

DISINTEGRATION AND TRADE IN SOUTHEASTERN EUROPE^{*}

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Abstract

This paper analyses the impact of disintegration of an economic union on trade patterns. Our study focuses on Southeastern Europe, which was highly fragmented during the nineties because of the dissolution of the Council of Mutual Economic Assistance (CMEA) and of the Socialist Federal Republic of Yugoslavia (SFRY). The empirics are based on the gravity equation and the estimation uses a 29-country panel database for 1993-2001. We show that despite the setting up of barriers to trade and the war, trade flows between countries of the region remained higher than explained by their economic size and mutual distance.

Key words : disintegration, gravity equation, Southeastern Europe.

Résumé

Ce papier analyse l'impact de la désintégration d'une union économique sur les flux commerciaux. Notre travail empirique s'appuie sur l'expérience de l'Europe du Sud-Est, marquée au début des années 90 par la désintégration du Conseil d'Assistance Economique Mutuelle (CAEM) et celle de la République Socialiste Fédérative de Yougoslavie (RSFY). Nous estimons une équation de gravité sur le commerce mutuel de 29 pays entre 1993 et 2001. Nous montrons qu'en dépit de la mise en place de barrières aux échanges et des guerres les flux commerciaux de la région sont restés supérieurs aux niveaux expliqués par la taille économique et la distance mutuelle.

Mots-clés: désintégration, équation de gravité, Europe du Sud-Est.

JEL Classification: F13-F15

1- INTRODUCTION

This paper deals with the impact of disintegration of an economic union on the trade flows of its successor States. It analyses, in particular, the question of persistence of trade flows. Several works have highlighted the role of history on bilateral trade flows : according to Fidrmuc and Fidrmuc (2000, p. 2) ‘the common history is more important than formal liberalization of trade’. The assumption underlying this paper is that history matters and can influence durably the level and the structure of trade flows. History can affect the realization of trade potentials and thus the effects of regional integration agreements. Our work lies at the crossroads of the analysis of disintegration and that of the regional integration agreements. The analysis is based on the gravity equation that allows highlighting deviation from ‘normal’ patterns of trade by the comparison of trade levels with a norm.

The disintegration of CMEA and Yugoslavia¹ in 1991 dramatically affected economic ties between South East European countries² but it created conditions for a reorganization of the economic geography of the region. From the mid-nineties several initiatives aiming at multilateral cooperation throughout the region have appeared but they did not end in a deeper regional integration. The set up of the Stability Pact for South East Europe in 1999³ has relaunched the process of regional cooperation and the formal liberalisation of trade. The experience of disintegration/reintegration in Southeastern Europe is particularly interesting since it includes different specific bilateral relations. However it is very complex since it is not easy to identify the causes and the consequences of the upheavals that led to the current situation.

This paper makes several contributions to the existing literature. It studies the effects of disintegration in Southeastern Europe and presents their evolution for three time periods. The data sample includes all South East European countries for nine years and several econometric approaches are used to highlight the intensity of trade in the region on a

¹ Yugoslavia refers to the Socialist Federative Republic of Yugoslavia (SRFY). It was constituted of six Republics: Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Slovenia. Its formal dissolution started in June 1991 with the declaration of independence of Croatia and Slovenia. In 1992 Serbia and Montenegro formed the Federal Republic of Yugoslavia (FRY) that became the Union of Serbia and Montenegro in 2002, following a constitutional change.

² Southeastern European countries are: Albania, Bulgaria, Romania, Bosnia-Herzegovina, Croatia, Macedonia, Serbia and Montenegro. Slovenia is not involved in the recent process of trade liberalization in South-East Europe but it is sometimes included in the analysis because it was a Republic of Former Yugoslavia. Moldova has been included in the Stability Pact for South-East Europe but it is not included in the analysis because data are not available.

³ For a detailed analysis of the Stability Pact for South East Europe see Welfens (2001).

multilateral as well as on a bilateral basis. The period of study gives some indications about the potential effects of reintegration.

The next section presents some stylised facts on South East European countries and its disintegration in the nineties. Section 3 reviews the theoretical literature on the links between disintegration and trade and between regional integration agreements and history. The econometric specification, the estimation strategy and data are presented in section 4 and the results are laid in section 5. Section 6 concludes.

2- TRADE IN SOUTHEASTERN EUROPE: A HISTORICAL APPROACH

During the eighties Southeastern Europe was composed of two sub-regions: the six Republics of Yugoslavia and two members of the CMEA: Bulgaria and Romania. Albania left the CMEA in 1961 and followed an autarkic path of development. The economic links between the two sub-regions were relatively weak and the area was not integrated despite the geographic proximity (Uvalic, 2001). The main part of Bulgarian and Romanian trade was oriented towards Soviet Union and the other members of the CMEA, following what Graziani (1981) called “radial trade”. Thus, the dismemberment of the CMEA provoked a dramatic collapse of trade among former members. It changed drastically the geographic pattern of their trade, characterized by a reorientation towards the European Community that became their main partner. Although the reorientation could have benefited the trade relations between the two sub-regions, war and sanctions on the territories of successor States of former Yugoslavia hampered this process. These upheavals are also an explanatory factor for the limited reorientation of trade of Bulgaria and Romania towards the European Community because they made trade more difficult and more expensive, isolating in a way the two countries of Eastern Balkans⁴.

At the end of the eighties and partly due to a preferential trade agreement⁵ Yugoslavia was realizing more than 40% of its trade with the European Community, whereas about 20% was oriented towards the Soviet Union. The Yugoslav economic space was highly integrated (Heimerl, Rizopoulos and Vukadinovic, 1999) and the productive system of the six Republics

⁴ Eastern Balkans refers to Bulgaria and Romania, Western Balkans to Former Yugoslavia and Albania.

⁵ In 1980 the European Community and SFRY signed a cooperation agreement.

was highly complementary (Bazler-Madzar, 2000). The domestic trade –inter-Republic deliveries and purchases- was very important for the production. As shown in table 1 it was characterized by a strong asymmetry.

