



DIVERSIFICATION OF SERBIA'S EXPORT MARKETS - POTENTIALS FOR EXPORT TO THE COUNTRIES OF CASPIAN BASIN

Nataša Stanojević

Faculty of International Economics, Megatrend University, Belgrade, Serbia

✉ nstanojevic@megatrend.edu.rs

Ana Jovancai

Faculty of International Economics, Megatrend University, Belgrade, Serbia

✉ ajovancai@megatrend.edu.rs

UDC
339.564(497.11)
Review paper

Abstract: Key features of the current foreign trade of Serbia are high and growing foreign trade deficit, and a small number of export partners. The fact that Serbia places its almost entire export on the markets of Italy, Germany and three former Yugoslavian countries implies the need for export diversification. Finding new or revitalizing former markets is vital for overcoming various weaknesses of Serbia's foreign trade. Gravity model was used for establishing determinants of Serbia's export and potential export directions. Coefficients of Serbia's export, determined in a few earlier studies are based on the figures that were valid before the global economic crisis. As the export to the EU countries which are geographically closest to Serbia decreased during the crisis, it is assumed that the parameters have now changed and the factor of importance of geographical distance decreased. The obtained coefficients are then applied to the countries of the Caspian Basin. This is the region which, due to its numerous geographical and economic characteristics, is seen as an adequate export market, although its distance is relatively large. Research based on applying of gravity model has found that in some countries of the region, there is plenty of „space“ for Serbia's exports.

Received:
02.07.2014
Accepted:
27.03.2015

Keywords: Serbia's export, gravity model, geographical distance, Caspian Basin.

Introduction

The economy of the former Socialist Federative Republic of Yugoslavia was characterized by very diverse trade relations with the countries of various economic and political orientations, situated in different regions of Europe, Asia, Africa and Latin America. The most important trade partners were the USSR, Italy and Germany, Saudi Arabia, France, and the countries from the region like Poland, Czechoslovakia, etc.

The breakup of Yugoslavia and transition process initiated by former republics, led to restructuring of their economies, changes in economic relations, resulting in major changes in the structure, volume and directions of foreign trade. In the first decade after the breakup of Yugoslavia, the volume, quality and diversity of production and export decreased dramatically.

The overthrow of left-wing regime in 2000 and the takeover of rule by pro-democratic and pro-European opposition meant abolition of sanctions, which provided a certain degree of revitalization of foreign trade. On the other hand, new government politics has, paradoxically, led to a massive drop in the number of export markets. Providing an explanation that the new course of Serbia's foreign policy (at that time it was in the state union with Montenegro), means 'shifting' towards the West, and closing 13 embassies in Asia, Africa, Europe and Latin America in 2001. For instance, the embassy in Lebanon was closed, although it was the country where a large number of Serbia's companies had operated, which resulted in the volume of export being 20 times lower the next year.

At the beginning of the 21st century, Serbia is among the least technologically competitive economies in Europe, due to the whole century of disinvestments, and the volume of production and product range drastically dropped. The main characteristics of Serbia's foreign economic relations are enormous growth of foreign debt, high foreign trade deficit, which keeps increasing, and a small number of export partners. The global economic crisis is not the reason for this, but it has contributed to a quicker and more extreme manifestation of these weaknesses.

Although they are main Serbia's trade partners, EU countries actually import a small number of products from Serbia. One of the reasons is the fact that these countries have treated Serbia as a risky trade partner for two decades and poorer quality of Serbia's products as a result of the use of outdated technology. Import from Serbia additionally decreased due to economic recession, which directly affected the most developed EU economies. Trade volume in these countries generally decreased, which affected Serbia as well. Even if we neglect the data on the decline in export to EU countries, the very fact that Serbia places almost its whole export in the EU market (half of it is

directed towards Italy and Germany) and three former SFRY countries within CEFTA implies the need for a geographic diversification of export.

For overcoming of the above-mentioned weaknesses of Serbian foreign trade-low volume of export, high deficit and a limited number of export partners, finding new markets is of key importance. It is vital to either identify new trade directions or determine which of the existing export markets have free 'room' for Serbian products.

A standard frame for the analysis of directions of trade flow is the application of gravity model. Gravity model of Serbia's export has been presented in only a few studies so far (Jovičić et al. 2002; Stanojevic and Batić, 2009; Stanojevic and Batić, 2010). As these studies date back to the period before the global economic crisis, and having in mind the assumption that the parameters have slightly changed (particularly when it comes to lessening the importance of geographical distance), the variables of this model need to be tested again. The aim of this research is to determine new parameters of the Serbia's export, and then, if the hypothesis on declining of the importance of geographical distance is confirmed, to apply it to the region, which, due to great distances is not considered an attractive market for Serbian products.

Earlier studies (Stanojevic Batić, 2009; Stanojevic and Batić 2010) showed that there is a lot of unused potential of the Serbia's export to the countries of North Africa and some countries of the Middle East. As there is no reason to doubt that these potentials have increased now, we chose to apply this model to the countries of the Caspian Basin. This is the region which, due to its numerous geographical and economic characteristics, is seen as an adequate export market, although its distance is relatively large. The aim is to precisely identify export potentials, both in terms of export directions and values of the Serbia's export to the countries of the Caspian Basin.

