Croatia	4666	4904	6187	8024	8773	10377	12360	14124	10492	11811	13364	12369	12742	13814
Montenegro								617	388	437	628	469	494	446
Serbia (and Montenegro)	1903	2275	2575	3801	5065	7212	9648	10972	8345	9795	11779	11229	14611	14843
TFYR of Macedonia	1155	1116	1363	1673	2041	2401	3356	3953	2692	3351	4455	4015	4267	4934
GDP (billion USD, at constant prices (2005) and constant exchange rates (2005))														
World	41660	42549	43769	45562	47203	49154	51104	51864	50820	52900	54381	55569	56837	58245
Real Effective Exchange Rate (year 2005 = 100)														
Albania	94	95	91	99	100	115	115	101	96	93	92	92	92	94
Bosnia and Herzegovina					100	88	87	89	88	88	89	88	87	86
Croatia	192	193	192	195	100	119	120	108	109	107	105	104	105	104
Serbia (and Montenegro)			231	231	100			126	119	111	121	113	122	121
TFYR of Macedonia	111	113	115	114	100	265	265	100	100	99	99	100	101	101
FDI stock (million USD, at current prices and current exchange rates)														
Albania	327	360	483	837	1020	1392	2693	2869	3258	3255	4399	4304	3936	4466
Bosnia and Herzegovina	544	942	1561	2286	2302	3203	5397	6103	6936	6709	7099	7440	7787	7383
Croatia	3406	5309	7402	11133	13332	25943	43584	28415	33537	32273	28398	29333	29911	29761
Montenegro								0	0	4231	4209	4707	5143	4983
Serbia (and Montenegro)	1194	1685	3152	4110	5687	9943	15710	21130	23149	24919	27684	29344	35375	33142
TFYR of Macedonia	916	1217	1632	2193	2087	2764	3747	4132	4525	4351	4678	4863	5489	5140

Source: http://unctadstat.unctad.org/EN/, accessed: 01.12.2015.