-Insert table 1 about here-

Serbia-Montenegro was the main supplier and the main client for the products of three Republics: Bosnia-Herzegovina, Croatia and Macedonia. Croatia was the main partner of Serbia-Montenegro and Slovenia. Moreover two Republics had a gross positive balance with the other Republics: Slovenia and Croatia. The other Republics had a negative balance.

The causes of the Yugoslav disintegration are numerous. In the economic field the income gap between Republics or regions and the feeling of the richest to be exploited by the poorest are the arguments the most frequently advanced. The first signs of the disintegration of the Yugoslav economic space were the commercial wars between Serbia and Slovenia and between Serbia and Croatia from the end of 1989. The three republics had the highest income per capita and were responsible for more than 75% of the Yugoslav domestic trade. The two periods of sanctions against Yugoslavia and the Greek embargo against Macedonia⁶ have increased the fragmentation of the markets. These upheavals had a dramatic impact on inter-Republics trade flows that decreased from 42% of the national income in 1987 to 6% in 1993. According to Bazler-Madzar (2000) the fragmentation of the market was also responsible for a fall of the production comprised between 88% for Slovenia and 38% for FRY. Slovenia and Macedonia suffered the most from the disintegration, the first because of its large openness and the second because of the strong concentration of its production structure.

The most noticeable evolution concerning the geographical structure of trade of Southeastern Europe during the nineties was the increase of the weight of the European Union with which it realized more than 60% of its trade. Trade with Central Europe also increased slightly. Figure 1 shows that in the meantime the trade with CIS and Southeastern Europe declined. Mutual trade between Southeastern European economies decreased from 15% in 1993 to 10% in 2001.

⁶ The first period of sanctions, from 1992 to 1996, forbade the UN countries to have commercial, financial, cultural or scientific relations or cooperation with FRY. The second one, from 1998 to 2001 took shape of an embargo on oil products. The Greek embargo against Macedonia lasted from 1991 to 1995.

-Insert figure 1 about here-

Table 2 provides a more detailed analysis of the exchange orientations of Southeastern European countries. First of all, a very weak integration between the ex-Yugoslavia's successor states, Albania, Bulgaria and Romania can be observed. Except for Bulgaria's exportations toward Serbia-Montenegro and Macedonia, mutual commercial flows never represent more than 5% of their exchange. Within the region, successor States of ex-Yugoslavia are rather oriented toward themselves, Romania is rather oriented toward central Europe and Albania is almost exclusively oriented toward the EU. The case of Bulgaria is a bit atypical because its exchange is rather oriented toward the CIS and Southeastern Europe than toward other countries in the region. The fairly high part of CIS in the imports of these economies reflects their dependence on energy, because the imports are primarily those of petrol and gas. It is particularly the case of Bulgaria.

The conclusion that can be drawn from this first analysis is that the reorientation of exchange following the upheaval of the 1990s was not done in profit of Balkan economies. Table 2 enables, among other things, to identify the persistence of significant commercial flows between the successor states of ex-Yugoslavia. The mutual trade between these states represents an average 20% of their exchange.

-Insert table 2 about here-

Table 3 shows trade structure between ex-Yugoslav Republics in 2001 and it can be compared to table 1. First, it highlights the weak role played by Serbia-Montenegro in the trade of the region. The major part of exchange in the region takes place between Croatia, Slovenia and Bosnia-Herzegovina. A high concentration of Croatia's and Slovenia's trade flows can be observed: more than 80% of their trade to or from Southeastern Europe is made between these countries or with Bosnia-Herzegovina. The existence of trade statistics for the two Bosnian entities does not enable to determine the part of these flows that is made with each of the entities that compose it, the Croato-Muslim Federation and the Serbian Republic. Similar concentration characterizes Bosnian imports that come essentially from Croatia and Slovenia, while its exports are divided between Serbia-Montenegro, Croatia and Slovenia. Finally, the trade of Serbia-Montenegro is the least concentrated, although 40% of it is achieved with

Macedonia. Thus, the trade between Former Yugoslavia's successor States is, as in 1987, characterized by a strong asymmetry but it seems that trade structure between Republics has completely changed.

-Insert table 3 about here-

This first analysis of the geographic structure of flows in Southeastern Europe leads us to a hypothesis that the region is highly fragmented, although in the case of the successor States bilateral flows between some Republics of Former Yugoslavia remain intense.

3- A REVIEW OF THE LITERATURE

In this paper, we try to determine the effects of disintegration on the trade flows between successor States, while placing ourselves in the perspective of reintegration. The literature on disintegration and trade on one hand and on historic ties and preferential trade agreements on the other hand show that history influences trade flows, which remain intense after a disintegration experience. Moreover, it suggests that disintegration influences reintegration perspectives through several mechanisms.

3-1 Disintegration and trade

The break-up of the Eastern block since the beginning of the 1990s and regional integration movements that followed are at the origin of a certain number of works on the economic effects of disintegration. They try to answer several types of questions: What are the effects of disintegration? What is its scope? What are the costs of disintegration?

An analytical framework of the economic disintegration was proposed by Andreff (1993), who suggests that disintegration is to be characterised by "exactly the opposite" effects of regional integration. The inversion of Viner's (1950) propositions and of those of the customs union theorists thus leads to the construction of a theory of international economic disintegration. Its application on the CMEA enables to highlight the dramatic effects of the disintegration on mutual trade.

The measure of the impact of the integration and disintegration process demands however a comparison to an international “standard” (“norm”), which leads to the gravity model. They are presented in detail in section 4. De Ménil and Maurel (1994), Maurel and Cheikbossian (1998) and Maurel (1998) use these models and compare the effects of two disintegration experiences: that of the Austro-Hungarian empire after the First World War and that of the CMEA in June 1991. In both cases, they identified the same characteristics of the persistence of past ties and the progressive trade reorientation toward third countries.