1. Characteristics of Serbian Foreign Trade

The main characteristic of trade between Serbia and foreign countries had represented the insufficient growth of export and low coverage of export by import for a long time, which resulted in rapid growth of trade deficit. In 2008, the Serbia's import was twice higher than its export. Total foreign trade amounted about 34 billion dollars, and the value of exported goods was only 11 (Statistical Office of the Republic of Serbia). In 2009, this trend continued. The volume of export was slightly less than half the volume of import, 8.345 billion USD compared to 15.582 billion, but this can hardly be seen as an improvement, having in mind that export decreased by about three billion dollars, and the total trade declined from 34 to 24 billion USD. According to the data of the Statistical Office of the Republic of Serbia, in the last ten years the

deficit increased from – 1.75 to as much as – 11.9 billion USD in 2008, and then decreased to about 8.4 billion dollars in 2011.

Data on high deficit in trade with almost all trade partners suggest that Serbia did not manage to find an appropriate export strategy and stimulate export producers in the right way.

When it comes to trade with certain countries, Serbia has the highest deficit with Russian Federation because of import of energy-generating products, followed by the deficit with Germany and Italy, with whom Serbia has the highest volume of export (with more than 1.3 billion USD), and China and Hungary. Bosnia and Herzegovina is the third Serbia's export partner when it comes to the volume of export, with 1.2 billion USD. Serbia realizes trade surplus with this country. Serbia realizes a surplus in trade with Montenegro, Macedonia and Albania (Statistical Office of the Republic of Serbia).

The European Union is the most important Serbian foreign trade partner and accounts for more than a half of the total Serbia's import and export abroad. Still, the volume of export to the markets of the European Union is not as high as it could be if geographical proximity is taken into account. One of the reasons is that ever since 1998 these countries have treated Serbia as one of the riskiest countries, which is a significant obstacle for business cooperation. Also, in the conditions of global economic crisis, risky countries and economic subjects from those countries are considered even riskier, and the result is decreased export of Serbian products to those markets. Besides this, the European Union countries mark the most dramatic drop in import. As a result of economic crisis, demand for goods in these countries, including demand for Serbian goods, is plummeting significantly. Export to developed EU countries fell drastically in 2009, and in 2010 it reached the level from 2008.

Table 1. Export of Serbian Goods to the EU countries (Million dollars)

	Italija	Nemačka	Slovenija	Austrija	Francuska	Grčka	V.Britanija	Poljska
2007	1094	937,5	409	301,4	290,3	182,1	150,1	135,3
2008	1128,5	1142	502	458,1	346,4	211,1	152,3	155,8
2009	820,8	870,5	343,8	290,7	249,3	135,7	107,3	67,1
2010	1118,4	1008,2	425,9	338,4	276,7	182,1	155,4	113,1
2011	1306,1	1329,7	526,1	371,3	309,1	201,0	185,2	182,5

Source: UN Comodity trade

Few Serbia's export partners show the need for geographical diversification of export. This is why one of the most important tasks of foreign trade policy in

the years to come should be a reorientation of domestic companies to new markets.

2. Potentials and the Need for Diversification of the Serbian Foreign Trade

The best way for Serbia to face a foreign trade deficit and a very low volume of export is to re-establish trade links with the countries with which it traditionally cooperates and strengthens trade links with new partners. The first group includes the Middle East and North African countries, while the countries from the second group are those that were formed by the breakup of the USSR, which are actually not 'new' Serbia's export partners.

Serbia has a great potential for export to these countries:

1. These regions are huge markets, both in terms of population and total GDP;
2. The economies of the above-mentioned regions are hit by the global economic crisis to a much lesser extent. Their export potentials did not significantly decrease during the previous period;
3. Growth of GDP in the previous period in the CIS amounted 9.1% a year on average, and in the countries of the Middle East and North Africa about 5.2%, which represents a significantly higher growth compared to 1.1%, which is the average growth of the Eurozone countries. The former Soviet Republics have great chances to continue the high growth trend in the years to come, which implies that there are more opportunities for export to these markets.
4. These countries are much more open for trade with Serbia. There are traditional trade links between Serbia and these countries, both direct and through former USSR. They do not see Serbia as „risky”;
5. The above-mentioned countries have open markets;
6. Economic compatibility is extremely striking. Due to unfavorable geographical conditions, the countries of the Middle East, Central Asia and North Africa do not have potentials for a significant development of agriculture, and as a result of lack of water, they do not even have certain industry branches. Unlike them, Serbia has extremely favorable conditions for development of agriculture and a wide range of food products, together with a considerable volume of production in various industry branches which these countries lack.

The above-mentioned facts clearly support the argument that Serbia has significant export potentials on these markets, or at least in some of them. However, it is necessary to identify these export potentials more precisely in terms of both export directions and export volume.

3. New Econometric Model of the Serbia's Export

A standard frame for the analysis of directions of trade and, more precisely, potentials for trade flows require the gravity model. Despite some theoretical controversies, gravity model proved to be a very applicable instrument for explaining and forecasting bilateral trade. It was often used for testing the efficiency of trade agreements and organizations like NAFTA or STO. According to the principle of gravity convergence, bilateral trade between two regions or countries is directly proportional to their gross domestic product and inversely proportional to the distance between them. Together with geographical distance, the model often includes variables such as price levels, common language, customs, colonial history, etc.

Having in mind that Serbia has a diversified range of products, but in small quantities, transportation costs seem to be an obstacle for export to remote markets.

The coefficients of Serbia's export, determined in few studies are based on the figures that were valid before the global economic crisis. As the export to the EU countries which are geographically closest to Serbia decreased during the crisis, it is assumed that the parameters have now changed and the factor of importance of geographical distance decreased. This is why it is necessary to determine new coefficients.

