

THE EFFECTS OF REGIONAL INTEGRATION ON EXPORTS

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Introduction

Since the early of 1990s the countries from the South Eastern Europe (SEECs)¹, have paid particular attention to regional economic integration. This fact confirms the view that International Economic Integration is a desirable economic strategy for small and medium size countries (Jovanovic, 1998). Under these circumstances, the economic policy (intervention in the form of integration) may simply add an adjustment mechanism to the existing highly imperfect and sub-optimal market situation. In addition, multilateral liberalization and regionalism could reinforce each other provided that regional integration schemes adopt a relatively liberal international trade and investment policy. On those grounds, regional arrangements may cause a favourable development for the SEECs, giving them the possibilities to grow richer in the medium and long term.

Undoubtely integration (regionalism) might be good for the multilateral trading system (globalization). In fact, the multilateral trading situation, would not be much better without the recenet “great” free trade agreements, and could easily have been worse (Krugman, 1995). On the contrary, one may observe that the creation of a trading block does not immidiately lead to a breakdown of the international trading system, (Winters, 1999). This is the reason why SEECs eager to engage in increasing trade integration with the EU, thus lining up as candidates to becoming members of the EU at the same time.

In 1997 EU initiated the Regional Approach Principle, according to which, the countries of the so-called West Balkan Region (Albania, Bosnia and Hercegovina, FYR. of Macedonia, FR Yugoslavia and Croatia) had to be mutually responsible for the advance in the contractual relations with the EU. This principle was proposed because of the index of regional reconstruction, measured by different factors (level of development, population potential, cultural affinity, success in restructuring, common borders, ethnic minorities, political instability, administrative structure, etc.) (Petrakos, 1996).

No matter these results, out of the mentioned group, FYR. of Macedonia managed to prove that the further EU integration should not be conditioned by the so-called regional principle, but on the contrary - the progressive approach should be applied, which means to respect the individual situation of each country. This approach was implemented into the Stabilisation and Association process (SAP) proposed by the European Commission on May 26th 1999. According to that principle, each country have to gear its political, economic and institutional development to the values and models underpinning the EU: democracy, respect for human rights and a market economy. On the basis of that principle, on the 9^h of April 2001, in Luxembourg, during the special ceremony on the margins of the General Affairs Council, the Special Stabilisation and Association Agreement has been signed between the EU and the FYR of Macedonia. What is unique for the Stabilisation and Association Agreement is the fact that according to that Agreement, FYR.of Macedonia is obliged to sign a Convention for Association with the country which seems to be second in the list, to sign the Stabilisation and Association Agreement with the EU. In that respect, FYR of Macedonia is granted rather central position in the regional co-operation.

¹ The group of SEECs in our case includes: Albania, Bosnia and Hercegovina, Bulgaria, Croatia, R.Macedonia, Romania and SR.Yugoslavia

It is finally the moment to conclude that it is quite logical to expect that the good and tight co-operation with the EU is only possible through the tight co-operation between the different parts of the complicated puzzle called Balkan area. This is the main reason why we try to measure the possibilities of economic integration between the SEECS and its impact on exports. But, there are serious methodological limits to quantification of these effects, since it is not yet possible to create a reliable counterfactual situation which would stimulate the scenarios occurring with or without integration. No matter these obstacles, the effects of international economic integration are less or more successfully measured by the help of different econometric models: ex ante, ex post, and through general equilibrium models (Jovanovic, p. 342).

In this paper (section 1) we first analyse the bilateral trade structure of the SEECS, with the FYR of Macedonia. Then we estimate a simple gravity model for the SEECS in order to evaluate the relevance of “regional integration” on exports (section 2). In addition (section 3), we compare the estimated results from the gravity model (taken as “integrated” period) with the projected results for the “pre-integrated” period, in order to measure the effect of integration. At the end (section 4), we give the concluding remarks.

Trade Structure of the SEECS

As the trade structure between SEECS is concerned, we are concentrating on the geographical profile. It is rather puzzled issue, because the geographical factors (the closeness between the countries in the region) did not go together with the history - political factors. The reason is quite straightforward – the Balkan, due to the historical and political reasons has never been politically integrated, instead, it has always been separated. In another words, while it is logical to expect that geographical proximity leads to trade creation in the region, history induces trade diversion.

