

Is there potential for trade growth? A gravity approach in the case of Serbia

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To my parents for supporting my intellectual pursuits

Gravity is not easy, but it is the law.

Author Unknown

Abstract

Following the political change in 2000 Serbia has started to participate in the international markets flows, to liberalize its economy and to pursue the way toward the European integration. The main characteristic of the economy are chronic high fiscal and trade deficits threatening sustainable growth even more in the light of the financial crisis. The present research investigates potential for trade enlargement, in particular exports increase with the EU and CEFTA2006 members using a gravity approach. In order to develop the model with included fixed effects the panel data are used for the period 2004-2007. The results suggest that neighboring countries, with which Serbia has traditionally common economic, political and cultural ties, are particularly open for trade. Furthermore, the most open European countries are those geographically close in the Central and Eastern Europe. This study does not limit here but proposes policies for export diversification and a wider base of exportables with a higher value added.

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Introduction

The desire of Serbia to join the European Union (EU) has been evident since the establishment of new regime in 2000 after the end of Milosevic's era. A country that lost one decade did not have any more time to lose in the transition period, therefore it was firmly determined to accept European values. However, reaching this goal was and still is a problematic path to follow with many objectives to be achieved. The most recent step was that Serbia was granted official candidate status for EU membership on 1 March 2012 (European Commission).

The intention of the EU toward the Western Balkan region¹ was logical: to create an environment which encourages economic growth and keeps peace in this region prone to constant tensions in the last two decades. The EU confirmed its dedication in 2006 by stating that "*the future of the Western Balkans lies in the European Union*" (European Commission 2011). The creation of the Stabilization and Association Process (SAP) in 2000 was a step toward the Western Balkan integration with the aspiration to prepare those countries for the accession to the EU (Montanari 2005). One of the tools to achieve this aim is to promote regional trade in this area, as well as trade between the EU and future member countries. The level of trade integration is even used as one of the indicators of the country's capacity to follow further integration into the EU and is evaluated as a part of the second economic criterion by the European Commission (EC). Furthermore, it represents the extent to which countries are able to deal with competitive pressure from the EU environment (Sosic, Vujcic 2005).

The Western Balkan region, and thus Serbia as part of it, shares common characteristics, such as small population, low income per capita and high and increasing unemployment

¹ Western Balkan region includes Albania, Croatia, Bosnia-Herzegovina, the Former Yugoslav Republic (FYR) of Macedonia, Montenegro and Serbia.

(Montanari 2005), especially in the light of the economic downturn which suggests even more problematic economic integration into the EU environment. In this setting, trade policy is generally seen as a tool to enhance this process which was implemented in the form of the Stabilization and Association Agreement (SAA) for the region. Agreement between the European Communities and their member states and the Republic of Serbia was signed in April 2008². The Agreement entails, *inter alia*, commitment toward the development of further economic relations between the parties, including development of trade and investments, as these are perceived being crucial factors for successful restructuring of the economy. The agreement aims at gradual development of free bilateral trade area that should be created in the period of a maximum six years. A characteristic of SAA is that it offers asymmetric trade liberalization when countries are given a few years transition period while, on the other hand, the EU opens its markets more quickly allowing free access to almost all products without quantitative restrictions (Montanari 2005).

Serbia is a member of yet another trade agreement that was signed in 2006, the Central European Free Trade Agreement (CEFTA-2006)³ which was originally created in 1992 as CEFTA. After the original CEFTA members⁴ joined the EU, they left this organization. However, the CEFTA-2006 has the same aim as its predecessor - to promote regional trade and prepare countries for exposure to severe competition forces present in the EU market. As stated by Petreski (2011), it was not only the geographical proximity that determined the willingness to be a part of this organization but the motivation to join the EU as soon as possible. In the same study, it is estimated that the effect on trade of CEFTA-2006 is greater than the effect of SAA.

² Internet, European Commission, http://ec.europa.eu/enlargement/pdf/serbia/key_document/saa_en.pdf

³ CEFTA2006 has 7 members: Albania, Bosnia-Herzegovina, Croatia, the United Nations Interim Administration Mission (UNMIK) in Kosovo, FYR of Macedonia, Moldova and Serbia.

⁴ Original CEFTA Agreement was established in 1992 by the Visegrad Group countries (Poland, Hungary, Slovak Republic and Czech Republic)

At the moment, Serbia is facing negative trends for almost all macroeconomic indicators threatening to endanger its further economic development. Fiscal deficit is close to the threshold while the public debt is already above the limit predicted by the law and exhibits increasing trend. The Fiscal Council of Serbia warned that the country is on the way toward debt crisis that will have adverse consequences for the Serbian economy such as severe devaluation of Serbian currency and increased inflation.⁵ This is one of the reasons why the issue of exports enlargement needs to be tackled.

Twin deficits show that Serbia was spending more than it was producing, and this gap was financed by international loans. Current patterns of consumption which were financed by loans instead of directing them into production and investments are threatened in the light of the global economic downturn when investors became more reluctant to invest. Having in mind all those limitations, it is very important to address the problem of sustained economic development. One of the most common proposals is to concentrate on the export enlargement through either finding new trading partners or increasing volumes of exports to the already existing markets. The Strategy on Republic of Serbia Exports Increase for period 2008-2011 already exists. However, further commitment is needed in order to achieve satisfactory performance in this field.

The objective of this paper is to explore the potential for Serbia's further trade expansion, particularly with the EU countries. The same question is relevant for the trade with the CEFTA-2006 member states. Given the high concentration of Serbian trade policy, both in trading partners and products, the aim of this paper is to propose policies toward increased diversification that will enable higher and less volatile exports earnings. Policies will concentrate both on volumes of trade, a topic that will be discussed in the framework of the gravity model and on the

⁵ Internet, The Fiscal Council of Serbia, www.fiskalniasvet.rs

structure of export products where there is a need to increase the share of exporting products with higher value added at the expense of low processed products.

This issue has been very often discussed in the framework of the gravity model, which has been used to assess international trade patterns and volumes of trade. The wide usage of this model is a consequence of its relatively simple form and the fact that data needed for the estimation are easily accessible. According to Paas (2000), this is even more important in the case of transition economies, since the provision of reliable and easily available statistical data are rather exception than a rule. Moreover, the Balkan countries, Serbia in particular, were in the recent past excluded from international flows in general due to political events in the region. After liberalization when political and economic opening of the economy has started, those countries had to go through a transition period. This precludes the possibility to use the extrapolation method to predict future trade flows based on passed data. This is why a gravity model presents a good option to overcome the problem of non-comparable data (Ferragina 2005).

The paper is organized as follows. The first chapter will provide insight into the trade policy and its tendencies in the last two decades emphasizing the main problems that are high concentration in both partners and products. The second chapter gives the theoretical background for the utilization of the gravity approach as well as literature review in the context of Central Eastern and Balkan countries. Details and estimated models for export and import are given in chapter 3. The following chapter provides support for the policies proposed in the last chapter namely, the nexus between the exports enlargement and diversification on the one hand and economic growth on the other. Finally, the last chapter will propose policies toward increased and more stable exports earnings.

Chapter 1: An overview of trade openness and patterns of trade in Serbia

Before considering the gravity model, it is important to identify more general indicators of the trade policy and their tendencies in the last two decades. Following a popular approach, openness ratio⁶ and geographical distribution of trade flows are often useful starting points in this analysis (Gros 1996, Susic and Vujcic 2005). Hence, this section provides a short historical overview of trade openness and patterns in Serbia during the 1990s and after liberalization of the economy during 2000s. This analysis will show high trade concentration in terms of partners and narrow base of exportables which is the main reason for implementation of more sustainable trade policies.

1.1 Trade openness

The period from 1990-2000 was characterized by the closing of the domestic economy to the foreign markets due to sanctions and the exclusion of the Federal Republic of Yugoslavia⁷ (FRY) from all international financial and trade institutions. This had as a consequence a reduction in domestic production and GDP, a tendency toward lower exports, imports and investments. Yet another characteristic is a relatively high trade deficit through the whole period. After the introduction of sanctions by the EU and the Security Council in 1992, FRY lost the most important markets which were those in the former Yugoslav Republics⁸ accounting for

⁶ Openness ratio is defined as (imports + exports)/ GDP

⁷ Federal Republic of Yugoslavia was established in 1992, after the breakup of the Social Federal Republic of Yugoslavia (SFRY). From 2003-2006, FRY is reconstituted into the State Union of Serbia and Montenegro. After the referendum in Montenegro, where the majority was for secession, the republic of Serbia was established.