Five variables were tested in this model, but only four of them were included in the model as statistically important. The degree of impact of these factors on Serbia's export is quite uneven. The model has been designed according to the data on 44 countries that were marked as the most important export destinations, taking into account the value of export. It included 30 countries of the most receptive markets for Serbian products, according to the list provided by the Statistical Office of the Republic of Serbia, 5 Middle East countries and nine more – 3 most important export markets on 3 continents (South America, Africa, Asia), which do not fall into the group of the first 30. The analyzed data refer to the period from 2005 to 2010, which is a significant statistical sample of 286 observations.

The model is evaluated by the OLS – ordinary least squares method, and coefficients are determined by establishing the relation (connection) between the independent variable and the required figure - potential export, using the multiple statistical regression method. Panel data are used, as a combination of comparative data and time series data, instead of cross-section data. This enables both the „analysis of the regional structure of foreign trade and analysis of changes in the structure which occur over the time “ (Dragutinović and Mitrović, 2005, p.78).

When evaluating the model variables, the most important task is to determine the parameters (coefficients) which match the analyzed economic,

social, geographical and other factors that comprise the gravity model. Coefficients show to what extent individual independent variables (GDP of the countries, distance, economic and political distance) affect the dependent variable – Serbia's export. The coefficients also show which of the above-mentioned variables are statistically important for Serbia's export, and to what extent. According to that, they will be included in the model (equation).

The tested variables are the following:

- *GDP* of 44 countries which were included in the sample. The data on it were provided by UN Comtrade. The expected sign is positive, as purchasing power dictates the volume of export to a large extent. GDP per capita is equally used, but in this model demand is conditioned by the total GDP. Namely, the total gross domestic product explains the size of the market, which is a more significant factor of export than purchasing power of individuals. Although it is the most common variable in gravity models, the GDP of receptive market shows a relatively insignificant ratio (small correlation coefficient) with Serbia's export. Despite that, this variable was included in the model because it still shows a statistical importance and together with other factors largely contributes to an explanation of the phenomenon.
- *Serbian GDP* in the model proved to have a greater impact on Serbia's export than the GDP of receptive markets. The ratio between economic growth and the growth of export proved to be even more direct and important.
- Transportation costs for any product have an extremely profound impact on demand. Typically, the *distance* between markets is reflected in transportation costs. Even when transportation costs decrease as a result of technology development and trade liberalization, distance still affects the value and volume of export. That is the reason why the most important trade partners are commonly from neighboring countries, which is the case in Serbia as well. Still, export directions are by no means exploited by European countries. Geographical distance from North African countries is not significantly greater than from most of European markets- some countries are even closer to Serbia. When evaluating this model, the distance in kilometers between Belgrade and capital cities of the countries included in the model was used. The model obtained this way shows that Serbia's export largely depends on geographical distance, which is, as expected, inversely proportional to the volume of export.
- The population is often a common variable in gravity model, as it shows the relation between a market and the amount of export. However, the testing on the sample of 42 countries did not prove to be statistically relevant, which is why it was not included in the model.

- Economic and political distance between two countries cannot be measured, which is why a *dummy*, i.e. an artificial variable is used, and it grades immeasurable aspects of economic relations between two countries with 0 or 1. According to the data provided by the Statistical Office of the Republic of Serbia, this country traded the most with the countries with which it has signed free trade agreements. We will focus on these agreements only, although this dummy variable usually has a wider meaning in terms of friendly relations, national, religious closeness and so on. The dummy variable P has the value 1 when there are preferential arrangements in bilateral trade of Serbia with each country from the sample, for the years when the free trade agreements came into force. For example, Serbia concluded free trade agreement with Turkey in June 2009, meaning that until 2009 the value of the variable was 0 and only in 2010 it was 1. The same year was characterized by a significant increase of export in Turkey. All CEFTA countries have a positive value of this variable- being a CEFTA member implies having free trade agreements. Albania is the exception, because diplomatic relations with this country were completely broken for some time, and due to political circumstances, the trade is conducted on the level which is significantly lower than the potential. Serbia also signed these agreements with Kazakhstan and EFTA members, but they only came into effect in 2011, and they cannot be estimated yet.

The model equation should have the following form:

$$X = \alpha + \beta_1 Y_r + \beta_2 Y_s - \beta_3 D + \beta_4 P + u \quad (1)$$

Where:

X is potential export to a certain country

α is assessed value of the constant

Y_r BDP – gross domestic product of receptive markets (in million \$)

Y_j BDP - gross domestic product of Serbia (in million \$)

D distance between Belgrade and an export country capital (in km)

P dummy variable for economic and political distance

β_1 β_2 β_3 and β_4 parameters for independent variables

u model error

Parameters β_1 β_2 β_3 and β_4 are determined by the method of multiple linear regression, i.e. the precise value of relation between two Serbia's exports, as the dependent variable and four independent variables.

As P-value is lower than 0.05, we can conclude that there is a statistically significant relation between the variables of the model with the degree of reliability amounting 95.0%.

R^2 shows that the model explains even 74.2727% of variability of dependent variable, i.e. potential Serbia's export. Adjusted R^2 statistics, which is more appropriate for the model with several different independent variables, amounts 73.9078%. Thus, about 74% of changes in Serbia's export are the result of some of the four tested variables.