A relatively recent stream of disintegration analyses is inspired by the works of McCallum (1995) on the border effect or domestic bias. McCallum shows that the Canadian provinces trade 22 times more between themselves than with American States of the comparable size and situated at the same distance. Obstfeld and Rogoff (2000) propose a detailed literature review on the border effects. The interest of the application of the domestic bias concept to disintegration is to determine to what extent successor states of a customs union have a superior level of flows to what it should be, due to their common history. In this case, the methodology differs from the one applied in classical works on the border effect in the sense that the intra-national trade is not taken into account. It is only a measure of the “former border” effect by the introduction of dummy variables. In order to show the hysteresis in the trade relations, Fridmuc and Fridmuc (2000) estimate gravity equations annually, which control the effects of belonging to former federations. They identify significantly higher domestic biases than those presented in the literature. Biases they measured are around 40 for Czechoslovakia, Baltic States and the Belarus-Russia-Ukraine and 24 for Croatia-Slovenia relations at the beginning of the 1990s. According to these authors there is thus a “considerable hysteresis in the economic relations”. Nevertheless, the domestic biases decrease significantly during the decade and are estimated, for 1987, at the level of 7 for Czechoslovakia, 13 for Baltic States, 8 for Belarus-Russia-Ukraine and 2 for Croatia and Slovenia. It is interesting to note that the attempts of the Czech Republic and Slovakia to maintain a high degree of integration by putting in place a customs union did not hamper the significant decrease of the intensity of flows. Djankov and Freund (2001) also use a gravity equation to estimate the evolution of the domestic bias between the Russian regions on one hand and between the Russian regions and ex-USSR republics on the other. They found a bias between the Russian regions at the level of 1.58 between 1994 and 1996 and a bias comprised between 1 and 8 between Russia and the Republics during the same period. They explain the

limited reorientation of flows by the reorientation of infrastructures, the rigidity of production and consumption chains and commercial networks. Nitsch (2002) is interested in a symmetric situation, the German unification, but comes up with different results. He shows that flows between Western and Eastern Germany between 1992 and 1994 were very reactive upon unification and identifies a domestic bias of 2.2 between three and five years after the unification. Mucchielli and Disdier (2002) use the Head and Mayer (2000) model to measure the border effect in Southeastern Europe. They identify an intra-Southeastern Europe border effect in parallel with a positive effect of belonging to former Yugoslavia. Moreover, they show the existence of a competition phenomenon between the regional integration process and integration to EU process. Their results are not comparable to ours due to their exclusion of the Federal Republic of Yugoslavia and Bosnia-Herzegovina from the sample and due to the differences in model specifications.

3-2 History and regional trade agreements

The impact of historic ties on trade is frequently taken into consideration in the works on the effects of preferential trade agreements. Frankel (1997) offers a detailed literature review on the historic factors explaining the level of flows between two countries and on experience of disintegration. Factors used in analyses of trade are colonial ties, past trade and international relations. Eichengreen and Irwin (1996) show that historic factors influence trade. Trying to determine the influence of regional trade agreements on the trade structure, they suggest that the identification of preferential agreements is biased by the fact that there is a correlation between this type of agreements and intensive past trade. They believe that it is thus necessary to control the influence of the past flows. The use of the gravity equation enables them to show that the past flows are indeed an explanative factor of the present flows. Wonnacott (1998) stresses the problem of correlation between past and present trade due to the absence of persistent, but non-correlated variables with the past trade. Mansfield (1995) suggests that political factors and in particular international relations influence trade. He shows that trade is more significant between two political allies and that war reduces flows of two belligerent countries. Moreover, preferential trade agreements seem to have different impact according to whether the countries are political allies or not.

4- GRAVITY EQUATION, DATABASE AND ECONOMETRIC APPROACH

4-1 The gravity equation

The capacity of the gravity equation to explain the trade flows has largely been verified empirically and therefore it represents an efficient tool. It is based on Linnemann's analysis (1966), according to which the size of the trade flows is explained by three factors reflecting the potential supply of the exporting country, the potential demand of the importing country and the commercial flow resistance between the partners. The gravity equation is then obtained by replacing the three factors by the variables that determine them: national income, population, distance and the existence of trade agreements. The theoretical foundations of the gravity equation were developed subsequently. Anderson's contribution (1979) is based on preferences of the Cobb-Douglas type and on the CES (constant elasticity substitution) type, with the goods differentiated by the region of origin. Bergstrand (1985) adopts at first the earlier hypotheses and includes the price, absent from Linnemann's work. Later (Bergstrand, 1989), he develops the generalised gravity equation starting from the monopolistic competition model to which he adds the factorial allocation differences. Deardorff (1995) derives the gravity equation from two extreme cases of the HO model, the one in which the goods are homogenous and the one in which all countries produce different goods. He then concludes that the gravity equation can be justified by standard international trade theories. Recent works on the border effect and the new geographic economy are based on the gravity equation, allowing new applications. The following basic specification is used:

$$\ln X_{ijt} = a_0 + a_1 \ln Y_{it} + a_2 \ln Y_{jt} + a_3 \ln DIST_{ij} + \sum_k a_k DUM_k + e_{ijt}$$

where $\ln X_{ijt}$ denotes the bilateral trade, that is the natural logarithm of exports of country i to country j. It is explained by $\ln Y_{it}$ and $\ln Y_{jt}$ that indicate the market size of countries i and j and are measured by their GNP. $\ln DIST_{ij}$ is a proxy for transportation costs and a part of transaction costs. It is measured as the distance in kilometres between capitals. DUM_k are dummy variables that control the effects of regional trade agreements and specific bilateral relations. Dummies are presented in Appendix 1.

The common language and land-lockedness dummies have not been included in the specification. The introduction of a common language that takes the value 1 if the official language is the same and 0 otherwise is not relevant in the case of disintegration for two reasons. First, it overlaps with bilateral relations dummies. Second and more importantly because the official language is not the only one in which populations can communicate, especially when the countries are geographically, historically and culturally close. The land-locked countries in the sample have a central position on the continent. Therefore the introduction of a dummy for land-lockedness controls also for this characteristic.