⁸ Former Yugoslav Republics are: Slovenia, Croatia, FYR of Macedonia, Bosnia and Herzegovina

more than twice as much in comparison to the rest of the world (Kovacevic 2005). All indicators showed negative tendencies at the beginning of the decade for this reason.

The other reason contributing to the decline was the hyperinflation, which was successfully stopped at the beginning of 1994 as reflected in the recovery of the economy (Table 1). Afterwards, the economy started to recover and to exhibit positive growth rates. Another slump is obvious in the 1999 as a consequence of NATO bombing. These reasons had one adverse widespread corollary for the trade policy: the structure of domestic exports was lagging behind the structure of world import demand which led to the deterioration of the export structure of the economy (Kovacevic 2005). The mismatch in what was produced in Serbia and what was in demand caused chronic trade deficits.

Table 1 Basic macroeconomic indicators growth rates (1991-2001)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
GDP (growth rates)	-11.6	-27.9	-30.8	2.5	6.1	5.9	7.4	2.5	-17.7	6.4	6.2
Exports (growth rates)	-19.1	-46.0	-15.0	-49.2	3.3	31.8	32.7	6.8	-47.6	15.0	10.5
Imports (growth rates)	-25.6	-30.4	-21.4	-37.5	40.5	54.5	17.2	0.5	32.0	12.6	30.3

Source: Bosnjak in Kovacevic (2005)

Turning point for Serbia was 2000 when it started to participate in the international flows again and to liberalize foreign trade policy. This was a common path for all transition economies. However, Serbia found itself in a very difficult position since most of the economy was destroyed during the 1990s and the need to rebuild the country in economic, political and institutional sense was prominent.

On its new way, Serbia has chosen to open the market and integrate into the world economy by the participation in different trade agreements. So far, Serbia has already signed

bilateral trade agreements with the Russian Federation,⁹ Belorussia,¹⁰ Turkey,¹¹ Kazakhstan¹² and the United States¹³ as well as multilateral agreements with the EU. Furthermore, Serbia is a CEFTA-2006 member, and has a preferential trade agreement with the European Free Trade Association (EFTA).¹⁴ The signed agreements allow duty-free access to the markets of more than 800 million people,¹⁵ which represents a huge opportunity for Serbian exports whose importance is even more emphasized in the case of an increased need for foreign exchange.

The significance of trade integration is emphasized by the European Commission, which uses this indicator to evaluate country's ability to pursue further integration. As proposed by the European Bank for Reconstruction and Development in Susic and Vujicic (2005), there is empirical evidence confirming positive relationship between the trade openness¹⁶ and the level of structural reforms. Table 2 presents trade openness ratios (TORs) and the development path which follows the direction predicted by the theory: as the liberalization and structural reforms were implemented in Serbia, this ratio was increasing. Those ratios will be compared to Croatian in order to provide better insight into its magnitude (Figure 1).

Table 2 Trade openness ratios

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Jan 2012	Feb 2012
<i>(EXPORTS + IMPORTS)/GDP</i>	59,3	63,9	73,7	73,6	81,2	85,8	86,8	73,6	90,3	92,8	90,0	90,4

Source: National Bank of Serbia

⁹ Serbia and Montenegro are the only countries outside the Commonwealth of Independent states (CIS) that have free trade agreement with the Russian Federation, signed in August 2000

¹⁰ The Agreement was signed in Minsk, 31. March 2009

¹¹ The Agreement was signed on 1. June, 2009

¹² The agreement was signed on 7 October 2010 and is temporarily from 1 January 2011

¹³ Trade with the US is carried out under the General System of Preferences (GSP) that was concluded on 1 July 2005

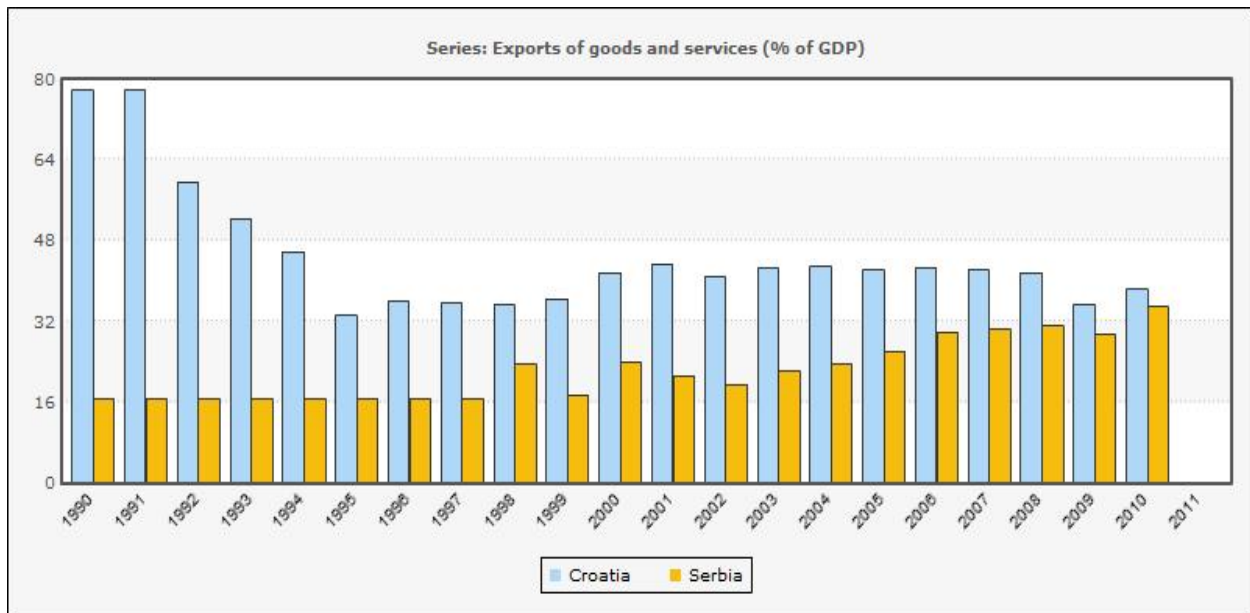
¹⁴ EFTA member states are Liechtenstein, Iceland, Norway and Switzerland. This agreement entered into force on 1 October, 2010. Internet, Serbian Chamber of Commerce, www.pks.rs accessed on 20. April, 2012.

¹⁵ Internet, Serbian Chamber of Commerce, www.pks.rs

¹⁶ Trade openness is presented by the ratio (TOR) of foreign trade to GDP

Since it is expected that Serbia will join the EU in the near future, it is logical to anticipate that it will follow a similar path to Croatia which has already been granted membership. Croatia was more superior in economic terms, and was able to better implement reforms that allowed for faster integration into the EU. As Croatia has similar economic characteristics as Serbia, it makes sense to contrast their level of openness. One should be aware that simple comparisons are not as accurate, however, long-run tendencies are able to provide some useful insights.

Figure 1 Exports of goods and services as percent of GDP– Comparison of Serbia and Croatia (1990-2010)



Source: World Development Indicators, World Bank. 2012.

Figure 1 presents recent tendencies for Serbia and Croatia in trade openness which is presented as a ratio of exports in goods and services to GDP. As already mentioned, at the beginning of 1990 Serbian economy suffered and huge discrepancy is noticeable as trade openness in Serbia was around 17%. After 2000 when the transition period started in Serbia, growth is considerable. High growth in trade openness ratios is achieved in 2007, after CEFTA-2006 Agreement was signed. What is obvious is a convergence in trade openness ratio between Serbia and Croatia in late 2000s.

1.2 Patterns of trade: data and statistics

Serbian trade policy is very much concentrated, both in terms of partners and in terms of products and thus, unfavorable. The idea behind export diversification is the same as the idea of portfolio diversification which is to decrease risk.

