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***Full integration versus  
partial trade liberalization:  
Comparing the economic performance of the New  
Members States (NMS) and  
Mediterranean Partner Countries (MPCs)***

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## Introduction and summary

In the project we compared the depth of trade liberalization and integration with the EU between the MPCs (Mediterranean Partner Countries)<sup>1</sup> and NMS (New Member States)<sup>2</sup>. We analyzed trade implications of preferential arrangements between MPCs and EU in the framework of EUROMED and between Central and East European countries in the frameworks of BAFTA (Baltic Free Trade Area) and CEFTA (Central European Free Trade Area) and so called Europe Agreements. This analysis demonstrated that Europe Agreements and two sub-regional agreements BAFTA and CEFTA have been efficient in promoting bilateral trade among European states. We find that the Europe Agreements as well as BAFTA and CEFTA significantly contributed to increase in both bilateral exports and imports of the CEE countries. In contrast to the NMS the impact of New Association Agreements concluded with the MPCs had been much more limited. We find that while the new Agreements increased significantly imports of the MPCs countries from the EU, they had no impact on their exports to the EU which can be attributed to the asymmetry in trade liberalization between the EU and the MPCs. In particular, liberalization of the EU imports from the MPCs was a gradual process that extended over the last thirty years and there was not much to liberalize in the 1990s while liberalization of the MPCs imports from the EU took place much faster and its scope was much bigger.

Differences in growth rates may stem from differences in trading arrangements of these two regions with the EU-15 and institutional factors within these regions. Despite the similar openness ratio, MPCs maintained (with the exception of Israel) considerably higher levels of trade protection in comparison to NMS. Higher levels of protection, causing production and consumption distortions, can slow down the rate of growth of economies.

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<sup>1</sup> The group MPCs consists of: Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, the Palestinian Authority, Syria, Tunisia and Turkey

<sup>2</sup> The group of NMS consists of: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia and Cyprus and Malta. In our project we analyze only first eight countries.

The degree of trade openness, given the widespread pressures of lobbies in a majority of countries, depends mainly on the governments' commitment to act in the interest of all consumers and on the scope external pressure for liberalization. NMS, by concluding Europe Agreements, were forced to remove tariffs and non-tariff barriers in its trade with the EU. The scope of trade liberalization foreseen in preferential agreements between MPC and the EU is much lower. Thus, without strong external pressure MPC could and did maintain considerably higher levels of trade protection, in comparison to NMS.

In order to verify this hypothesis an attempt has been made to apply the Grossman-Helpman (G-H) model, explaining the interplay between sectoral interest groups and a government to the Polish economy as a representative of NMS. On the other hand Israel was treated as an example of MPC, being able to liberalize significantly its trade policy. We demonstrated that rent seeking of the lobbies had some, although very limited, impact on the scope of non-preferential trade liberalization in Poland. On the other hand, the performance of the G-H model for Israel has not been satisfactory, because of lack of the relevant statistical data allowing to strictly follow the original modeling framework. The model estimated in a simplified way did not show a significant impact of lobbies on tariff schedules of Israel, however, this conclusion is not robust due to poor statistical properties of the model. The verification of the model for other MPCs economies appeared to be even more difficult, due to non existence of relevant sectoral data.

Other important conditions, which are crucial for reaching real trade liberalization and convergence to the advanced EU members, are the business climate and the level of corruption. Our results suggest that corruption increases with a higher number of procedures involved in license granting, enforcing contracts and starting new businesses. According to our study, the recent accession to the EU required from the NMS to put in place certain measures that enforce transparency and competition. The gradual law approximation to the EU *acquis communautaire* boosts performance of the poorer NMS through the facilitation of trade and general economic activity. In this study we compared corruption levels in the MPCs and NMS, that acceded the EU in 2004. The results suggest that if the MPCs reduced their level of business regulation to

that of the NMS, we would observe a predicted fall in corruption (with the exception of Israel and Jordan). This fall is quite large, especially for Syria and Algeria. This in turn, could lead to real further trade liberalization, reducing production and consumption distortions in MPCs.

## **1. Assessing the impact of Europe Agreements and EUROMED FTAs**

### **1.1. Europe Agreements, BAFTA and CEFTA**

In the 1990s the European Union played an active role in sponsoring trade liberalization in Central and Eastern European (CEEC) countries. The CEECs during the communist rule remained isolated from the rest of the world for almost fifty years. The so-called Europe Agreements concluded with the CEE countries were intended to support their economic reforms and prepare them for eventual membership in the EU. These efforts culminated in two subsequent waves of enlargement to the East that took place in 2004 and 2007.