4-2 The database

Our sample consists of 29 countries - 15 member States of the EU⁷ (Austria, Belgium and Luxemburg (together), Denmark, Finland, France, Germany, Great Britain, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden), 8 countries that will join the EU in 2004 (Czech Republic, Hungary, Poland, Slovakia, Slovenia, Estonia, Latvia, Lithuania) and 7 Southeastern countries (Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Macedonia, Romania, Serbia-Montenegro). The time span covers the period from 1993 to 2001. Our panel data is balanced and contains 7308 observations. Bilateral trade data come from Chelem-Cepii. To our knowledge it is the only database that allows working on such a long time span for all Southeastern countries. Chelem-Cepii database is built from the diverse data available and rendered coherent and harmonized using an accounting framework that covers the whole world. Flows are measured in millions of current dollars. However one has to be cautious regarding South East European countries: Kaminski and De la Rocha (2003) highlight huge gaps when comparing mirror statistics, i.e. the same flow declared by the exporter and the importer. GNP and distance also come from the Chelem-Cepii database. GNP are measured in millions of current dollars. Distance is the shortest distance “as the crow flies” between capital cities in kilometres.

4-3 The econometric approach

One of the main difficulties raised by the use of the gravity equation concerns the econometric approach. During the last decade the application of the gravity equation was

⁷ Austria, Finland and Sweden became Member States in 1995.

essentially based on cross-section estimations on pooled data. Recently Egger (2000) argued that this kind of methodology presents limits that can be avoided by the use of panel-data techniques. Then, one has to choose between two panel data techniques: random and fixed effects. Following Matyas (1997) the choice between random and fixed effects is driven by the result of the Hausman test that allows detecting a correlation between explanatory variables and bilateral specific effects and thus accepting or rejecting the random effect model. Despite the fact that it always provides consistent estimates even if there is a correlation between explanatory variables and the specific effect, the fixed effect model has a major drawback: time-invariant variables can not be tested. It constitutes a major problem since we are interested in measuring the effects of preferential trade agreements and specific multilateral and bilateral relations that do not vary across the period considered.

A solution has been suggested by Cheng and Wall (2002). According to these authors the time invariant variables can be estimated “by regressing them on the country-pair effects from the fixed effect model” (Cheng and Wall, 2002). Their methodology allows estimating the coefficients of distance, contiguity and language but it can not be used to measure the effects of preferential trade agreements and specific bilateral relations that do not vary across time. Actually it is not possible to estimate the effects of these variables by regressing them on country-pair effects since the two sets of variables are strongly correlated.

We therefore estimate the equation using OLS on pooled data. As suggested by Anderson and Van Wincoop (2003) we include country specific effects. Moreover all estimations include a year fixed effect to “account for such factors as the value of dollar, global business cycle, extent of globalization, oil shocks, and so forth” (Rose, 2002).

We first present the benchmark estimations, which enable to compare OLS on pooled data, OLS with country effect, fixed and random effect. We then use OLS with country specific effects. Results are discussed in the following section.

5- RESULTS

The first estimation confirms the positive impact of supply ($\ln Y_i$) and demand ($\ln Y_j$) forces on the volume of trade as well as the negative impact of distance. Coefficients are significant and consistent with the literature. A common border ($FRONT$) between two partners increases the volume of trade. Unsurprisingly the coefficient of this variable decreases when we introduce dummies for groups of neighboring countries. This raises the more general problem of

overlapping variables, particularly strong when one studies disintegration experiences and in particular the case of Former Yugoslavia. For this reason *FRONT* is excluded from the estimations (8) to (15).

-Insert table 4 about here-

Results are slightly different when we include country effects (estimation 2). One noticeable difference is the decrease of the coefficients of regional integration experiences (*EU*, *ASSOC*, *CEFTA*, *BALTIC*) that get closer to the ones found with the fixed-effect estimation (3). Coefficients of the dummies controlling the effects of integration agreements highlight their stimulating but have limited effect on trade, except in the case of the Baltic customs union. *EU* is not as high as we expected, which is consistent with others studies (Buch and Piazzolo, 2001, Rose, 2002). Moreover, the fact that EU countries represent the main part of our dataset could distort this result. *CEFTA* and *ASSOC* are positive and significant but reflect a lower stimulating effect on trade than the Baltic custom union (*BALTIC*), which had a very strong impact on the mutual trade of Baltic States, with a coefficient higher than 3 for the whole period. The custom union itself can explain this coefficient but it also reflects the fact that Baltic States all belonged to the Soviet Union until 1991. The coefficient of *CEFTA* is much smaller, probably because of a stronger and faster trade reorientation toward the EU. The introduction of variables to control the effects of free trade agreements set up in 1996 between FRY and Macedonia and between Croatia and Macedonia in 1997 did not give significant results. Estimation (4) presents the results of the random effect model. However the Hausman test shows that specific effects and explanatory variables are correlated: the GLS estimator is biased and the fixed-effect is preferable. For the remaining estimations we use OLS with year and country effects.

The aim of *SEE7* is to control the degree of integration in Southeastern Europe. The coefficient is significant and positive indicating that the countries of the region trade more than the potential level, the level explained by the gravity variables. The negative coefficient of *WAR* indicates its depressing effect on regional trade. However *SEE7* keeps a highly significant coefficient. In the following estimations the dummy variable for the war in Former Yugoslavia cannot be included because it overlaps with other regional groupings. The introduction of *SFRY4* in the estimation (6) reduces notably *SEE7*'s coefficient: a part of the coefficient determined previously is due to the intensity of trade between the Successor States of Yugoslavia. The high coefficient of *SFRY4* reveals the persistence of a large above normal

trade. The “former border effect” is thus of $\exp(3.81) = 45.15$, indicating that countries of former Yugoslavia trade about 45 times more with themselves than their economic size and distance would predict. This is approximately what Fidrmuc and Fidrmuc (2000) found for successor states of Czechoslovakia or Soviet Union. In the following estimation we divided Southeastern Europe in two sub-regions: Successor States of Yugoslavia on one hand and former members of CMEA on the other hand, and we introduced a variable to capture the intensity of trade between the two sub-regions. During the period considered, trade between Bulgaria and Romania presents a deficit. Conversely the intensity of trade between Western and Eastern Balkans exceeds the level explained by the gravity variables.