Table 1 indicates the low development of inter-region trade. The inherited divisions, general underdevelopment and overall security problems is what caused the low levels of trade between SEECS and what prevented the development of regional integration.

Table 1. SEECS: trade with countries in the region, 1996 (per cent of total)

	Croatia		B. and H.		Yugoslav		Albania		FYROM		Romania		Bulgaria	
	Ex.	Im.	Ex	Im.	Ex.	Im	Ex	Im	Ex	Im	Ex	Im	Ex	Im
Croatia			12	0.8	0	0	0	0	1.3	0	0	0	0	0
B. and H.	0	31.2			68.5	9.9			0	0	0	0	0	0
Yugoslav	0	0	21	5.6			0	0	12	5.2	0	0	0	0
Albania	0.8	1	0	0	0	0			3	2.5	3.5	2	0	3.5
R. Maced	0	2.7	0	0	21	11	2.8	0.3			0.3	0.7	3.3	6.6
Romania	0	0	0	0	0	0	0	0	0	0			0.9	0.6
Bulgaria	0	0	0	0	4.3	0	0.9	0	3	0.6	1.5	1.5		

Source: The Vienna Institute Monthly Report 1997/12

The presented data shows that the trade was much bigger with certain countries from the EU (Italy, Germany) than with SEECS (Table 2). The trade figures of the EU with SEECS (only Yugoslavia is missing), show the same trends –very small proportion of EU trade with the SEECS group (Table 3). As the FYR of Macedonia and its most important foreign-trade partners is concerned, 39.0% of its exports and 29.9% of its imports belong to the group of EU countries, and 25.3% and 20.7% respectively belong to the countries of the SEECS region (Table 4).

Table 2. SEECs: trade with selected countries, 1996 (per cent of total)

	Germany		Italy	
	Exports	Imports	Exports	Imports
Croatia	18.6	20.6	21	18.2
B. and H.	15.7	12.9	25.9	12.2
Yugoslavia	7.9	12.8	9.8	10.6
Albania	6.1	4.6	51.5	37.9
R. Macedonia	18.7	14.7	4.5	6.7
Romania	18.4	17.6	17.1	15.3
Bulgaria	9.1	10.7	9.6	5.9

Source: The Vienna Institute Monthly Report 1997/12

Table 3. Trade of the EU with SEECs, 1996 per cent of total

Country	Exports	Imports
Croatia	5.6	3.5
B. and H.	0.8	0.1
Albania	1.1	0.4
R. Macedonia	1.2	0.9
Romania	6.4	7.2
Bulgaria	2.4	3.4

Source: Export Strategy for the FYR of Macedonia, Macedonian Academy of Sciences and Arts, 1999.

Table 4. SEECs: Most Important Foreign-Trade Partners of the FYR of Macedonia, 1998 per cent of total

Country	Exports	Imports
Germany	21.4	13.3
Yugoslavia	18.2	12.8
USA	13.2	5.3
Italy	7.3	5.7
Greece	6.3	5.9
Slovenia	3.1	7.8
Bulgaria	3.2	4.5
Ukraine	0.3	6.2
Croatia	3.9	3.4
Russia	2.0	4.8
Netherlands	3.3	2.2
Switzerland	3.0	1.4
Austria	0.7	2.8
Turkey	0.7	2.7
Total	86.6	78.8

Source: Export Strategy for the Republic of Macedonia, Macedonian Academy of Sciences and Arts, 1999.

As we pointed out, the uniqueness of the Stabilisation and Association Agreement between the EU and the FYR of Macedonia is the fact that according to that Agreement, the examined country is granted rather central position in the regional co-operation. This is exactly why we feel the need to attempt to establish a theoretical framework for measuring the influence of the separate factors on the possibility and readiness for an economic integration of the Balkan (SEECs) countries, with the use of a *gravity equation*², and hencewith, the intensity of their possible collaboration. Namely, it is exactly the use of the gravity models that provides the evaluation of the influence of the integration processes on the foreign trade of each separate country. In this process of analysis, not only the transitional countries of

² The gravity equations include both the internal, and the external determinants of the foreign trade flows. The former begin from the assumption that the flow of goods from one border to the other equals from one side the total production of the exporting country, and from the other side on the total consumption in the country that appears as an importer of that product. However, the main characteristic of the gravity equations is that they rely on the cross-section data, and so the analysis done with their help is called cross-section analysis. In other words, the adaptation of the countries' foreign trade policy to the change of prices and other relevant variables is not examined. Instead, with these equations the "reaction" of different countries to the change of the surrounding, the system and the economic policy factors, is followed in a given time period.

the so-called “West Balkan” are included, but also R.Bulgaria and Romania, that according to the functioning of the actual form of existence of the open regionalism – The Pact of Stability, belong to the SEECS group.