Table 2 Parameters of Serbia's Export

Parameter	Parameter value	Standard error	T statistics	P-value
α	6.0444	3.14379	1.92265	0.0555
β_1	0.145712	0.0226816	6.42425	0.0000
β_2	0.765676	0.292797	2.61504	0.0094
β_3	-1.73612	0.102741	-16.898	0.0000
β_4	0.835341	0.216184	3.86403	0.0001
Parameters: α is a model constant β_1 is a parameter for GDP of export market β_2 is a parameter for Serbian GDP β_3 is a parameter for geographical distance β_4 is a parameter for economic and political distance $R^2 = 74.2727\%$ R^2 (adjusted statistics) = 73.9078 %				

The result is the following equation:

$$X = 6.0444 + 0.145712 * Y_r + 0.765676 * Y_s - 1.73612 * D + 0.835341 * P + 1.2913 \quad (2)$$

The model determined in this way can be used for estimation of potential export of Serbia to any country in the world.

Parameters before the global economic crisis

We will now focus on comparing the new parameters of Serbia's export with the latest coefficients in the studies from the period before the global economic crisis. The parameters in the paper Stanojević, Batić (2010) were determined by the same method (OLS), which was used for the most econometric models and they also include similar statistical mass. The selection of markets that were used for this determination was based on quantitative presence of Serbia's export to these countries. 42 countries were included in the model evaluation, i.e. only two countries less than in the analysis. The period included for constructing the model was four years (2005-2008).

As shown in Table 3, the value of parameters changed in the expected direction only due to the fact that the data on two crises (or post-crisis) years-2009 and 2010 were included. The parameter of export market size decreased from 0.56 to as little as 0.14. This was the result of the fact that Serbia's export to the most developed European markets dropped greatly. The value of Serbian GDP decreased slightly from 0.81 to 0.76. As expected, the negative coefficient of distance decreased, having in mind that most distant export partners suffered less severe consequences of the crisis than the neighbor (geographically closer) countries of the EU. Finally, the coefficient of economic and political distance increased significantly.

Table 3 Parameters of Serbia's Export before the Global Economic Crisis

Parameter	Parameter value	Standard error	T statistics	P-value
α	3.0295	2.63601	1.14928	0.0045
β_1	0.560394	0.0466861	12.0034	0.0000
β_2	0.814331	0.250337	3.25294	0.0014
β_3	-2.08202	0.0915762	-22.7354	0.0000
β_4	0.573528	0.164901	3.47802	0.0006
Parameters: α is the model constant β_1 is the parameter of GDP of the export market β_2 is the parameter of Serbian GDP β_3 is the parameter of geographical distance β_4 is the parameter of economic and political distance				

Source: Stanojević, Batić, 2010

In the realistic situations, calculations should be made with even more striking differences, although it cannot still be proved statistically. The reason for it lies in the fact that the years before the crisis were included in the model, since the sample of only two or three years, despite the large number of export markets, cannot be statistically relevant. If the model had included only the crisis years, 2009 and 2010, the distance parameters would have had a less negative effect, while the GDP of export market would have had a less positive impact.

Time will show the direction of changes in analyzed conditions. The export results in the years to come will show if these are just temporary (crisis-related) or permanent parameters of Serbia's export.

4. Application of Gravity Model of Serbia's export on the Countries of the Caspian Basin

The gravity model obtained in the described way can be used to determine Serbia's export to individual countries and the exact amount of goods from Serbia that these markets can receive. The comparison of potential and actual export clearly shows which directions are the most open, i.e. countries with the most free "room" for import from Serbia are marked.

As the assumption about decrease of negative distance coefficient is confirmed, the potentials for Serbia's export to the countries outside Europe are even greater. The importance of the Middle East and North Africa, which was analyzed in some earlier studies (Stanojević and Batić, 2010) is even more considerable than it was previously estimated. This research was focused on the application of the obtained model on even more distant countries, assuming that after the crisis the potentials for exporting to these countries are greater than they have been so far.

The obtained parameters are applied to the countries of the Caspian Basin. It is a fact that numerous regions of the world accord with the above mentioned six reasons for diversification of Serbia's export markets. An additional reason for choosing Caspian Basin is the obvious compatibility of their economies. Namely, the countries of Caspian Basin abound in oil and gas resources, which Serbia needs to import. On the other hand, due to specialization of production within the USSR, these countries have a very limited product range and undefined export partners for them. The structure of Serbia's export is such that it could be competitive on these markets in certain segments.

Using the gravity model for Serbia's export for each of these four Caspian Basin countries (Azerbaijan, Iran, Kazakhstan and Turkmenistan), the exact amount of goods from Serbia that these countries can receive is calculated.

The value of potential export in two variants was calculated for each country. In the first one, the variable for economic and political distance amounts zero, having in mind that relations between Serbia and these countries are relatively undeveloped. In the second variant this independent variable has the value one.

**Table 4 Potential Serbia's Export to the Countries of the Caspian Basin
(million dollars)**

Country	Export 2010	Potential export (in millions of USD)	Potential export with positive dummy variable
Azerbaijan	5.764	33.465	77.157
Iran	32.297	33.253	82.609

Kazakhstan	4.576	18.144	41.832
Turkmenistan	2.812	18.103	41.739

Source: author's calculation

As the obtained results show, the changes in bilateral relations with the countries from this region result in a significant increase of potential export, and compared to the actual export on the current level, they are from 2.5 to 20 times higher.