Since we identified “abnormal” levels of trade in the period it is interesting, as a second step, to analyze the evolution of the coefficients during the period. We divide the sample into three sub-samples of three years (1993-1995, 1996-1998, 1999-2001). *SFRY4* decreases over the three time periods but the coefficient remains highly significant and positive. It shows that the Yugoslav disintegration was very slow from the trade point of view. In the last period the coefficient reveals a trade 32 times higher than its potential level. *SFRY4-BUL-ROM* follows the same decreasing trend and indicates that trade intensity between the Western and the Eastern Balkans is slightly higher than explained by the gravity equation. The coefficient for *BUL-ROM* is not significant over the three periods.

-Insert table 5 about here-

We showed that trade flows between Successor states of former Yugoslavia are relatively high compared to what could have been expected. A more detailed analysis is therefore needed to determine if we can observe differences on the basis of bilateral specific relations. We introduce dummies controlling the bias that could characterize bilateral relations and we estimate their coefficients for the whole period and then for each sub-period. Table 6 contains regression results, table 7 summarizes the results.

-Insert tables 6 & 7 about here-

The only insignificant coefficient that regards trade between Successor States of Former Yugoslavia is the dummy *CRO-SM* during the second time period (1996-1998). It turns positive again for the last period (1999-2001). This result means that the “former Yugoslavia effect” is

back few years after the war. Past links seems to have a stronger impact on trade than war in the medium term. All other bilateral relations are stronger than predicted by the model, with coefficients between 1.186 (*CRO-SM*) and 6.534 (*MAC-SM*) for 1993-2001. These results are rather surprising if one considers that many barriers to trade were erected during the decade. However they are coherent with the other studies on disintegration quoted previously. Our results confirm partly those of Christie (2001) who tried to divide Southeastern Europe in several regions and showed that the main division is between Croatia and Serbia-Montenegro. Although the intensity of their trade is the lowest among trade intensities in Former Yugoslavia they trade more with each other than explained by their economic size and distance. These regressions also show that trade flows between Western and Eastern Balkans are very often below their potential.

6- CONCLUSION

The aim of this paper was to analyze the evolution of trade flows in Southeastern Europe after the disintegration of former Yugoslavia and the CMEA.

The analysis conducted in the paper highlighted some changes of the geographical orientation of trade of South East European economies. Obviously, these changes have been shaped by the upheavals in the nineties and did not benefit mutual trade between the countries of the region. However the econometric analysis also showed that the influence of past ties is extremely strong in the case of Southeastern Europe. Numerous barriers to trade did not lead to a complete disintegration of the region and we still observe many of the characteristics of the previous pattern of trade.

This is particularly the case for countries of former Yugoslavia. Despite the fragmentation of the markets during the nineties these countries still trade more significantly between themselves than with their other partners, confirming the existence of a hysteresis that diminishes very slowly. Although there are differences on a bilateral basis, successors States of former Yugoslavia trade more than 40 times more between themselves than explained by the gravity variables.

The same effect of “inertia” concerning flows between Republics of Former Yugoslavia and Eastern Balkans has been observed. The results showed a trade deficit between Bulgaria and Romania and between these countries and their neighbors. There is therefore a potential for development of these trade relations.

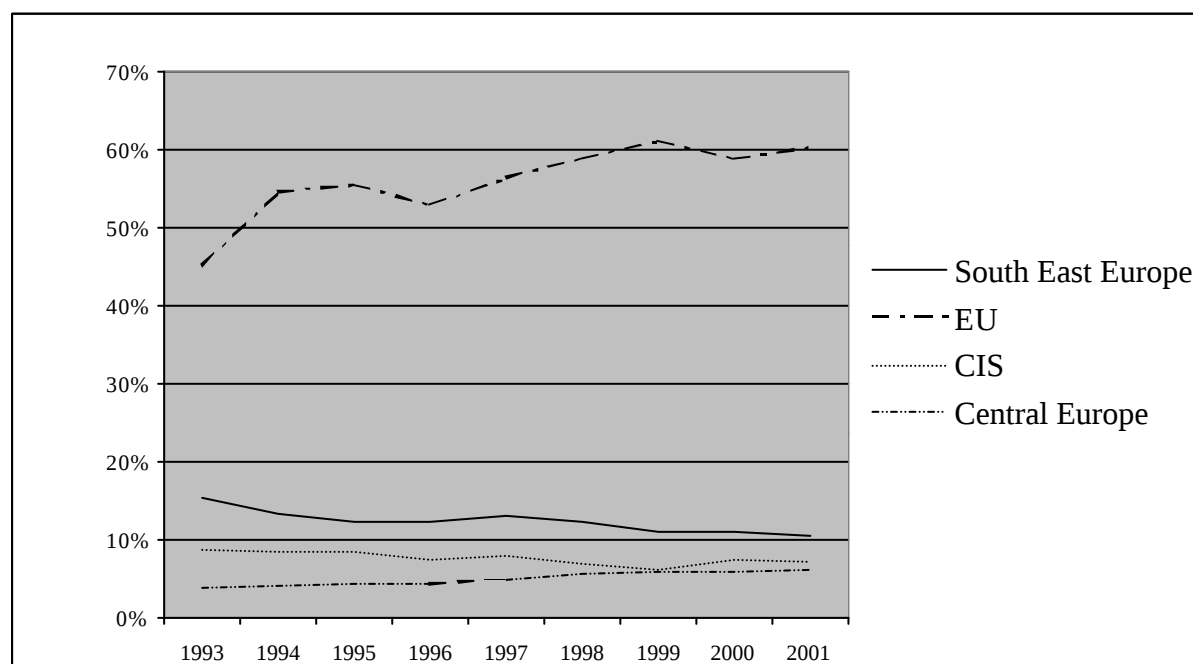
These findings imply that the current process of trade liberalization in Southeastern Europe may have differentiated effects. Actually, one can be doubtful about the capacity of regional trade agreements to increase mutual trade when the bilateral trade levels are above their potentials. In these cases the increase of trade depends above all on growth and foreign investments.