The ultimate goal of joining the EU has been the major factor shaping foreign trade policies in the CEE countries throughout the 1990s. The EU concluded bilateral association agreements with the majority of the CEECs in the first half of the 1990s. These agreements aimed at establishing a hub-and-spoke free trade area covering industrial products and granting some preferences to agricultural goods between the CEECs and the EU over a maximum period of ten years.

In contrast to a typical FTA the Europe Agreements implied asymmetric trade liberalization between the EU and the CEECs with more rapid liberalization by the EU. The trade components of the Europe Agreements overshadowed and extended the Generalized System of Preference status granted by the EU to most CEECs in the early 1990s. By January 1, 1997 the EU eliminated practically all tariffs on imports from the CEECs with the exception of agricultural and “sensitive” products.

Although trade parts of the Europe Agreements with some CEE countries entered into force on different dates ranging from 1992 (former Czechoslovakia, Hungary and

Poland) to 1997 (Slovenia), schedules of elimination of tariffs and non-tariff barriers on industrial products had one important element in common. They all had to be completed by the target date of January 1, 2002. The liberalization of trade in agricultural goods between the EU and the CEECs, however, did not take place until the two waves of enlargement of the EU to the East in 2004 and 2007. Only since then the CEECs have been able to participate fully in the EU Single Market.

In addition to trade liberalization with the West the CEE countries liberalized trade among themselves creating a matrix of bilateral and sub regional free trade agreements. The most important of these was the Central European Free Trade Area established by former Czechoslovakia, Hungary and Poland. The CEFTA agreement was signed on December 21, 1992 and entered into force on March 1, 1993. The initial CEFTA agreements eliminated tariffs on approximately 40 percent of industrial goods. Trade in industrial goods and some agricultural products was further liberalized through a series of additional protocols, mostly signed in 1994 and 1995.

By 1996 almost 80 percent of CEFTA trade in industrial products were free of tariffs. By 1999 tariffs were abolished on almost all industrial products except a minor list of “sensitive” products. The CEFTA membership gradually expanded overtime to include Slovenia (1996), Romania (1997), Bulgaria (1991) and Croatia (2003). The CEFTA agreement was supposed to include also three newly independent Baltic States: Estonia, Latvia and Lithuania that emerged from the former Soviet Union after its collapse in 1991. However, these three countries - in about the same time when CEFTA was built - created their own Baltic Free Trade Area (BAFTA).

In contrast to CEFTA, BAFTA did not enlarge its membership but the coverage of the agreement was increased over time at a faster pace than in the CEFTA member states. In particular, by January 1, 1997 BAFTA included not only industrial but also agricultural and fish products. In this way BAFTA became the first free trade area in the region that provided for completely liberalized trade in these politically sensitive areas.

Consequently, the significant differences in the pace and the coverage of trade liberalization between the BAFTA and the CEFTA member states did not allow creating a single free trade area that would embrace all the CEE countries before their



accession to the EU. Instead, a number of bilateral trade agreements between the BAFTA and the CEFTA countries was signed that complemented sub-regional trade liberalization in Central and Eastern Europe.

We study here the trade effects of the Europe Agreements for bilateral imports and exports of the CEE countries using the generalized gravity equation that can be derived from neoclassical and new trade theory models that assume incomplete specialization in production. In our study we control for the effects of other both plurilateral and bilateral free trade agreements concluded by the CEE countries among themselves as well as with countries located outside the region. We analyze the impact of the association agreements for both exports and imports separately.

The generalized estimating equation that encompasses particular estimating equations is derived from various theoretical models. Apart of standard variables, related to distance, GDP, capital/labour ratio or regional trade agreements we also used dummies indicating whether countries share a common border, a common language and/or a same colonizer.

We find that the Europe Agreements as well as BAFTA and CEFTA significantly contributed to increase in both bilateral exports and imports of the CEEC countries. Moreover, the estimates obtained for BAFTA were of higher magnitude than those obtained for CEFTA. This is in line with our initial expectations given the fact that the BAFTA agreement included not only industrial but also agricultural and marine products.

## **1.2. EUROMED, bilateral and Agadir Agreements**

Unlike trade liberalization with the Central and East European countries trade liberalization with the MPCs was a gradual process that lasted over three decades and is in fact not completed at the time of writing. Moreover, unlike the CEE countries that radically liberalized their trade with the EU in the 1990s, exports from the MPCs have enjoyed preferential treatment by the EU for many years. The first generation Euro-Mediterranean Association Agreements with the selected MPCs that provided free access for their manufactures exports to the EU countries were concluded already at the end of 1960s and early 1970's.

In 1972 the European Commission launched the Global Mediterranean Policy (GMP) that was aimed at providing trade concessions to most MPCs. This policy resulted in a series of so-called Cooperation Agreements that were concluded between 1973 and 1980 with most MPCs. In particular, these agreements extended earlier preferences for MPCs exports of agricultural products both in terms of coverage and the margins of preference. However, at the same time these exports were subject to protectionist measures imposed by the European Common Agricultural Policy (CAP).