When the actual export differs from the potential to such an extent, it implies the possibility of exporting a wide range of products. Still, it is useful to precisely define what goods would have the greatest demand in each country. The products that are in the export lists to the countries of this region are the following:

1. Heavy industry products
2. Consumer goods
3. Agricultural products and food industry

Accordingly, export strategy should be based on the increase of export of these products, i.e. expansion of the existing markets.

4.1. Azerbaijan

Azerbaijan is an agricultural and industrial country with developed power-related industry branches. For a several decades Azerbaijan economy was developing within the USSR and it was focused on the Russian market. The leading industry branches were production and processing, and agriculture. During the sixties and the eighties, an intensive development of industrial branches, like chemical, textile, food, machine industry, etc. began. The economy suffered a drastic decline in the period from 1988 to 1994 due to the war in Nagorno-Karabakh. After signing the Armenian-Azerbaijan peace agreement in May, 1994 and stabilization of political circumstances in the country, further recession was stopped.

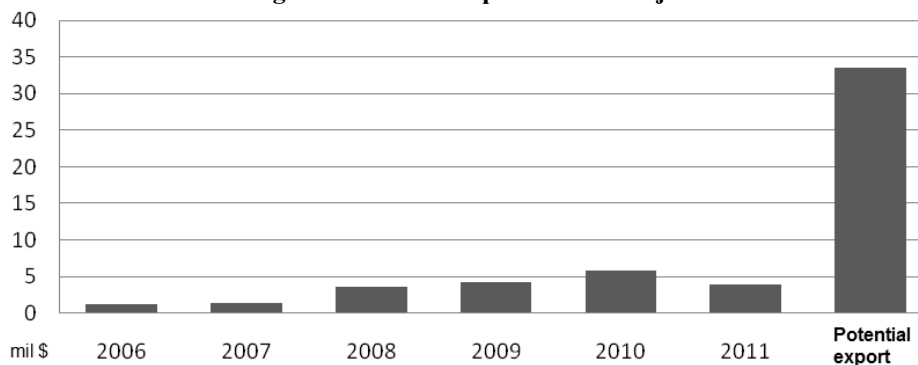
The oil sector is today the most important and the most developed industry branch. After the breakup of the USSR, Azerbaijan became very attractive for foreign oil companies.

The second, also very important industry branch is agriculture. Almost 46% of the whole territory is agricultural soil. The most cultivated crop plants are wheat, tobacco, cotton, tea, tropical fruit and grapes. However, Azerbaijan's food production satisfies only 10-15% of the country's needs.

In 1997 an abrupt economic growth of GDP began, and it amounted 5.8% in 1997, 7.4% in 1999, 11.3% in 2000 and 9.9% in 2001 (The World Bank). The growth was the result of development of the service sector and a modest growth of industrial production, while the policy of decreasing agricultural production still continued. In the period from 2002 to 2008 significant results were obtained: poverty level decreased from 45% to 13%, minimum wage increased 3.5 times, pensions increased 3.8 times, while budget funds grew as much as ten times. According to the data provided by the World Bank, this period was marked by a constant double-digit growth and it reached the record value in 2006 when it amounted as much as 34%, and in 2005 and 2007 it was over 25%. From 2009, economic growth had a single-digit value. Due to the rapid economic growth, the increase in the volume of foreign trade is expected.

From all the Caspian Basin countries, Azerbaijan is the country with the most 'free space' for Serbia's export. Thanks to the intensive efforts of governments of both countries, Serbia's export to this country keeps growing from year to year.

Figure 1 Serbia's Export to Azerbaijan



Source: author's calculation

In 2006 and 2007 export amounted slightly more than a million dollars per year and in 2008 it reached 3.6 million, then it increased to 4.2 in 2009 and to about \$5.8 million in 2010. This was followed by a drop below four million in 2011. Despite the growth, the value of export is far from the needs and potentials of this country. The results of our research show that potential export of 33.465 million dollars is even six times higher than the best export results from 2010.

This country has the demand for Serbian agricultural products, having in mind that Azerbaijan cannot meet its own needs for food. The countries in the region do not have the appropriate conditions for food production. Besides this,

there are potentials for increasing the export of medicines, medical equipment, furniture, machines, agricultural machinery and chemical industry products.

4.2. Iran

Economies of Serbia and Iran have a high degree of compatibility. The two countries are complimentary in the energy sector, technology, agriculture and industry. Also, this is one of the rare export partners with which Serbia realizes a surplus. According to the data provided by the Statistical Office of the Republic of Serbia (Chamber of commerce), the dominant export goods are paper, wagons, railway industry products, car parts, transportation products, machine industry, and when it comes to agricultural products, the leading product is corn. According to the same source, the major exporters are Tetra Pak Production - Beograd, Institute of Field and Vegetable Crops, PPT-hydraulics, ATB North, etc.

The problem which has lately been an obstacle to business cooperation between the two countries are UN and EU sanctions against Iran, which left the issue of interbank operations unsolved. Due to the sanctions imposed against oil export, and as the survival of the entire Iranian economy depends on it, this country has made new arrangements with the most important export partners (India, China, Turkey, Japan, etc.). First of all, the value of a portion of exported oil is replaced by import of other products from these countries. However, the amount of that import is by far smaller than the value of exported oil, and Iran agreed to receive payments in currencies of these countries, whether they are convertible or not. This implies that Serbia has potentials for establishing favorable barter arrangements of goods export for oil. They would, on the one hand, enable a greater value of exported goods and, on the other hand, contribute to overcoming restrictions resulting from UN sanctions.