Table 1 Trade between Yugoslav Republics in 1987 (%).

		Total	Bosnia- Herzegovina	Croatia	Macedonia	Slovenia	Serbia and Montenegro
Bosnia- Herzegovina	<i>Deliveries</i>	100		30.54	5.43	16.65	47.37
	<i>Purchases</i>	100		33.41	4.35	20.02	42.23
	<i>Balance</i>	-		-	-	-	-
Croatia	<i>Deliveries</i>	100	21.36		5	33.31	40.32
	<i>Purchases</i>	100	19.49		6.61	35.74	38.16
	<i>Balance</i>	+	+		+	-	+
Macedonia	<i>Deliveries</i>	100	10.96	18.34		15.82	54.88
	<i>Purchases</i>	100	12.26	17.92		16.05	53.77
	<i>Balance</i>	-	+	-		-	-
Slovenia	<i>Deliveries</i>	100	14.01	41.23	5.41		39.35
	<i>Purchases</i>	100	16.57	44.52	6.85		32.06
	<i>Balance</i>	+	+	+	+		+
Serbia and Montenegro	<i>Deliveries</i>	100	27.79	34.33	15.50	22.37	
	<i>Purchases</i>	100	21.35	33.93	13.11	31.60	
	<i>Balance</i>	-	+	-	+	-	

Source : Bazler-Madzhar, 2000

Figure 1 Evolution of the geographical orientation of trade (exports + imports) of South Eastern European countries (in %).



Source : Chelem-Cepii, author's calculation.

Table 2 Shares of the main partners of South East European countries in 2001 (%).

	Exports						Imports					
	Yugoslavia 4	Yugoslavia 5	South East Europe	EU	Central Europe	CIS	Yugoslavia 4	Yugoslavia 5	South East Europe	EU	Central Europe	CIS
Bosnia- Herzegovina	26,26	34,66	35,32	55,94	1,72	1,69	30,58	42,29	42,68	38,65	6,15	3,13
Croatia	20,49	30,05	30,64	47,71	3,30	2,40	2,56	11,64	12,01	60,04	7,78	7,32
Macedonia	24,25	26,55	30,36	52,54	0,92	1,62	9,04	15,36	21,70	54,07	2,64	9,76
Serbia- Montenegro	18,10	20,40	23,63	59,34	4,98	4,74	9,73	12,42	19,00	51,69	6,60	10,03
Yugoslavia 4	21,22	28,19	29,75	51,74	3,13%	2,69	9,73	17,32	19,94	53,73	6,62	7,58
Slovenia	14,67	14,67	15,86	63,47	7,94	3,83	5,30	5,30	6,32	73,48	7,76	2,48
Yugoslavia 5	17,75	21,02	22,38	57,96	5,68	3,29	8,06	12,80	14,81	61,16	7,05	5,67
Albania	2,20	2,24	2,42	92,85	0,31	0,14	2,52	3,50	6,47	76,47	1,65	3,11
Bulgaria	5,65	6,20	9,09	57,57	2,25	9,32	0,70	1,11	4,28	48,53	4,52	23,29
Romania	1,16	1,79	3,85	68,71	4,66	2,66	0,26	0,67	1,52	62,39	8,55	10,70
Southeastern Europe	9,91	11,81	13,64	62,02	4,74	3,97	4,56	7,30	9,17	60,07	6,99	9,64

Yugoslavia 4 includes Bosnia-Herzegovina, Croatia, Macedonia and Serbia-Montenegro. Yugoslavia 5 includes Yugoslavia 4 and Slovenia. Southeastern Europe includes Yugoslavia 5, Romania, Bulgaria and Albania.

Source : Chelem-Cepii, author's calculation.

Table 3 Trade between Yugoslav Republics in 2001 (%).

		Total	Bosnia- Herzegovina	Croatia	Macedonia	Slovenia	Serbia- Montenegro
Bosnia- Herzegovina	Exports	100,0		35,4	1,9	24,2	38,5
	Imports	100,0		63,9	1,5	27,7	6,9
	Balance	-		-	-	-	+
Croatia	Exports	100,0	60,1		2,5	31,8	5,6
	Imports	100,0	12,7		2,1	78,0	7,2
	Balance	+	+		+	-	-
Macedonia	Exports	100,0	6,5	7,1		8,7	77,8
	Imports	100,0	2,1	10,3		41,2	40,7
	Balance	-	+	-		-	+
Slovenia	Exports	100,0	25,5	56,1	9,6		8,9
	Imports	100,0	14,9	74,0	4,4		6,7
	Balance	+	+	+	+		+
Serbia- Montenegro	Exports	100,0	25,2	20,7	42,9	11,3	
	Imports	100,0	24,3	13,4	40,7	21,7	
	Balance	-	-	-	-	-	

Source : Chelem-Cepii, author's calculation.