The Gravity Model for SEECS

There are many approaches and studies examining and measuring the influence of the regional economical integrations on the foreign trade (Tinbergen 1962, Linnemann 1966, Geraci, V. and Prewo, W. 1977 and Brada, J. 1985). Unfortunately, very few studies in this field exist on the countries that are not members of any international group, and even then when they exist, they are mainly separate, and not group studies (Momirska-Marjanovik, 1998 and Rodrik D., 1994).

Before we proceed with the gravity model, we should first clarify a few things such as:

1. The sample of countries can be considered as homogenous;
2. We adjust the domestic product by taking the adjuste for PPP domestic income;
3. Although we are dealing with "relatively close countries"³ it is interesting to notice that in the 10-years period examined (1991-2000)⁴, these countries have unnaturally become far, mostly because of the happening on the territory of former Yugoslavia and closing the borders between them. Alternative ways had to be used and consequently, transport expenses were much bigger.

The assumptions 1 and 2 enable to calculate the effects from the integration, in a way that apart from the surrounding variables (geographic distance, level of economic development), we also incorporate a dummy variable that will measure the effect of the integration on exports between the member-countries in the group. So, starting from the assumption that all the observed countries in the sample tend to be EU candidates (and separately stressing out that FYR.Macedonia, Bulgaria and Romania, according to their individual contracts, are in a somehow advanced phase⁵), we establish the standard gravity model (Arcangelis, 2001) for the integration of SEECS in the form:

$$L(EXPORTS) = C(2) * l(GDPX) + C(3) * l(GDPM) + C(6) * l(DIS) + C(10) * DUMYU (1)$$

where:

EXPORTS = value of the exports of the specific country expressed in \$1000.

GDPX = PPP of the exporting country

GDPM = PPP of the importing country

DIS = distance between the capitals of the two countries.

DUMYU = dummy for a previous belonging to the Yugoslav Federation.

As we can see, the variables of the model (income, distance and political dummy)⁶ measure the influence of the surrounding political and economic system for each country. Namely, we are considering the factors of supply from the exporting country and factors of demand from the importing

³ Although not all of them are neighboring countries, the distances between their capitals are not big.

⁴ Mentioning the "period" does not mean that we are analyzing a time series. On the contrary, it is only to "locate" the time, and the results presented will actually relate to the coefficients from the cross-section analysis of 1999.

⁵ Romania and Bulgaria have already started the process of negotiations for membership in the Union, R.Macedonia signed the agreement for association and stabilization, while the other countries have not begun this process yet.

⁶ We have also tested different explanatory variables (population in the exporting and the importing country, dummy for the level of economic development (calculated as national income per capita), dummy for the geographic distance of the integration member countries, dummy for the existence of an agreement for a free trade collaboration, but the estimated coefficient were not statistically significant.

country, as well as factors of "trade restraint"⁷. In that manner, the surrounding shows that mainly neighboring countries are taken under consideration, and that is why it is expected the factor "distance" (C6) to be statistically significant and with a negative value (it is supposed that the greater the distance between the countries, the smaller the possibility for the influence of the factors of "trade restraint" on strengthening the integration processes between separate countries in the group is). Taking into consideration the fact that a bigger absorbing power and income stimulate exports, it is expected that (C2) and (C3) have a positive sign. As the previous belonging to the Yugoslav Federation is concerned (C10), this dummy is equal to 1 whenever two members of the economic integration trade with each other. We expect this variable to be statistically significant and with a positive sign, since the non-existence of language barriers in the case of countries which belonged to the same federation.