The main trading partners did not change significantly in the last decade, principally the most important 20 partners. In 2010, the most important export receiving countries are Italy, Bosnia and Herzegovina and Germany, with share in total exports 11.4, 11.1 and 10.3 percent respectively. The biggest share of imports is from the Russian Federation (12.9%), Germany (10.6%) and Italy (8.5%). If calculated as a whole, the EU is by far the most important trading partner for all Western Balkan countries including Serbia. Trade with the EU accounts for around 65% of total trade in the last few years.¹⁷

The second major partner are CEFTA2006 countries with whom Serbia have a surplus in trade, resulting mainly from exports of agricultural products (cereals and similar products and various drinks), and iron and steel exports. Regarding imports - mostly imported is coal, coke and briquettes, iron and steel, electricity, as well as vegetables and fruits.¹⁸ A surplus with CEFTA members is very important as it helps to some extent, to finance the trade deficit with the EU countries.

The largest single country surpluses in trade in 2011 have been made with Montenegro, Bosnia and Herzegovina and Macedonia. The highest deficit has been recorded in trade with the Russian Federation because of energy imports, mainly oil and gas, followed by deficits with China, Hungary and Germany.¹⁹

¹⁷ IMF, DoTS

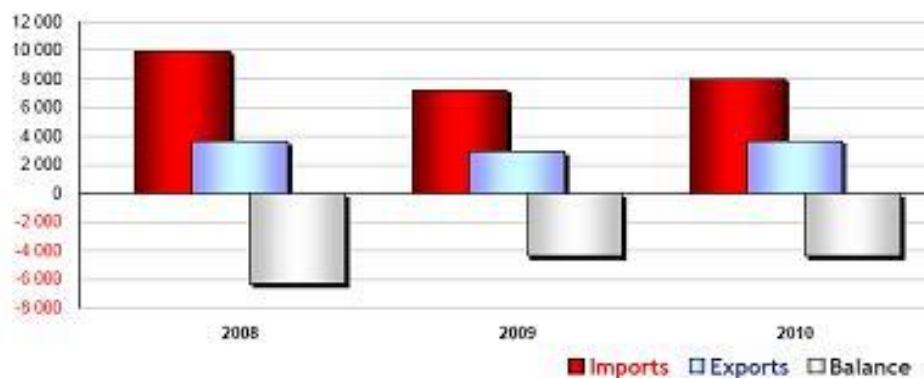
¹⁸ Internet, Statistical Office of the Republic of Serbia, www.stat.gov.rs

¹⁹ Internet, Statistical Office of the Republic of Serbia, www.stat.gov.rs

As for the product composition, raw materials and intermediate goods are the most important group comprising 55% in exports. In the trade structure by products, the most dominant group both in exports and imports are the reproduction products comprising for around 65% in 2011. The next group is consumer goods, around 25% and 19% in exports and imports respectively. The last group is equipment which is represented in total exports and imports 8% and 12%.²⁰ Yet another trade indicator recorded negative tendency in 2012: export to import ratio in March 2012 was 52,9% and was lower than in the same period in the previous year (58%).²¹

The analysis presented in this section has shown that Serbian export is highly concentrated on a few trading partners. The most important trading partner is the EU with whom Serbia has a chronic deficit (Figure 2). This is increasing the importance of Serbia to continue achieving and even increase a surplus in the other markets, especially with the CEFTA2006 members. Another conclusion is that Serbia predominantly exports low processed products.

Figure 2: Trade balance with the EU



Source: IMF (DoTS)

²⁰ Internet, Statistical Office of the Republic of Serbia, www.stat.gov.rs

²¹ Internet, Statistical Office of the Republic of Serbia, www.stat.gov.rs

Chapter 2. Literature review: The Gravity model

The idea of the gravity model was taken from Newton's law of Gravitation describing the gravity force between the two entities, stating that the force is positively correlated with their masses and negatively correlated with their distance. The same notion is adopted in the field of economics and applied on different situations. This section will look back on the economic theory behind the demand-supply gravity equation. Following this, a selective review of the model used to predict trade in the Central and Eastern European and in Balkan countries will be presented.

2.1. Economic theory behind the gravity equation

The gravity models have been used relatively successfully in the past several decades to predict the levels of trade. Besides this, it has long been used to model factor movements such as migration decisions, the flow of Foreign Direct Investments (FDI) and recently, to model international portfolio investments (Anderson 2010).

In its simplest form the model propose that bilateral trade is directly proportional to the size of the economies which is frequently approximated by the Gross Domestic Product (GDP) and negatively correlated with the distance. In other words, the trade between two countries may be explained in the supply-demand manner: trade depends on the supply conditions of the exporting country and demand conditions in the importing country. Second basic variable is the distance between trading partners that accounts for trade costs which may be measured in different ways. One possibility is to use the distance between the capitals or between trade centers. Another alternative is to use the "great circle" formula for which the longitude and

latitude data on the economic centers are needed. Those data are then applied into the formula to gain the distance in miles:

$$D_{ij} = 3962.6 \arccos [\sin(Y_i) \times \sin(Y_j)] + [\cos(Y_i) \times \cos(Y_j) \times \cos(X_i - X_j)],$$

where X stands for longitude in degrees multiplied by 57.3 to express it in radians. Y stands for latitude multiplied by -57.3 (Head 2003). It would be even more accurate to use road distances rather than air distances. However, for the case of Serbia, this distinction will not make a big difference.

The equation including basic explanatory variables is presented below:

$$TT_{ij} = A \frac{Y_i Y_j}{D_{ij}}$$

where

TT_{ij} stands for total trade between countries i and j;

Y_i, Y_j – size of the economies i and j;

D_{ij} – the distance between countries i and j that approximates trade costs;

A is a constant gravity parameter.

After taking natural log, the gravity equation may present linear relationship between the economy sizes and distance:

$$\ln TT_{ij} = \ln A + \alpha \ln Y_i + \beta \ln Y_j - \varphi \ln D_{ij}.$$

The gravity model may be further augmented with other explanatory variables such as income per capita, adjacency or common border, common language etc. (Nilsson 2000) that usually account for historical and cultural nearness such as common border and language. Moreover, trade is expected to increase as a consequence of signed Preferential and Free Trade Agreements, like in the case of trade liberalization in the European common market. This model

may include the effect of exchange rate policies and the adoption of common currency. However, findings of exchange rate variable influence are mixed (Nilsson 2000, Head 2003).

International trade is yet another field in the economics where the gravity model has been successfully applied since 1962. Tinbergen and Lineman were among the first who applied this model. Later, the model was improved by many authors (e.g. Anderson 1979, Bergstrand 1985). The utilization of this model has been criticized for the lack of theory in spite of its widely usage. Anderson was among the first economists to provide the theoretical base for the gravity model using preferences that exhibit constant elasticities of substitution (CES). One of the assumptions is the hypothesis of the “identical homothetic preferences across regions” (p. 106) i.e. identical Cobb-Douglas preferences which together with the availability of the constant prices at the equilibrium value leads to the perfect specialization when only one product is produced in one country (in compliance with Keynesian trade model). In its simplest form, the pure expenditure system proposes that the demand for good i in country j is defined by

$$M_{ij} = b_i Y_j$$

where b_i stands for the share of income spent by the country j on the good i and is the same for all countries as a consequence of the Cobb-Douglas preferences; Y_j presents income in country j . Moreover, income must equal consumption:

$$Y_j = b_j (\sum_i Y_j).$$

Further transformation and substitution leads to the simplest form of gravity model:

$$M_{ij} = Y_i Y_j / \sum_j Y_j \text{ (Anderson 1979).}$$

The theory behind the gravity equation was analyzed by Evenett and Keller (1998) who were interested into two main international trade theories, the Heckscher-Ohlin (H-O) theory and the Increasing Returns (IRS) theory. In the Heckscher-Ohlin setting, the main assumption is that countries are identical besides the different factor endowment which is the driving force for the

trade. Trade in H-O setting is completely inter-industry trade. Moreover, constant returns to scale (CRS) are assumed. The authors provide the evidence that perfect product specialization based on the different factor endowments is not enough to explain the gravity behavior. On the other hand, the presence of the IRS allows for trade even when there are no factor endowments differences. A consequence of this is an inter-industry trade, which definitely describes better real trade flows. According to authors, IRS theory is the major reason in explaining trade flows (Evenett 1998).

2.2. The Gravity model in Central and Eastern European countries and Western Balkan

The notion of the international trade and its potential was again in the centre of discussion during the 1990s, since during that period Central Eastern European Countries (CEECs) were on their way toward the EU experiencing fast trade integration. Researchers (Baldwin 1994, Nilsson 2000, Bussiere et al 2008, Gros 1996) were interested in similar questions that are now relevant for Balkan countries: how much has the trade potential been exploited so far and whether there is a room for its enlargement? If the answer to the latter question is positive, it is important to consider which trade policies may be proposed to fully utilize the potential. Policies proposed certainly play an important role in the future shaping of the trade patterns.