Table 4 Benchmark results

Ln X _{ij}	OLS	OLS with country effects	FE	GLS	OLS with country effects	OLS with country effects	OLS with country effects
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ln Y_{it}	1.06*** <i>68.01</i>	1.695*** <i>12.15</i>	1.649*** <i>19.34</i>	1.239*** <i>35.31</i>	1.134*** <i>7.68</i>	1.658*** <i>12.19</i>	1.678*** <i>12.25</i>
Ln Y_{jt}	0.893*** <i>57.73</i>	1.144*** <i>8.21</i>	1.099*** <i>12.88</i>	1.023*** <i>29.38</i>	0.584*** <i>3.95</i>	1.108*** <i>8.14</i>	1.128*** <i>8.23</i>
Ln D_{ij}	-0.919*** <i>-29.81</i>	-1.382*** <i>-37.61</i>	-	-0.904*** <i>-11.16</i>	-1.386*** <i>-38.03</i>	-1.455*** <i>-40.35</i>	-1.531*** <i>-42.90</i>
FRONT	0.765*** <i>10.29</i>	0.271*** <i>4.32</i>	-	0.743*** <i>3.79</i>	0.252*** <i>4.03</i>	0.115** <i>1.85</i>	0.130*** <i>2.08</i>
EU	2.040*** <i>30.23</i>	0.839*** <i>9.46</i>	-	1.245*** <i>8.55</i>	0.974*** <i>10.95</i>	0.666*** <i>7.63</i>	0.875*** <i>10.26</i>
ASSOC	1.156*** <i>20.89</i>	0.427*** <i>7.28</i>	0.207*** <i>4.81</i>	0.252*** <i>6.04</i>	0.556*** <i>9.37</i>	0.256*** <i>4.43</i>	0.372*** <i>6.52</i>
CEFTA	1.092*** <i>9.63</i>	0.461*** <i>4.48</i>	0.309*** <i>3.05</i>	0.323*** <i>3.36</i>	0.536*** <i>5.24</i>	0.330*** <i>3.28</i>	0.339*** <i>3.33</i>
BALTIC	3.51*** <i>15.32</i>	3.186*** <i>16.60</i>	-	3.702*** <i>6.12</i>	3.219*** <i>16.90</i>	3.155*** <i>16.84</i>	3.066*** <i>16.25</i>
SEE7	0.852*** <i>9.03</i>	1.959*** <i>20.46</i>	-	0.876*** <i>3.55</i>	1.854*** <i>19.42</i>	1.195*** <i>10.06</i>	
WAR					-0.969*** <i>-10.85</i>		
SFRY4						2.952*** <i>19.16</i>	3.816*** <i>26.19</i>
BUL-ROM							-0.481 <i>-1.55</i>
RSFY4- BUL-ROM							0.656*** <i>5.37</i>
Nb. obs.	7308	7308	7308	7308	7308	7308	7308
R²	0.76	0.85	0.65	0.78	0.86	0.86	0.86

*, **, *** define 1%, 5% and 10% significance level respectively. t-Student are presented in italics.
All estimations include year effects. Coefficients for years and countries are not reported.

Table 5 Evolution of SFRY4, BUL-ROM et SFRY4-BUL-ROM (with year and country effects).

Ln X _{ij}	1993-2001	1993-1995	1996-1998	1999-2001
	(8)	(9)	(10)	(11)
SFRY4	3.816*** <i>26.19</i>	4.425*** <i>16.13</i>	3.621*** <i>14.16</i>	3.467*** <i>15.18</i>
BUL-ROM	-0.481 <i>-1.55</i>	-0.743 <i>-1.23</i>	-0.441 <i>-0.86</i>	-0.362 <i>-0.80</i>
SFRY4-BUL-ROM	0.656*** <i>5.37</i>	1.012*** <i>4.29</i>	0.638*** <i>3.17</i>	0.385*** <i>2.14</i>

*, **, *** define 1%, 5% and 10% significance level respectively. t-Student are presented in italics.
Coefficients for years and countries are not reported.

Table 6 Results of the estimations (OLS with country effects)

Xij	1993-2001	1993-1995	1996-1998	1999-2001
	(12)	(13)	(14)	(15)
Yi	1.633** <i>12.47</i>	1.174* <i>1.95</i>	1.865*** <i>3.64</i>	1.904* <i>1.92</i>
Yj	1.083** <i>8.27</i>	1.684*** <i>2.80</i>	1.128* <i>2.20</i>	0.983* <i>2.40</i>
DISTij	-1.466*** <i>-49.65</i>	-1.471*** <i>-26.14</i>	-1.501*** <i>-31.17</i>	-1.444*** <i>-33.97</i>
EU	0.544*** <i>6.44</i>	1.170*** <i>10.28</i>	0.211** <i>2.17</i>	-0.668 <i>-0.78</i>
BALTIC	3.189*** <i>17.71</i>	2.917*** <i>8.49</i>	3.336*** <i>11.35</i>	3.216*** <i>12.39</i>
ALB-BOS	0.988** <i>3.30</i>	1.093*** <i>1.93</i>	1.285* <i>2.65</i>	0.857** <i>2.00</i>
ALB-BUL	-0.575 <i>-0.19</i>	-0.182 <i>-0.32</i>	0.062 <i>0.13</i>	-0.05 <i>-0.11</i>
ALB-CRO	2.342*** <i>7.88</i>	2.368*** <i>4.21</i>	2.542*** <i>5.29</i>	2.402*** <i>5.66</i>
ALB-MAC	4.275*** <i>14.31</i>	4.538*** <i>8.03</i>	4.190*** <i>8.67</i>	4.371*** <i>5.66</i>
ALB-SM	3.164*** <i>10.60</i>	4.949*** <i>8.77</i>	2.357*** <i>4.88</i>	2.461*** <i>5.77</i>
ALB-ROM	0.443 <i>1.50</i>	0.381 <i>0.68</i>	0.905** <i>1.88</i>	0.048 <i>0.12</i>
BOS-BUL	-0.874*** <i>-2.95</i>	-0.761 <i>-1.35</i>	-0.635 <i>-1.32</i>	-1.212*** <i>-2.84</i>
BOS-CRO	4.772*** <i>16.00</i>	4.755*** <i>8.43</i>	5.337*** <i>11.06</i>	4.502*** <i>10.57</i>
BOS-MAC	4.135*** <i>13.90</i>	4.169*** <i>7.41</i>	4.680*** <i>9.73</i>	3.838*** <i>9.04</i>
BOS-SM	5.616*** <i>18.69</i>	8.418*** <i>14.82</i>	4.98*** <i>10.24</i>	3.714*** <i>8.66</i>
BOS-ROM	0.425 <i>1.44</i>	0.225 <i>0.40</i>	0.835* <i>1.73</i>	0.226 <i>0.53</i>
BUL-CRO	-0.320 <i>-1.09</i>	-0.516 <i>-0.92</i>	0.072 <i>0.15</i>	-0.493 <i>-1.16</i>
BUL-MAC	2.904*** <i>9.82</i>	3.329*** <i>5.89</i>	2.809*** <i>5.81</i>	2.586*** <i>6.06</i>
BUL-SM	2.605*** <i>8.79</i>	4.218*** <i>7.45</i>	1.898*** <i>3.92</i>	1.708* <i>4.00</i>
BUL-ROM	-0.243 <i>-0.82</i>	-0.363 <i>-0.64</i>	-0.422 <i>-0.87</i>	0.057 <i>0.13</i>
CRO-MAC	4.055*** <i>13.65</i>	3.891*** <i>6.93</i>	4.388*** <i>9.13</i>	4.180*** <i>9.86</i>
CRO-SM	1.186*** <i>3.98</i>	1.03* <i>1.84</i>	0.591 <i>1.23</i>	2.212*** <i>5.20</i>
CRO-ROM	-0.349 <i>-1.19</i>	-0.818 <i>0.145</i>	0.131 <i>0.27</i>	-0.341 <i>-0.80</i>
MAC-SM	6.534*** <i>21.97</i>	7.799*** <i>13.87</i>	6.177*** <i>12.84</i>	5.908*** <i>13.91</i>
MAC-ROM	0.838*** <i>2.84</i>	1.231*** <i>2.19</i>	0.970* <i>2.01</i>	0.324 <i>0.76</i>
SM-ROM	2.447*** <i>8.28</i>	3.856*** <i>6.84</i>	1.890*** <i>3.91</i>	1.599*** <i>3.75</i>
Nb. obs.	7308	2436	2436	2436
R ²	0.87	0.87	0.88	0.89