Empirical Results

The greatest part of the data, except those that refer to the value of the exports are obtained from the calculations made from the National Banks and Statistical Offices of each country. In this occasion it should also be stressed that fortunately, there are no problems of methodological nature that refer to the way of calculating the value of exports, i.e. imports, to and from the SEECS, because a harmonization of the methodology of this calculation has been made, so the same one goes for all the observed countries⁸.

The estimation of the regression is done with the help of the statistical package Eviews, 3^d version⁹. Because it was not possible to make the observations for a longer period of time, the evaluation of the parameters from the equation (1) was performed only for 1999. It is interesting to mention that the choice of this year especially corresponds to the justifiability of the test on the influence of the integration scheme upon the foreign trade exchange. Namely, 1999 is the year when on September 8th, after the positive decision of the Council of Ministers of the Union, the FYR of Macedonia started its negotiating process for concluding the Agreement for Association and Stabilization, and Bulgaria and Romania intensified the process of negotiating for a sooner association. That is also the year when the war conflicts in Kosovo exploded, that was the reason as for changes in the population structures in some countries from the "group", as well as for changing the normal way of movement of the goods for trade, and the unfulfillment of some contracts as instruments of the foreign trade policy of the countries in the region. Then, that is the year when certain agreements for a free trade cooperation between the countries were realized, and what is maybe the most important thing, that is the year when after NATO's intervention on FR Yugoslavia, the process for cooperation between all the countries in the Balkans slowly, but definitely restarted.

But, what the results from the gravity model for SEECS (economic, distance and political factors included) show? Table 5 summarizes the results from the estimated gravity equation of economic integration of the SEECS. As can be seen, the results from the estimated coefficients are statistically significant and have the expected signs, which confirms the validity of the gravity model. The relatively high coefficient of determination ($R^2=0.654$) confirms the appropriate specification of the model, especially if it is combined with the results from the test for the eventual presence of multicollinearity. Namely, the results show that there are no problems of multicollinearity present in the model. As far as the results from the Durbin-Watson statistics are concerned (1.989), the model is in the zone of acceptance, which shows absence of autocorrelation between the residuals.

⁷ In this group we can name: the transport expenses, that depend exactly on the geographic distance between the countries; the trade barriers (quotes, tariffs); the non-quantitative variables (political factors - belonging to a specific economical or/and political community, language barriers - as there are cases in neighboring countries).

⁸ According to "Phare pilot project on external trade statistics", *Evaluation of EUROSTAT*, the State Statistical Office of the Republic of Macedonia, 1998.

⁹ The calculation is obtained in collaboration with the analytical section in the Macedonian National Bank.

Table 5. Parameter estimates for Equation (1)

	Coefficient	St.error	t-statistic	Probability
C(2)	1.117	0.192	5.821	0.00
C(3)	1.196	0.1913	1.017	0.31
C(6)	-1.827	0.337	-5.424	0.00
C(10)	3.251	0.513	6.333	0.00

$R^2=0.653799$

Adj. $R^2 = 0.625728$

D.W. = 1.988892

In accordance with the theoretical explanations of the ex-post models, we also measure the difference between the actual (estimated) and expected (without integration) exports for the SEECS group. This difference is the ratio of actual to expected exports, expressed as:

$$2^{\text{Total}} = \text{actual exports/expected exports}$$

The integrated period has been defined on the basis of the estimated equation (1). Then, the parameter estimates have been employed to measure a hypothetical situation: what could have happened with exports in a situation without integration? The calculations were made according to the Winters & Wang model (1994). The results are shown in Table 6.

Table 6. Effect of integration in SEECS group

	Coefficient
C(2)	1.051
C(3)	-0.300
C(6)	-1.677
C(10)	3.218
Total	2.292
2^{Total}	4.899

The results represent export creation of exports (since there is an excess of actual inter-member exports over the expected volume of exports). This excess is attributed either to changes in income & competition, or to reduction in barriers to trade because of the signed agreement for free trade collaboration between the countries in the group¹⁰, that at the same time measures the effect of trade policy.