A research question of the above cited articles was shaped by the proposition of the European Commission that the level of trade integration between the EU and CEECs present their ability to cope with pressures from the open European market. Hence, the higher level of trade meant the better possibilities for the integration into the EU (Nilsson 2000). Besides standard explanatory variables in the gravity model, Nilsson included a few dummy variables of which *language* and *border* were statistically significant. As the point of reference in this study

was the level of trade integration in OECD countries, it is concluded that CEECs are integrated in the EU as OECD countries are integrated on average. The author compares the ratios of potential trade based on the gravity model to actual trade for CEECs: the results are lower ratios than in the Baldwin's study (1994) meaning that some of the potential was already used in a meanwhile. However, he concluded that there is still unused trade potential for CEECs. The opposite conclusion was derived by Gros and Gonciarz (1996) as the GDP data before 1989 are overvalued creating inaccurate results. They argue that level of GDP in 1989 was at much higher level than in 1992 and that contributed to inaccurate over-estimation of real trade potential. Nilsson (2000) uses a gravity model extended for the influence of the exchange rate changes in CEECs and its impact on the levels of trade. Changes in the exchange rate in CEECs are mixed, since some countries experienced appreciation while the other experienced devaluation to USD and it does not explain why some countries had trade above and some below their potential level.

A similar subject is addressed by Busierre et al. (2008). The transition related factors such as lacking transport infrastructure, low level of experience for dealing business in those countries, institutional uncertainties –that may be described as obstacles to trade, made the difference between the actual and potential trade, especially in the early phase of transition. The authors include additional variables such as country pairs individual effects to account for unobservable factors that cannot be contained in the dummies (such as non-tariff barriers, openness to trade etc). Furthermore, the time specific effects are included to control for widespread shocks like globalization. Their conclusion is that for CEECs trade potential is almost fully used, there is only little room for improvement.

At this moment, Western Balkan countries are in the analogous phase of the EU integration as the CEECs were during the 90s. Even though there is no wide literature dealing with this issue in the context of Western Balkan countries there are some studies addressing this

subject (Christie 2002, Kaminski 2003). Grupe and Kusic (2005) address the question whether it is reasonable to expect that enhanced regional integration, mainly in terms of free trade, will have positive effects on the small economies comprising Western Balkan countries. Most of the trade barriers between this region and the EU have already been eliminated, with only some non-tariff barriers left. In this setting, the main obstacle for further trade enlargement appears to be similar trade structure of those economies and little complementarities. They conclude that due to comparable trade interests and a dominant labor intensive production, there is no much space for regional trade enlargement. In the same work, they emphasize yet another conclusion: incoherent approach implemented by the EU. There is a contradictory tendency of the EU making local integration a condition for the EU accession and, on the other hand, fostering integration with the West at the expense of the regional integration. Furthermore, the EU has kept an individual country approach, offering support in return for implementing reforms aimed at the restructuring of the economy (Grupe and Kusic 2005). The same problem, “an eternal conflict of bilateralism and multilateralism in the EU trade relations with the Western Balkans” (p.10), is addressed by Bjelic (2005) where he suggests that the EU should support regional integration by providing trade concessions to the whole region instead of implementing an individual country approach. This will have a positive incentive on the countries in the region to increase collaboration.

Two studies address trade in the Western Balkan region using estimated gravity equations and both derive a similar conclusion (Christie 2002, Kaminski 2003). According to Christie (2002), there are deviations from potential level of trade, for instance, the trade between Bosnia and Herzegovina and Serbia and Croatia is much lower than its potential. Kaminski (2003) concludes that there is more potential for trade growth among countries in this region. Moreover, there is space for trade enlargement with the EU countries as well.

The same problem is addressed by Montanari (2005) who concentrates on the Western Balkan region and applies often used two step gravity model, separately for imports and exports in order to examine potential for increase in trade between Western Balkans and the EU. Firstly, he estimates the gravity equation coefficients for countries with a functioning market economy. Afterwards, he applies estimated coefficients to data to get potential trade (PT) and compare it with the actual trade (AT) data to get information on the achieved level of trade. Montanari (2005) concludes that Agreements with the EU, as a part of SAA, and WB countries had affirmative effects on trade, especially in the case of Romania and Bulgaria emphasizing the influence of the asymmetric approach. One more time the analogy with the CEEC may be made: at the beginning of transition process a large potential for trade enlargement exists (Baldwin 1994). However, later studies show less room for trade increase between the EU and CEEC. Similar founding may be expected for Western Balkan countries. A policy proposed by the author is that EU should immediately liberalize its trade, including agricultural and textile products coming from Balkans which is by and large the policy path already taken (Montanari 2005).

A comparable analysis for Croatia is done by Susic and Vujcic (2005) in order to assess the extent to which Croatia has fulfilled the economic criteria to join the EU. A single country gravity equation is estimated and potential trade flows based on it. They note one of the drawbacks of this approach is the inability to predict trade structure. It is argued that there is a home country bias toward the former Yugoslav Republics which is a consequence of numerous Preferential Trade Agreements, that have additionally lessen trade diversification and caused slower trade integration of Croatian economy with other CEECs.

A study relevant for the presented research, aimed at evaluating trade potential of Serbia with the North African region,²² using the gravity approach was conducted in 2009 (Stanojevic 2010). In the light of the increasing trade deficit, the interest to discover new trade markets or already existing ones with unused trade potential especially exports have increased. A gravity equation for exports is estimated using the panel data analysis for 2005-2008 period, and bilateral trade flows with 42 countries. Besides basic variables (GDP of Serbia, GDP of a trading partner and distance) model includes a variable on the political-economic distance between Serbia and a trading partner. This term is defined through economic ties, preferential trade agreements, investments in the Serbian economy, company presence etc. Moreover, this feature proved to be significant in the exports model (Stanojevic 2010).

However, the year dummies to account for business cycle variations were not included neither country specific variables. This is the gap this research will build on, in particular including fixed effects.

Stanojevic (2010) emphasized that essential long-term factor of trade is the complementary economies. In other words, Northern African countries are interested in Serbian goods such as agricultural products. Because of the climatic conditions, countries in the North Africa could not develop crop growing to the desired level. On the contrary, conditions in Serbia are favorable to agriculture which represents a chance for Serbian exports. Furthermore, markets in this region are open and there is no limitation to imports from Serbia. However, the result of a study was that potential to export to this region is largely not used. The study empirically proved by comparing potential to actual exports that there is 5-10 times more free “space” in this region to absorb exports from Serbia. Among those countries, potential is best exploited with Egypt.

²² North African region comprises of 5 countries: Algeria, Libya, Egypt, Morocco and Tunisia

What may be concluded from this section following the integration path of Central and Eastern European countries, is that trade potential in the Balkan countries has been partially used from 2000s onwards especially after the policies implemented by the EU. However, it is expected that the level of trade is still below potential.

Chapter 3. Gravity model for Serbia

In this chapter a gravity model including fixed effects for Serbian trade flows will be estimated using panel data for the period 2004-2007. The evolution of trade patterns and indicators from 2000s onward including trade openness ratios, the geographic patterns and the structure of trade have already been presented in the Chapter 2. Findings of trade blocks effects from this chapter will be incorporated in the policies toward trade enlargement.

3.1 Methodology and data

In order to estimate a gravity equation, several methods are proposed in the literature. Ordinary Least Squares (OLS) are used to estimate logarithmic form of the equation by Christie (2002), Nilsson (2000), Matyas (1997), Busierre et al. (2008) and is the most often employed in the gravity literature.

In this work, separated gravity models for imports and exports will be estimated using OLS method to calculate single country equations for the case of Serbia. Sosic and Vujcic (2005) use the same approach, and state that a single country equation prevent problems coming from pooled data estimations. It is possible to avoid the problem of heterogeneity of countries. The other problem noted by Brenton and Di Mauro (in Sosic and Vujcic 2005) , is that different remoteness factor (R_j) among countries may have biased results. Remoteness is important in a sense it provides information about country's alternatives. Hence, countries with lower level of R_j , i.e. those countries with many opportunities will import less from each particular country (Head 2003). However, this issue is circumvented as the estimation is done for only one country.