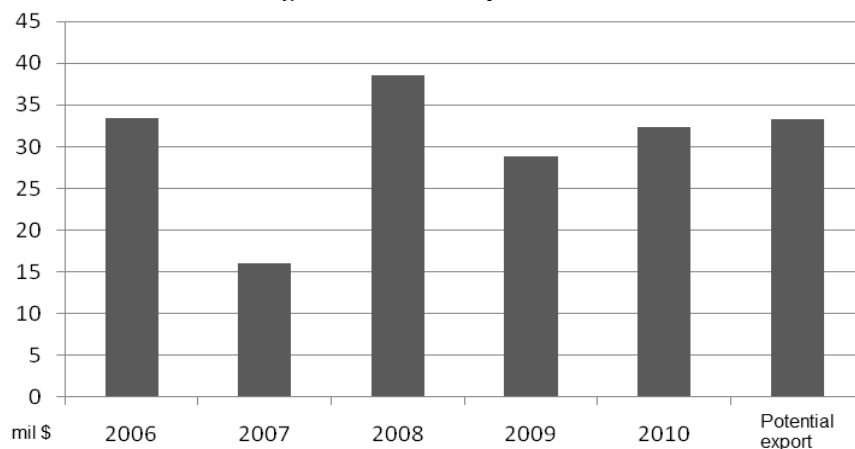
Serbia's export to Iran is greater than Serbia's export to Azerbaijan. In 2006 it amounted 33.465 million dollars and in 2007 only 16.05. It was \$38.602 million in 2008. During 2009 export plummeted drastically to \$28.859 million, which was also the case with most Serbia's export partners. It increased slightly in 2010 when it reached 32.297. Potential export, which is calculated by applying the obtained coefficients, amounts 33.253 million dollars, when the value of dummy variable, which refers to the economic and political distance is zero.

The value of this variable in relations with Azerbaijan is one, which explains a similar value of potential export to this, by far, smaller country. The reason for this is that the Serbian government did not show a particular interest in deepening economic relations with Iran during the previous decades. In the recent years, Iranian diplomacy and entrepreneurs have made some attempts to establish a closer cooperation with Serbia, while Serbian representatives keep

ignoring these attempts. The reason for this is probably fear of damaging relations with the countries of the developed West which have had bad relations with Iran for decades. The value of potential export to this large market would amount even 82.609 million dollars, provided that economic and political distance is overcome.

Apart from trade relations, Iran is interested in investing in Serbia but, due to the above-mentioned reasons, significant investments have not been made yet.

Figure 2 Serbia's export to Iran



Source: author's calculation

4.3. Kazakhstan

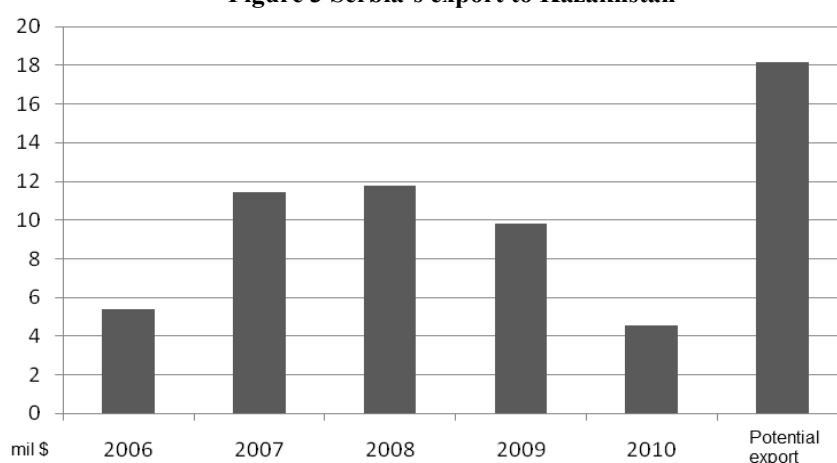
This country is very rich in natural resources, and the whole of its economy and domestic industry is based on it. Kazakhstan is the second former Soviet Republic when it comes to oil production, preceded by Azerbaijan. As this country is located on the transit road of pipeline, it mostly exports oil to the Russian Federation. Oil accounted for almost 15% of Kazakhstan's total export. After the reform of oil sector in Kazakhstan, which was carried out with foreign investments, the percentage of oil export in the total export increased to 60%.

According to the estimation of the Statistical Office of the Republic of Serbia, besides a small volume of trade, which will be analyzed in detail, some of the most important characteristics of economic relations with this country are the following: a narrow structure of goods in trade, domination of buying and selling relations in trade without long-term, higher and production forms of cooperation, undeveloped financial and banking cooperation, etc. Together with this, Serbia realizes a constant and large deficit in trade with this country.

Undeveloped economic relations between Serbia and Kazakhstan are such that the value of potential export is several times higher than the actual one,

even when dummy variable amounts zero. In 2006 export amounted to only 5.395 million dollars. In 2007 and 2008 it was about 11 million. It dropped to 9.792 in 2009 and then in 2010 its value was 4.576 million dollars. Potential export calculated using the obtained coefficients, with current undeveloped cooperation amounts 18.144 million dollars. If the existing economic and political distance is overcome, i.e. if state-owned and private entities of both countries get involved in the process of establishing closer cooperation, potential export could exceed 40 million dollars (Table 4, Figure 3).