*, **, *** define 1%, 5% and 10% significance level respectively. t-Student are presented in italics.
Coefficients for years and countries are not reported.

Table 7 Classification of the coefficients for the bilateral dummies

$\hat{a}_k > 0$ and significant (descending order)			
1993-2001	1993-1995	1996-1998	1999-2001
MAC-SM	BOS-SM	MAC-SM	MAC-SM
BOS-SM	MAC-SM	BOS-CRO	BOS-CRO
BOS-CRO	ALB-SM	BOS-SM	ALB-MAC
ALB-MAC	BOS-CRO	BOS-MAC	CRO-MAC
BOS-MAC	ALB-MAC	CRO-MAC	BOS-MAC
CRO-MAC	BUL-SM	ALB-MAC	BOS-SM
ALB-SM	BOS-MAC	BUL-MAC	BUL-MAC
BUL-MAC	CRO-MAC	ALB-CRO	ALB-SM
BUL-SM	SM-ROM	ALB-SM	ALB-CRO
SM-ROM	BUL-MAC	BUL-SM	CRO-SM
ALB-CRO	ALB-CRO	SM-ROM	BUL-SM
CRO-SM	MAC-ROM	ALB-BOS	SM-ROM
ALB-BOS	ALB-BOS	MAC-ROM	ALB-BOS
MAC-ROM	CRO-SM	ALB-ROM	
		BOS-ROM	

$\hat{a}_k < 0$ and significant			
1993-2001	1993-1995	1996-1998	1999-2001
BOS-BUL			BOS-BUL

$\hat{a}_k$ non significant (descending order)			
1993-2001	1993-1995	1996-1998	1999-2001
$(\hat{a}_k > 0)$			
ALB-ROM	ALB-ROM	CRO-SM	MAC-ROM
BOS-ROM	BOS-ROM	CRO-ROM	BOS-ROM
		BUL-CRO	BUL-ROM
		ALB-BUL	ALB-ROM
$(\hat{a}_k < 0)$			
BUL-ROM	ALB-BUL	BUL-ROM	ALB-BUL
BUL-CRO	BUL-ROM	BOS-BUL	CRO-ROM
CRO-ROM	BUL-CRO		BUL-CRO
ALB-BUL	BOS-BUL		
	CRO-ROM		

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Appendix 1 List of dummy variables

<i>FRONT</i>	takes the value 1 when partners have a common border, 0 otherwise.
<i>EU</i>	takes the value 1 if both the exporter and the importer are member States of the EU, 0 otherwise.
<i>ASSOC</i>	controls the effect of the Association Agreements between the EU and Hungary, Poland, Czech Republic, Slovakia, Bulgaria, Romania, Estonia, Lithuania, Latvia, Slovenia.
<i>CEFTA</i>	controls the effect of the Central European Free Trade Agreement that includes Hungary, Poland, Czech Republic, Slovakia, Bulgaria, Romania, and Slovenia.
<i>BALTIC</i>	controls the impact of the customs union between Estonia, Lithuania and Latvia.
<i>SEE7</i>	controls mutual trade between Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Macedonia, Serbia-Montenegro and Romania.
<i>WAR</i>	takes the value 1 when the exporter or the importer is Bosnia-Herzegovina, Croatia or FRY for the years 1993-1995.
<i>SFRY4</i>	controls mutual trade between Bosnia-Herzegovina, Croatia, Macedonia and Serbia-Montenegro.
<i>SFRY4-BUL-ROM</i>	takes the value 1 for exports and imports of a country of <i>SFRY4</i> to or from Bulgaria or Romania and 0 otherwise.

The codes of the countries are the following:

<i>ALB</i>	Albania
<i>BOS</i>	Bosnia-Herzegovina
<i>BUL</i>	Bulgaria
<i>CRO</i>	Croatia
<i>MAC</i>	Macedonia
<i>ROM</i>	Romania
<i>SM</i>	Serbia-Montenegro