Another advantage of a single country approach is the possibility to distinguish between exports and imports since it is expected that those will respond differently to important factors such as changes in the real exchange rates (Földvári 2006).

3.2 Data description and sources

It has been practice to use cross-section data to estimate the gravity equations. Recently, the panel data proved to provide more accurate results than cross-section data which are likely to experience omitted variable bias because of the unobserved country specific effects (Földvári 2006). Matyas (1997) is arguing that in order to specify a proper gravity model the fixed effects should be included, in particular effects for import and export countries as well as time specific effects (“triple-way model”). However, it makes sense to state here that including fixed effects does not permit to include into estimation time invariant variables such as border, language and distance (Serlenga 2004, Foldvari 2008). The reason for the inclusion of the fixed effects was given by Hsiao which are the omitted variables specific to different time periods and cross-sectional elements (in Egger 2000). Egger (2000) emphasizes the difference in interpreting the coefficients in cross-section and panel analysis. While in case of panel analysis data may be interpreted as elasticities of “the influence of the independent variables on the dependent one (within interpretation)”, in cross section this interpretation would be conceptually wrong (Egger 2002, p.26).

This research will employ, as proposed by Harris and Matyas (1998), a pooled time-series of cross-sections - panel data approach including time and target country effects. This excludes all time invariant variables from the model. Data used in this model will cover the period 2004-2007 and will include yearly bilateral trade flows between Serbia and 40 most important trading

partners²³ which altogether account for around 95% and 85% of total Serbian exports and imports respectively, which means that only a minor part of the total trade is not encompassed in this sample. Data for exports and imports are collected by the Statistical Office of the Republic of Serbia²⁴ and are expressed in thousands USD. In accordance with its practice, the value of goods in the external trade is expressed in prices based on contracts agreed between the companies. All values are calculated based on existing exchange rates. For imports the CIF method is used and for exports FOB, as is common practice. Data about real GDP are taken from the World's Bank database, World Development Indicators (WDI) and Global Development Finance (GDF). GDP is measured in constant 2000 US\$ and is expressed in thousands. Data on populations are taken from the same database for the perspective years.

Thus, the total number of observations is 160, with some missing data. In particular, since the sample includes the data from 2004, the trade with Montenegro is not captured individually, since Montenegro separated from the State Union of Serbia and Montenegro in 2006.

In this research, two models of Serbian trade will be estimated: models for exports and imports using OLS method. The analysis including fixed effects does not allow for calculating counterfactual scenarios and data on the potential trade. On the contrary, checking for the trading block effects should be done with the analysis of the target specific parameters from the estimated models that explain part of behavior not explained by variables included in the model (Matyas 1997). Country specific parameters provide information on the openness of the particular economy for Serbian exports and imports. Hence, those numbers may be understood as obstacles to trade due to administrative procedures and financial barriers (Matyas 1997) while time specific effects capture the influence of variable that vary over the time and are not encompassed by

²³ Details about countries are presented in Appendix

²⁴ Internet, Statistical Office of the Republic of Serbia, <http://webrzs.stat.gov.rs/WebSite/>

explanatory variables such as transports and communication costs (Busierre et al. 2008). Chapter 5 will built on those findings and provide policies how to improve trade.

3.3 Consequences of a single country gravity models

Gravity models may be used to model trade for a group of countries or to model trade between a single country and its trading partners. A multi-country approach is characterized by the symmetry of trade flows, because the exports from country j to country i equals the imports from country i to country j . Thus, in multi country approach, one estimates either imports or exports but not both (Foldvari 2008).

In case of a single country approach, there is no symmetry in trade flows and one has to estimate models for both exports and imports. When estimating single country equations, there are two potential problems. The first problem that may arise is stemming from the assumption of the time-variant unobserved effects which makes it impossible to determine the real effect of domestic income and population on exports and imports. Time variant explanatory variables are GDP^{sr}_t and pop^{sr}_t which stands for domestic income and population. A solution is either to include year dummies and do not interpret those coefficients or to omit the year dummies.

The second problem arises due to time-invariant variables such as distance, border, language etc. It may happen that some of the country specific dummies are perfectly collinear with time-invariant variables. This will cause the problem of perfect multicollinearity when country specific variables are explicitly included in the model (Foldvari 2008).

3.4 The Gravity model for exports

Exports present one of the most important sources of the foreign exchange in the economy that may be later used for different purposes. It is essentially important in the case of a large and increasing debt. Hence, the consideration of the exports comes first on the agenda. In order to estimate export flows of Serbia the following model including fixed effects was applied:

$$\ln Exports_{it} = \gamma_j + \lambda_t + \beta_1 \ln (GDP_{it}) + \beta_2 \ln (pop_{it}) + \varepsilon_{it}$$

Where

$Exports_{it}$ is the volume of trade (exports) from Serbia to a trading partner in a year t;

GDP_{it} is the GDP of a trading partner in a year t;

pop_{it} is the population of a trading partner in a year t;

γ_j is the target country effect;

λ_t is the time (business cycle effect) for years 2005, 2006 and 2007;

ε_{it} is the error term.

The model includes the target country effects only, because it is a case of a single country equation and does not contain the local country effects. Broadly speaking, target country effects account for the demand for Serbian exports (Harris and Matyas 1998). Relatively large target country effects imply the openness of the economy suggesting that there are no administrative and financial obstacles to trade (Matyas 1997). It should be noted that those effects (for all 40 countries) are not presented in the table below. Furthermore, time fixed effects are presented in the table and were estimated in a way that one year was excluded, as proposed by Harris and Matyas (1998) and thus, the model includes time effects for only three years.

Results of the estimated model for exports are presented in Table 1.

Table 3: Estimated results for exports including specific fixed effects (within) regression

lnexports	Coef.	Std. Err.	t	P> t
lngdpconst	.715137	1.080702	0.66	0.510
lnpop	.0143054	.9629702	0.01	0.988
y2005	.2415671	.0791233	3.05	0.003
y2006	.4227111	.1173217	3.60	0.000
y2007	.6317513	.1636721	3.86	0.000
_cons	-2.852121	24.96497	-0.11	0.909

Dependent variable: $\ln(exports)$

$R^2 = 0,9724$

R^2 within = 0,5529

Number of observations: 154

Omitted year = 2004

Source: Author's calculations

After including only time variant explanatory variables and fixed effects, many variables seem to be insignificant. The coefficient on partners GDP has a positive sign and magnitude as predicted by literature. This effect dominates over the population effect of a partner country.

The time variables, which account for the business cycle effect and common shocks, are highly significant. In those years, real export had an increasing trend as a consequence of the variables other than those included in the model.

The analysis of target specific effects should give information on the “willingness” of partner countries to import from Serbia. However, having a look at those country specific effects²⁵, it may be seen that relatively high parameters are present in the case of CEFTA2006 member countries meaning that, on average, Serbia exports more to those countries than average export to the other countries, holding partner's GDP and population constant and controlling for

²⁵ Details in Appendix.

business cycle effects. In other words, those markets are more open to Serbian exports than an average market in this sample.

Even though the data encompass only one year after the CEFTA Agreement started to operate, already high trade among those countries and Serbia existed even before which is obvious having in mind that those countries are among the most important trading partners for Serbia. A reason behind this is the idea that CEFTA2006 was formed as a “waiting room” in front of the EU with the aim to increase trade integration in Balkans and not only that, but to have a positive impact on the political stability in this region, more equal development, infrastructure building, promoting and attracting investments to this region. Offering cheaper and higher quality products and services to the consumers is yet another advantage of this agreement. Definitely the most important implication of trade liberalization within member states is the enlargement of trade flows. The CEFTA2006 presents the second most important trading partner, after the EU, and is a source of trade surpluses.

Having in mind that Serbia has signed the Stabilization and Association Agreement with the EU only in 2008, the effects of the more liberal access to this market are not captured by this model. However, as empirically proved by Egger (2004) often derived conclusion in panel data approach is that there is no short-term impact of joining the EU. On the other hand, there is a significant positive effect in the long run which may be expected in the upcoming years as a consequence of the signed Agreement which allows for free access to the European market. This will have a positive impact for the positioning of domestic products with a condition that those products fulfill particular standards. This task should be addressed by the exporters. However, a high inclination toward the EU import is already present in Serbia (Ehrke 2010). This is not necessarily bad when it pushes for higher exports and exports with higher value added.