Figure 3 Serbia's export to Kazakhstan



Source: author's calculation

There is a wide range of Serbian products for which there is a demand in the Kazakhstan market. These include the following: machines, equipment, transport vehicles and chemical industry products. Still, Kazakhstan imports these products from the Russian Federation, because these two countries have a good economic cooperation. Serbia already exports the products for which there is free "room" in Kazakhstan. The volume of this export is small and it includes telecommunication cables, furniture, constructions, aluminum parts, electrical industry products.

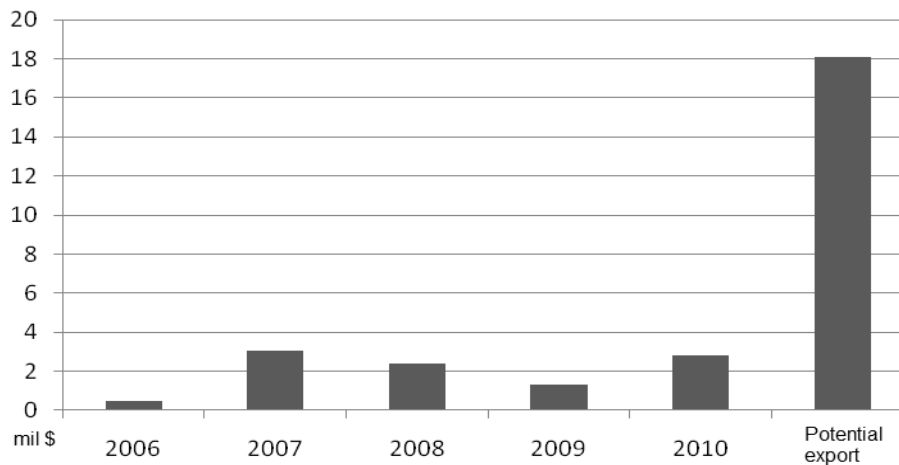
4.4. Turkmenistan

Turkmenistan was the poorest country of former Soviet Union. It possesses certain reserves of oil and gas, and other natural resources of this country are coal, magnesium and sulfates. The role of Turkmenistan in the Soviet economy was supplying other republics with raw materials like natural gas, oil and cotton. The focus on these raw materials left other economy branches undeveloped. More than 40% of the workforce are involved in agriculture, which does not satisfy domestic demand, because it is focused on cotton

production. Turkmenistan is one of the greatest world exporters of cotton fibers, and together with oil and gas it represents the whole product range of this country. The economy of Turkmenistan thus depends on food import and other consumer goods, which makes it an interesting Serbia's export partner.

The additional importance of Turkmenistan as an export market is extremely high growth rate which had a double-digit value from 1999 to 2009 and in 2010 it amounted 9.2% (The World Bank). From 2010 Turkmenistan has had a growth which was more rapid than in other former Soviet republics. The economy growth increased export potentials of this country.

Figure 4. Serbia's export to Turkmenistan



Source: author's calculation

The volume of Serbia's export to Turkmenistan is very low, which, taking into account geographical distance from this country and its size, is understandable. Still, the application of gravity model based on the latest coefficients, shows that these factors do not have such a great negative impact. Like Kazakhstan, potential export is much higher than the actual. In 2006 it amounted only to 0.447 million dollars and in 2007 it was \$3.067m. In the following years, it was about 2 million dollars. The value of potential export is \$18.103m. This opens up opportunities for the export of almost all types of goods, provided that this country does not start importing from the Russian Federation, to which it is still economically strongly attached.

Conclusion

Changes in the current imbalance in foreign trade can take place if import decreases to the necessary minimum and export increases, which can happen only if new markets are found.

Evaluation of parameters in the process of designing Serbian econometric model provided conclusions and guidelines for Serbian export policy. Some of them are not new or surprising, like the fact that economic growth affects the growth of our export, shown in GDP growth. Also, it is not surprising that geographical distance as a basis for the gravity model theory has a great statistical impact on Serbia as well.

On the other hand, the impact of the size of export markets shown in their GDP is weak and can almost be neglected. As the model's creation is based on a large sample and it does not refer to a specific region, but to Serbia's export in general, it can be concluded that rich markets do not have much free "room" for goods from Serbia.

The Caspian Basin is only one of concrete proposals, but it is certain that there are vast unused potentials in other regions and countries, too. These countries, following the results of the obtained model, do not necessarily have to be rich. It is important that they are geographically relatively close and that both sides put additional effort into overcoming economic and political distance. This would probably include all North African countries and some of the former Soviet Republics on the European soil. Certainly, there is the fourth factor. It is a growth of Serbia's economy- the aim which is currently hard to reach. Although important, this is not a crucial factor.

Potential Serbia's export to the Caspian Basin countries exceeds the actual export by far. The application of the gravity model shows that free "room" for Serbia's export to Caspian Basin countries amounts about 103 million dollars per year, while the realized actual value of export to the four analyzed countries amounted only to 45 million last year (the results from Table 4). Hypothetically, if diplomatic relations between Serbia and Caspian Basin countries were such that political and economic distance is overcome, potential export to this region would exceed \$243 million, i.e. it would be five times higher than the current export. Thus, these markets have the "room" for 6 to 10 times higher value of goods from Serbia than the value of current export, i.e. up to 20 times higher if these countries become economically and politically closer.

From all the Caspian Basin countries, Serbia realizes the highest export potential with Iran, i.e. the export to this country is the closest to the potential export. These potentials are not fulfilled due to the great geographical distance (geographically, this is the remotest country of the region) and not because of close cooperation. When it comes to the countries with which potential value of export is low, the number of such neglected or insufficiently used Serbia's export markets in the world is so big that the realization of all important export potentials would substantially increase the total value of export.