Conclusions

The main conclusions that could be drawn from the analysis shown here are:

- Trade structure of the SEECS group gives signals for very limited possibilities for regional integration (with exception of FYR.of Macedonia).
- Estimation results underline the importance of physical distance in determining exports. Since the transportation costs are related to physical distance, then we may conclude that the level of the inter-regional exchange is determined by the “distance from the gravity center”, so that the smaller distance means a bigger possibility for realizing the trade exchange in the same time.
- The inclusion of a dummy variable in the model (previous belonging to the Yugoslav Federation) is positive since the goodness of fit always increases when adding the dummy (the results not shown in the text). Relatively large value of the coefficient (3.251256) shows the effectiveness of the economic integration tested.
- The positive and relatively high coefficient of the income elasticity of the exporting countries shows that these countries have economies with an increasing power of absorption, and since, increasing possibilities of the inter-regional trade.

¹⁰ Only R of Macedonia has signed agreements of this kind: with Bulgaria, FR Yugoslavia and Croatia.

- The results correspond to those obtained from analyses of other gravity equations of the transition countries as well (Petrakos, 1996, De Angelis, 2001), for the importance of the factors chosen, especially the surrounding factor.
- In 1999 the conditions for a regional integration of the Balkan transition countries has already been created. Above all, that was made possible as a result of their geographic proximity and the opening of their economies for the cooperation in the region, and so the former belonging to the same federation is started to be used as an advantage and not as a handicap.

The results above could be used as a line of direction for the future cooperation between SEECS towards regional integration. In that respect, their proximity, trust, the increasing absorption power of their economies and the diversification of their production, the agreements signed for a free trade cooperation, and their common minority, border and territory disputes with the neighbors, could easily be transformed into bridges for collaboration. In this way, these countries could easier (and together) continue to trace the way to the economic integration to the EU.

References

- Bogoev, K., Zikov, A. and Blazevski, B. (eds) (1999) *Export Strategy for the Republic of Macedonia*, Macedonian Academy of Sciences and Arts.
- Brada, J., Mendez, F. and Jose, A. (1985) "Economic Integration among developed, developing and centrally planned Economies: A Comparative Analysis", *The Review of Economics and Statistics* Vol.LXVII, No4, November.
- De Arcangelis, G., Galeotti, M. and Giovannetti, G. (2001) "Trade Links with the SEECS: Trade Specialization and Industrial Structure", *Conference Whither SEECS Development? A SME Perspective for Integration with the EU*, Bari (Italy) 15-16 February 2001.
- Geracy, V.J. and Prewo, W. (1977) "Bilateral trade Flows and Transport Costs", *The review of Economics and Statistics*, Vol.59.
- Jovanovic and Miroslav, N. (1998) *International Economic Integration*, Limits and prospects, Second Edition, London and New York: Routledge.
- Krugman, P. (1995) "The move toward free trade zones", in P. King (ed.) *International Economics and International Trade Policy*. New York: McGraw-Hill.
- Linnemann, H. (1972) *An Econometric Study of International Trade Flows*, Amsterdam, North-Holland Publ.Co., Amsterdam-London 1972.
- Momirska-Marjanovik, M. (1998) "Primena na gravitacioniot model vo ekonomskite istrazuvanja", *Godisnik na ekonomskiot fakultet- Skopje*, tom 33.
- Petrakos, G. (1996) "The Regional Dimension of Transition in Central and East European Countries", *Eastern European Economics*, September-October 1996.
- Rodrik, D. (1994) "Foreign Trade in Eastern Europe's Transition: early results", in Oliver Jean Blanchard, Kenneth A.Froot, and Jeffrey D.Sachs (eds) *The Transition in Eastern Europe*, The University of Chicago press, Chicago and London.
- Sekulovska-Gaber, B. (1996) "Macedonian Exports", *Eastern European Economics*, November-December 1996.
- State Statistical Office of the Republic of Macedonia (1998) "Phare pilot project on external trade statistics", *Evaluation of EUROSTAT*.
- Tinbergen, J. (1962) *Shaping the World Economy*, suggestions for an International Economic policy, The Twentieth Century Fund, New York, 1962.
- Winters, P. (1999) "Regionalism vs multilateralism", in R. Baldwin, D. Cohen, A. Sapir and Venables (eds) *Market, Integration, Regionalism and the Global Economy*. Cambridge: Cambridge University Press.
- Winters, L.A. and Wang, Z.K. (1994) *Eastern Europe's International Trade*. Manchester&New York, Manchester University Press.