Looking at the country specific coefficients on the EU countries, the most open for Serbian exports are Slovenia, Bulgaria, Romania and Hungary which are all the bordering countries besides Slovenia. However, there are historical ties with Slovenia since both countries were part of the Socialist Federal Republic of Yugoslavia in the past.

Data on the structure of exports reveal that Serbia, during the period 2004-2010 was predominantly exporting to the already mentioned EU countries live cattle (heifers and calves) and agricultural products, corn in particular, which supports the statement that Serbian exports is mostly based on the low processed products and products with low values added.

A conclusion to be derived from the presented results is that most of the EU countries by the end of 2007 had relatively high administrative barriers for the Serbian imports. However, after the ratification of the Interim Agreement on Trade and Trade-related issues²⁶ in 2008, those barriers are lower more proportionally for Serbian exports than imports, an increase in trade flows was recorded. Serbian products that fulfill the EU standards have easier access to the EU market. Another traditionally important market is those of neighboring countries with whom Serbia shares similar political and historical background. The focus of further policies in the short to medium term should be toward those markets where Serbian products are present for longer period of time as this strategy brings less risk than penetration to the completely new markets. However, in a long run entry into the new markets with new products may be a good policy.

3.5 The Gravity model for imports

Similar steps as for the previous estimation have been applied in estimating equation for Serbian imports which has the following form:

²⁶ European Commission, www.ec.europa.eu

$$\ln Imports_{it} = \gamma_j + \lambda_t + \beta_1 \ln (GDP_{it}) + \beta_2 \ln (pop_{it}) + \varepsilon_{it}$$

Where

$Imports_{it}$ is the volume of trade (imports) from a trading partner to Serbia in a year t ;

GDP_{it} is the GDP of a trading partner in a year t ;

pop_{it} is the population of a trading partner in a year t ;

γ_j is the target country effect;

λ_t is the time (business cycle effect) for years 2005, 2006 and 2007;

ε_{it} is the error term.

Table 4: Estimated results for imports including specific fixed effects (within) regression

$\ln imports$	Coef.	Std. Err.	t	P> t
$\ln gdp_{const}$	4.624009	3.657994	1.26	0.209
$\ln pop$	1.608245	3.259492	0.49	0.623
y2005	.0998151	.2678191	0.37	0.710
y2006	.0212675	.3971143	0.05	0.957
y2007	.1852896	.5540026	0.33	0.739
_cons	-101.0327	84.50221	-1.20	0.234

Dependent variable: $\ln(imports)$

$R^2 = 0,879$

R^2 within = 0,1403

Number of observations: 154

Omitted year = 2004

Source: Author's calculations

Results of the estimated model for imports including fixed effects are presented in Table 4. All coefficients, including those accounting for business cycle effects seem to be insignificant with much higher magnitude on the trading partners GDP.

Interpretation of country specific effects²⁷ will give information on the openness of trading partners to export to Serbia. The highest values are recorded in the case of Montenegro,

²⁷ Details in Appendix.

FYR Macedonia and Bosnia and Herzegovina which is expected given the geographic proximity and political, economic and cultural relationships in the past.

As for the structure of imports, based on the value, from Bosnia and Herzegovina one of the dominant groups of products are coke and semi-coke made of coal during the whole period 2004-2011. Serbia also imports woods and steel from Bosnia and Herzegovina. In the same period the most common imported products from Macedonia were wine, iron and steel cubes, and medicines in the last few years.²⁸ However, imports from those countries are lower than exports. A reason for this may be that countries export rather similar products as produced in Serbia indicating the low level of complementarities between economies.

Based on the volumes of imports, even more important is the EU market. According to country specific parameters, relatively large openness is recorded in Slovenia, Hungary, Romania and Bulgaria. Interestingly, a high value is recorded in case of Cyprus and Lithuania. Looking at the structure of imports from Slovenia in the period 2004-2011, the most important group is the household appliances and recently the medicines. From Bulgaria and Cyprus, the dominant importing products are refined copper while from Romania and Hungary Serbia predominantly imports gas oils and electricity.²⁹ The structure of Serbian imports revealed its high energy dependence due to low energy inefficiency. However, this topic is outside of the scope of this work.

Results in this chapter suggest that the most open economies for exports and imports from and to Serbia are the traditional markets of neighboring countries. As for the EU economies, the most open for trade cooperation are geographically close Central and Eastern European economies.

²⁸ Internet, Statistical office of the Republic of Serbia

²⁹ Internet, Statistical office of the Republic of Serbia

Chapter 4. Relationship between trade and export diversification and economic growth

“Countries are what they export”

Unknown author

The importance of exports for economic growth and their relationship looks rather simple. This section will elaborate more on the conditionality between the two and provide background knowledge and theory behind it. Not only will the role of exports be examined, but the function of export diversification as a step toward economic progress. Finally, this chapter provides interesting evidence on the allegedly called “export-led growth” and provides yet another possible sphere of interest for policy makers: the non tradable sector.

The export driven model was found in the centre of attention after the successful episode of economies in Asia and their remarkable performance under this strategy. Afterward, many countries were trying to successfully implement similar strategies named “export-led growth” (Yang 2008).

There is extensive literature addressing the questions such as “Does trade cause growth?” (e.g. Hesse 2006, Lee 2011, Frankel 1999). Frankel (1999) examines the effect of trade on growth and how trade influences standards of living (income) focusing on the part of trade caused by the geographic factors which is in compliance with the gravity framework. He concluded that trade raises income. In particular, Frankel (1999) estimated that an increase of 1 percentage point in the trade openness ratio increases income per person by 0,5 percent. The main channel for this impact is the accumulation of physical and human capital. The other conclusion from this study is

that not only the international trade has a positive effect on the level of income, but the domestic trade as well through the same channels.

In the context of less developed countries the literature tends to emphasize that trade liberalization has an important role in enhancing economic growth and decreasing the poverty. Lee (2011) provides a short review of the economic development and growth relationship. One of the starting points in this analysis is the Solow model where resources available in a country determine output growth while technology is determined exogenously. A consequence of this structure is that trade policy does not play an important role. On the other hand, the new-growth theory emphasizes the endogenous nature of technology allowing for an active role of trade. A driving force in those models is that new markets allow for specialization leading to higher productivity growth as a consequence of learning by doing. Melitz (in Lee 2011) provides evidence that export oriented firms are on average more productive than those producing only for domestic market. This is a reason why the overall productivity is higher with a raise in export activity.

Lee (2011) notes that micro-foundations of production structure are gaining importance over the factor endowments. In the same work the idea of Hausmann et al. is given as an explanation for the relationship between high-productivity goods and faster economic growth: shifting resources from less to more productive activities will lead to economic growth. Lee (2011) concludes that trade openness might have a positive effect on the economic performance. However, equally important are “the particular structural characteristics of exporting industries” (p.59). The author finds that the higher the share of technologically advanced goods in total exports, the fastest economic growth. As proposed by Krueger and Bhagwati (in Lee 2011) the factors that are of crucial importance are market institutions presented by the level of competition, government as main institutional factor and the social environment. What is an

important conclusion is that trade openness may have a positive impact on growth under some conditions that are not necessarily related to trade policies but more to the overall macroeconomic health of the economy.

Building on the previous conclusion, another question arise “What is the reason behind the export diversification?” Hesse (2006) classifies theoretical reasons to answer this question into several groups. One of the explanations relates particularly to the countries exporting primarily commodity products whose prices are highly volatile. Put differently, exports instability is a reason for its diversification. The other reason is learning-by-doing gains and knowledge spillovers in the manufacturing sector.

However, Hesse (2006) emphasizes results from Imbis and Waczizrg who noted the U shaped relationship between sectoral concentration and income level. The consequence of this U curve is that at the beginning countries diversify production and as they are becoming richer this feature changes to specialization. In the same working paper, he underlines the new literature concentrating more on diversification with entrepreneurial motives rather than on the comparative advantages. Background explanation for this phenomenon may be provided in the context of negative externalities. In other words, due to a positive spillover from developing new goods, social benefits will be higher than social costs leading to an underinvestment. On the other hand, potential loss of failure has to be borne by entrepreneurs. This is a reason why the government should be actively involved in the industrial growth and promoting entrepreneurship. With a help of empirical research Hesse (2006) concludes that that diversification on average leads to a higher per capita income growth and moreover, export diversification demonstrates non linear relationship with income: the less developed countries benefit from diversification in exports more.