All the previously mentioned conclusions suggest that Serbian diplomacy, institutions and entrepreneurs need to put much more effort into intensifying trade with Caspian Basin countries. First of all, the factor of economic and political distance is the only one that can be directly influenced. The distance is a fixed variable, GDP of export markets cannot be affected, while the own GDP is much harder to change than the relations with the countries that also have interest to cooperate.

The reason which explains the recent lack of initiative and interest in the increase of trade with these countries is a Serbian orientation towards the EU, CEFTA and Russian markets. This, certainly, cannot be a justification, as there is no economic logic in limiting a country's export. In the case of three analyzed post-Soviet countries, unrealized export potentials are the result of the fact that these are relatively young countries and economic cooperation with none of them, except with the Russian Federation, has reached its full potential. Still, Azerbaijan is an exception to this, as the relations with this country have reached by far a higher level. In the case of Iran, the lack of closer cooperation which is realistic and possible is the result of the recent orientation of Serbian politics.

The second possible explanation for the lack of the country's activity is a low value of export, which would remain relatively low even if it doubled. Still, the application of gravity model showed that these markets could receive a several times, even ten times higher volume of export from Serbia. As it was calculated, the value of export in the Caspian Basin region could reach \$243million as opposed to the current \$45m, which should be a good reason for an attempt to bring the relations back to the level on which they used to be before.

References

- Dragutinović M.R. (2005) "Ograničenja gravitacionog modela u ekonometrijskoj analizi spoljnotrgovinske razmene", *Ekonomski anali*, vol. 50, no. 167, pp. 77-106.
- Frankel J. & Romer D. (1999) "Does Trade Cause Growth?", *American Economic Review*, 89(3)
- Gallup J. L. & Sachs J. (1998) *Geography and Economic Development*, (Columbia University National Bureau of Economic Research NBER)
- International Monetary Fund (april 2009), *Crisis and recovery*, World Economic Outlook
- Jovičić, M. (2002) *Merenje komparativnih prednosti i strategija unapređenja spoljnotrgovinske razmene Srbije* (Beograd, Ekonomski fakultet)
- Lima N. & Venable A. (1999) "Infrastructure, Geographical Disadvantage, and Transport Costs", *World Bank Policy Research Working Paper* No. 2257.
- Privredna komora Srbije - Privredna saradnja: Srbija i Iran, PKS: www.pks.rs/MSaradnja.aspx?id=71&p=1&pp=2 10 oktobar 2013.
- Ministarstvo spoljnih poslova republike Srbije, Bilateralni odnosi, <http://www.mfa.gov.rs/sr/index.php/spoljna-politika/bilateralni-odnosi?lang=cyr>, 3. maj 2014.

Republički zavod za statistiku - <http://webzrzs.stat.gov.rs/WebSite/> 10 oktobar 2013.

Stanojevic N. & Batić J. (2009) "Assessment of Serbian export potentials in Mashriq countries", in *Dealing with the Global Economic Crisis by Companies and Economies*, Belgrade, 27 november 2009 (Megatrend university, Belgrade)

Stanojevic N. & Batić J. (2010) "Quantitative analysis of Serbia's export potential to North African countries", *Megatrend review*, 7 (1): 163-180

UN United Nations Commodity Trade Statistics Database

UN Population Fund (2006), *The State of World population*, New York.

World bank Data - Key Development Data & Statistics

DIVERZIFIKACIJA IZVOZNIH TRŽIŠTA SRBIJE – POTENCIJALI ZA IZVOZ U ZEMLJE KASPIJSKOG BASENA

Apstrakt: Ključna obeležja aktuelnih trgovinskih odnosa Srbije sa inostranstvom su visok i rastući spoljnotrgovinski deficit i veoma mali broj izvoznih partnera. Činjenica da Srbija skoro čitav svoj neveliki izvoz plasira na tržišta Italije, Nemačke i tri bivše članice SFRJ, ukazuje na potrebu za geografskom diverzifikacijom izvoza. Za prevazilaženje brojnih slabosti spoljne trgovine Srbije od ključnog značaja je pronalaženje novih ili revitalizacija ranijih tržišta. Primenom modela gravitacije utvrđuju se determinante srpskog izvoza i utvrđuju potencijalni izvozni pravci. Koeficijenti dobijeni u nekim ranijim studijama, zasnovani su na podacima koji su važili pre Svetske finansijske krize. Kako je izvoz u zemlje Evropske unije, koje su geografski najbliže Srbiji, smanjen tokom krize, polazna pretpostavka je da su koeficijenti sada značajno promenjeni, a posebno koeficijent geografske distance za koji se očekuje da je značajno smanjen. Dobijeni koeficijenti se, zatim, primenjuju na zemlje Kaspijskog basena, koji se do sada, zbog relativno velike razdaljine, nije smatrao atraktivnim izvoznim tržištem. Ovo je region koji, zbog brojnih geografskih i ekonomskih obeležja, može predstavljati interesantno tržište za srpske proizvode, uprkos velikoj udaljenosti. Primenom modela gravitacije utvrđuje se da u nekim zemljama ovog regiona ima dovoljno slobodnog „prostora“ za srpski izvoz.

Ključne reči: izvoz Srbije, model gravitacije, geografska razdaljina, Kaspijski basen.