One interesting point with potential consequences for policy proposals about the “export-led growth” is noted by Yang (2008) who finds empirical support that in fact not all the so called “export-led growth” episodes are really what their name says to be. In particular, in the case of “export-led growth” one would expect to see appreciation of the exchange rate as a consequence of the influx of the foreign exchange which is very often not the case. Moreover, there are many countries experiencing depreciation. The relevant policy question is what was causing the economic growth if the “export-led growth” is excluded based on the above mentioned criteria?

What was the main engine for growth is the productivity improvement in non-tradable sector which has an impact on GDP growth, and in the next instance an increase in demand. Part of this increase, depending on the demand elasticity for imported goods, will flow to the imports causing the real exchange rate depreciation. A consequence of depreciation will be an increased competitiveness and a raise in exports. Yang (2008) uses a term “growth driving exports” for this phenomenon when non-tradable sector has the crucial role. It is not only the increased productivity in tradables that matter, but in non-tradable sector as well. Those conclusions bear significant implications for policymakers especially in developing countries. In the past two decades, based on the successful growth in Asian countries, many governments dedicated a lot of resources to replicate the so called “export-led growth”. Yang emphasizes that non-tradable sector is as important as tradable and may serve as a growth engine. Hence, policies for improvement of the non-tradable sector are equally important.

Countries should note and examine the trade-off between supporting exports sector only. What is proposed by Yang are policies concentrating on the technological improvement as main driving force. The objective should be to invest in human capital as it is the most important factor (Rajan 2010, Yang 2008). Policies should be aimed at lessening barriers and allowing resources to move more liberally to the sectors with a higher productivity and improving the institutional

structure in a country. Similar proposal is found in Rajan (2010) who notes that the most important obstacle to the growth is the lack of organizational structure.

This section provided evidence on the positive relationship between the trade openness and economic growth. Moreover, the reasons behind diversification in developing countries are emphasized. Finally, the phenomenon of “growth driving exports” is underlined and the potential consequences of unconditional support toward exports.

4.1 Export-led growth in Serbia

After the opening up of the economy in 2000s, Serbia continued to record trade and current account deficits and not only that but the trade deficit was increasing as a consequence of insufficient exports (Uvalic 2010). The growth pattern was highly unfavorable, promoting private consumption particularly of imported goods. At the beginning of the decade, this pattern of consumption was financed by foreign loans leading to an increased debt position. However, in the light of the global financial crisis hitting the region of the Balkans in the late 2008, this source of finance was not as available and there was even a possibility that it may dry out (Ehrke 2010). This is a reason why Serbia should without delay find a way for more sustainable growth and one of the policies toward this aim is a higher export growth than import. The relevant question is to discover potential opportunities for exports enlargement, create and implement policies that will achieve this goal.

The idea of “export-led growth” in Serbia is certainly not new. What have attracted more attention lately, after more than one decade from political regime change, are the reasons for the failure of the “export-led” strategy.

Following the political change, many changes in the economic field took place. Foreign Direct Investments (FDI) started to flow to Serbia and inflation was under control together with price stability. This was accompanied with the institutional reforms. According to Uvalic (2010), several successes have been accompanied by policies which failed to provide sustainable growth. The situation in the labor market had a negative trend: the number of unemployed was increasing starting from 2006. At this moment, the unemployment rate in Serbia is one of the highest in Europe, at around 23% in 2011 and it is predicted that it will slightly increase during 2012 while staying at the level above 21% by the end of 2017.³⁰ The other field with highly inadequate performance is the external position of Serbia's economy (Table 3). The problem of increasing trade deficit as already emphasized deserves the most attention (Figure 2).

Table 5: External trade of goods and current account deficit

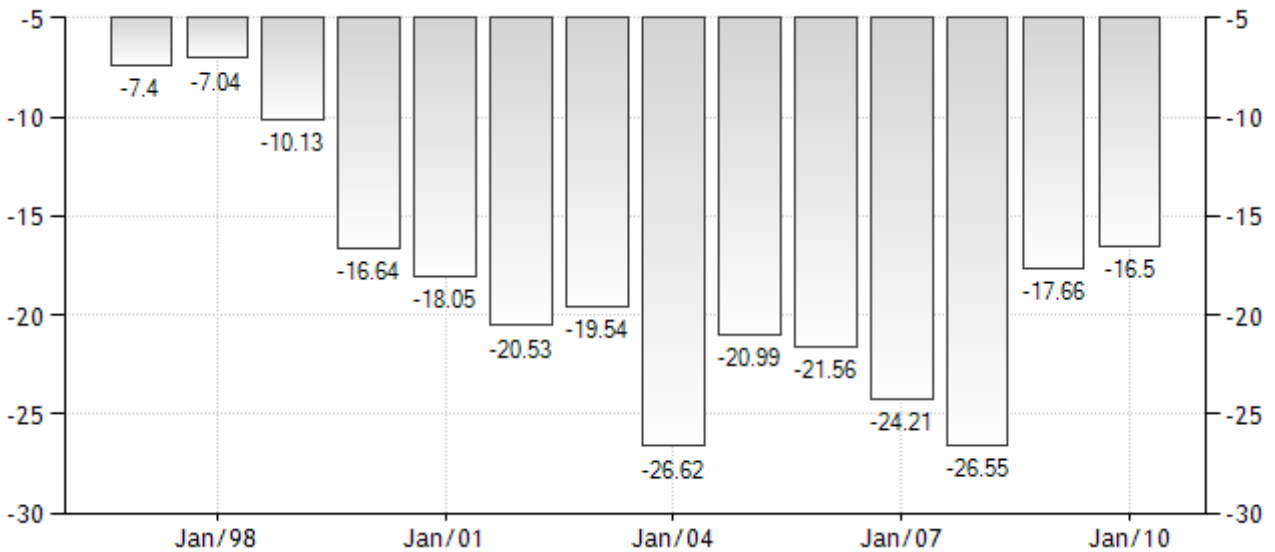
	Exports	Imports	Total (balance)	Current account balance (in EUR million)	Current account balance as % GDP
2002	2075	5614	-3539	- 671	- 4.2
2003	2755	7473	-4718	-1347	- 7.8
2004	3523	10753	-7230	- 2620	-13.8
2005	4482	10461	-5979	- 1778	-8.8
2006	6428	13172	-6744	-2356	-10,1
2007	8825	19164	-10339	- 5053	-17.7
2008	10974	24331	-13375	- 7054	-21.6
2009	8344	16056	-7712	- 2084	-7.2
2010	9795	16735	-6940	- 2082	-7.4
2011	11777	20139	-8362	- 2968	-9.5

Source: Statistical office of the Republic of Serbia

A very high and permanent trade deficit was one of the critical reasons for a continuously high current accounting deficit in particular in 2008 when it recorded the maximum level. Consequently, the current account deficit was also the highest in the same year.

³⁰ IMF staff estimates, www.imf.org

Figure 3: External trade balance as % of GDP (constant 2000 US\$)



Source: World Bank database

4.2 Reasons for unsatisfactory foreign trade performance in Serbia

Discovering and understanding the reasons behind the failure of the Serbian external trade policy to develop further is a vital step for policymakers as it can provide better insight in what has been done and why it failed to provide positive results.

There are divided opinions for the main reasons causing negative trade development. According to Uvalic (2010), one fraction of economists believes that the most important factor contributing to an extremely high trade deficits was inappropriate monetary and exchange rate policies after 2000. Even though *de jure* exchange rate was a managed float, it was *de facto* a very rigid as the National Bank of Serbia was intervening very often in the exchange rate market to keep the exchange rate from oscillations. This policy was criticized as very inflexible and inappropriate by Marinkovic (in Uvalic 2010). Afterwards, when more flexible exchange rate

was implemented, the impact on the export growth was obvious. Moreover, flexible exchange rate policy allowed adjustments that alleviated adverse influence of the crisis.

According to the other group of economists a leading reason for the poor external trade performance is the inadequate and unbalanced structure of export. In other words, export relies on limited range of products usually with low value added. The export structure has not changed significantly in the last decade which is precluding price competitiveness and calling for a significant restructuring of the economy (Petrovic 2005). What is the closest to the truth is that both reasons were contributing to the unsatisfactory trade performance and fulfillment of only one of them will not lead to a successful export strategy. The level of competitiveness of Serbian exports is very low, not only to the EU countries but to the countries from the region as well.

As noted by Uvalic (2010), there were several inappropriate decisions made during the transition period in relation to the privatization together with delayed and not adequate reforms that still have adverse effects for the economy. However, this is not the focus of this work.

Besides providing theory behind the link between exports augmentation and economic growth, this chapter provided review of the macroeconomic policies in the last decade leading to the unsatisfactory performance in the external trade field. It may be concluded that stable macroeconomic environment is a first precondition for achieving this goal.

Chapter 5. Policy recommendations and conclusions

The needs for increased volumes and change in the structure of exports have been emphasized several times in this study. Policy makers should bear in mind the important question of under what conditions diversification is desirable. One of the potential caveats of export-led growth promotion is the dominance of only one country as a major trading partner, which is exactly the opposite of the desirable direction. When making policy proposals, the influence of the current crisis should be taken into consideration especially since it has changed the attitude of the EU toward the further enlargement. The other important consequence of the crisis is the unwillingness of the investors to pursue investments in the same quantity as before. On the other hand, according to Bastian (2010) due to the crisis imports in Serbia were declining at a faster rate than exports which had a positive effect on the trade deficit.

There are two possible paths toward the diversification and both of them should be pursued parallel in order to achieve satisfying results in the long-run. One is identifying the new markets for penetration and already existing markets with potential for export growth. The second strategy that should accompany this “search” for potential is the orientation of the export structure toward products with the higher value added.

The gravity approach applied in this work has suggested that there is unused potential with neighboring countries mostly. Not only Serbian products are already present in those markets but there are high political, economic and cultural ties facilitating the exports. By the same token, the volume of intra-regional trade surplus should be increased as this is the main source financing chronic deficit with the EU countries.

When it comes to the leaders of the change, it is clear that all stakeholders should be involved for the best results. The government is definitely one of the most important figures in implementing reforms but the business sector should take part as well. The role of the government is even more important when markets proved to be unable to deliver satisfactory results. A practical notion by Hare (2008) is that some of the policies are very often not connected with the diversification *per se* which may be seen in the following paragraphs. Moreover, policies are related to strengthening institutions that should facilitate and enable diversification.

Create favorable environment encouraging the FDI inflow

One of the most challenging tasks is to attract the new FDI and transnational corporations to invest in Serbia. In order to achieve this aim, it is necessary to create favorable investment environment and conditions. Low wages in comparison to other countries in the region and relatively educated working force already present a significant advantage, but in a short term. However, further investment in the quality of human capital is needed not only at the level of universities but education of employees as well. It is inevitable that in the long run the demand for workforce will shift toward the labor force with higher skills and education (Hare 2008). Hence, educational reform is needed to fill in this gap. However, this topic is beyond the scope of this work.

According to the indices measuring the business climate³¹, Serbia ranks very poorly. Political instability is not the biggest problem anymore, but the corruption and oversized bureaucratic sector which should be reduced (Trbovic 2010) allowing for more business conducive environment. Adopting simple and clear regulatory framework and tax system will

³¹ World Economic Forum (WEF) Global Competitiveness Index, World Bank Doing Business Report, EBRD Transition Report

lead to a lower level of corruption (Hare 2008). Another issues in Serbia are monopolistic and oligopolistic behaviors in many fields (railways, processing of petroleum products, land line telecommunications) demanding more efficient antitrust policies that will create a real market-type economy.

Stable exchange rate

The exchange rate pass-through channel is very important in the case of Serbia. Monetary policy, influencing the interest rate is indirectly having an impact on the exchange rate which is transmitted to the volumes of exports and imports. Changes in the exchange rate will alter the prices of exported and imported goods and services. Depreciation of the national currency will lower the price of Serbian exports expressed in foreign currency. On the other hand, the imported components will become more expensive. Stable monetary policy and exchange rates are of crucial importance as they provide security in long term and influence on the price competitiveness of exportables.

Create competitive markets

The Government of Serbia should abandon the practice of supporting loss-making national champions and concentrate on measures promoting the diversification of the industrial base (Uvalic, 2010) because a consequence of such a governmental policy are uncompetitive markets where it was difficult for small and medium enterprises (SMEs) to survive. Yet another reason for abandoning this strategy is an often pursued practice in the past to finance those enterprises in spite of losses they make just in order to keep jobs. Supporting the development of small and medium enterprises (SMEs) is important as those are perceived to be the driving force toward higher employment. The role of transnational companies in leading economic growth is also important because of technology transfer. The developmental policy of the state should be to support the implementation of local companies into the global chains.

Enhance access to markets

Already established trade agreements between Serbia and various countries³² provide access to markets and a good strategic position for exports enlargement. However, further integration in the international market, principally the accession to the World Trade Organization (WTO) should be one of the objectives. The positive side is that Serbia is at the end of this process and membership may be expected the near future.

Actively include business sector in reforms

The practice of passive business sector should be changed into their active involvement. It is of crucial importance to introduce international quality standards since in many sectors it is not possible to export to the international markets without a strict quality control. In addition, companies should organize into exports clusters which proved to be a successful strategy toward higher competitiveness in a very few cases in Serbia. The export promotion is essentially important to accompany liberalized imports as a failure to do this may lead to a faster increase in imports relative to exports which will only widen already existing trade deficit. Participation in international trade fairs will allow for better strategic position in the markets, higher quality products etc. The level of technical equipment and the application of the modern information technology are very low and it presents one of the issues to be addressed first in the near future because this is constraining competitiveness of Serbian products on the international markets.

Do not neglect the non-tradable sector

In pursuing those policies, the importance of non-tradable sector should not be neglected as it has been proven that it may also have a positive impact on GDP and growth and in final instance on the export enlargement.

³² The Russian Federation, CEFTA2006, EFTA, Belarus, Turkey, Kazakhstan, USA and the EU

All the difficulties facing the economy of Serbia require a higher commitment toward the sustainable growth. Exports enlargement with positive influence on the growth is seen as a tool to alleviate negative macroeconomic trends. Thus, this work concentrates on the markets with unused trade potential according to the gravity model. What has been shown is that neighboring countries are the most open for trade with Serbia promoting regional trade, exports in particular. Policies toward export diversification are proposed. However, it should be emphasized that they should be put into the wider context of macroeconomic stabilization since this is a precondition for success together with commitment of all stakeholders, government in particular.

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APPENDIX

The list of trade partners of Serbia included in the econometric estimation, country specific effects for exports and imports

	COUNTRY	Exports	Imports
1	Italy	0.850648	-10.35223
2	Bosnia and Herzegovina	4.576383	16.27689
3	Germany	0.185514	-13.10620
4	Montenegro	5.621449	26.29373
5	Russian Federation	0.641297	-5.950440
6	Macedonia, FYR	4.082350	19.53740
7	Slovenia	2.512288	11.94600
8	Croatia	2.369045	9.842418
9	France	-0.629492	-12.57910
10	Austria	0.569400	-0.393684
11	Hungary	1.534561	5.432720
12	Romania	1.610108	4.419798
13	Bulgaria	2.052905	11.07290
14	Greece	0.664882	-0.057487
15	United Kingdom	-1.326084	-14.15315
16	Ukraine	1.023960	3.499457
17	Netherlands	-0.517583	-5.366183
18	Czech Republic	0.620588	3.871320
19	Belgium	-0.355632	-2.632001
20	Poland	-0.422634	-3.408526
21	United States	-3.281510	-24.80496
22	Spain	-1.357785	-9.712690
23	Cyprus	1.386384	14.07218
24	Switzerland	-0.994765	-2.176568
25	Slovak Republic	0.516730	7.407046
26	Turkey	-0.928133	-6.456688
27	Albania	1.632752	13.71323
28	Sweden	-1.351930	-2.680422
29	Lithuania	-0.638698	7.881562
30	Egypt, Arab Rep.	-1.189540	-5.500873
31	Israel	-1.339786	-0.930217
32	Belarus	-0.465650	7.987309
33	Denmark	-2.029757	-0.580952
34	Syrian Arab Republic	-0.664085	4.421022
35	Portugal	-1.725698	-2.377629
36	Iran, Islamic Rep.	-2.095286	-8.200793
37	Norway	-2.464657	-2.161194
38	Canada	-3.642346	-12.00777
39	United Arab Emirates	-2.387257	-2.762026
40	Algeria	-1.655637	-5.880937