Following the southern enlargement the EU concluded a new series of agreements with the MPCs called Adaptation Agreements. As a result of this renovated policy by the end of 1993 all tariffs on exports from the MPCs were eliminated, however, non-tariff barriers (NTBs) to trade related to the CAP were still in force.

The final round of trade liberalization between the EU and the MENA countries was initiated in 1995 at the Barcelona conference that set the ambitious goal of creating the Euro-Mediterranean Free Trade Area (EUROMED) by the target date of 2010. The creation of the EUROMED is to be achieved by means of the new generation of the Euro-Mediterranean Association Agreements between the EU and the MPCs accompanied by free trade agreements between the MPCs themselves. In contrast to earlier, mostly unilateral, trade liberalization (with exception of Cyprus, Turkey, Malta and Israel), the new Association Agreements provide for the implementation of bilateral free trade between the EU and the MPCs. The EUROMED foresees free trade in manufactured goods and progressive liberalization of trade in agricultural products.

In addition to “vertical” bilateral trade liberalization with the EU the MPCs are committed to implement “horizontal” trade liberalization among themselves. However, compared to the Euro-Mediterranean Association Agreements, trade liberalization between particular MPCs is still far less advanced. Given the lack of significant progress in liberalizing trade at the regional and sub-regional levels in the MPCs region some countries located both in the Middle East and North Africa decided to liberalize their trade on bilateral basis. This led to the establishment of the grid of bilateral trade agreements by the end of the 1990s that prepared the ground for the Agadir Declaration signed in 2001 by the representatives of four MPCs: Egypt, Jordan, Morocco and Tunisia. The Agadir Declaration included a commitment to the establishment of a free

trade area (FTA). The Agadir Agreement was signed in 2004 and was initially foreseen to take effect in 2005. However, it encountered delays in entering into force and eventually came into force only in 2007. At this stage it is too early to evaluate its effectiveness. Nevertheless, it was possible to evaluate empirically at least the effectiveness of those bilateral trade agreements concluded among the MPCs in the late 1990s that later laid the foundations for the Agadir Agreement.

Similar to the case of the NMS we study here the trade effects of the new EU Association Agreements for bilateral imports and exports of the MPCs using the generalized gravity equation that can be derived from neoclassical and new trade theory models that assume incomplete specialization in production. In our study we control for the effects of other both plurilateral and bilateral free trade agreements concluded by the MPCs among themselves as well as with countries located outside the region. We analyze the impact of the association agreements for both exports and imports separately.

As in the case with CEE countries, we derive the generalized estimating equation based on various theoretical models. In addition to the standard variables, related to distance, GDP, capital/labour ratio or regional trade agreements we also used dummies indicating whether countries share a common border, a common language (Arabic or Turkish) and/or a same colonizer.

In all the cases our estimations demonstrate that the EU-Association Agreements significantly contributed to the increase in bilateral imports of the MPCs from EU members. The evidence obtained for bilateral trade agreements concluded in the late 1990s between the members of the Agadir group is, however, mixed. While the simple OLS estimates suggest that all bilateral agreements concluded between the Agadir group member states significantly increased their bilateral imports, this evidence is not robust when panel data estimation techniques are employed. In contrast to bilateral imports the new generation EU Association Agreements do not seem to contribute positively to the expansion of exports from the MPCs to the EU. This means that the EU countries will be the main beneficiaries of these agreements, at least in the short run, as the EU markets for industrial products have been open to the MPCs since the 1960s and the 1970s, while the markets for agricultural products still remain relatively closed.

We also find that not all the MPCs were able to benefit equally from the EU Association Agreements. In the case of bilateral imports we obtain positive and statistically significant coefficients for the Agreements only for Israel, Jordan, Morocco and Tunisia, and in the case of bilateral exports only for Tunisia. The results obtained for bilateral trade agreements concluded between the future members of the Agadir group were not significant.

## **2. Why trade liberalization is difficult and frequently delayed: testing Grossman-Helpman model**

### **2.1. Testing Grossman-Helpman model for Poland**

The degree of trade openness, given the widespread pressures of lobbies in a majority of countries, depends mainly on the governments' commitment to act in the interest of all consumers and on the scope of external pressure for liberalization. All NMS, by concluding Europe Agreements, and Central Free Trade Area (CEFTA), were committed to remove tariffs and non-tariff barriers in their trade with the EU.

Polish trade policy in 1990's, during the economic and political transition, was quite similar to that of other Central and East European (CEE) countries. Poland, at the beginning of 1990's had some degree of freedom in its tariff policy towards non-European countries. At that time Poland's tariffs were not subject to the discipline of the GATT and the government had freedom to manoeuvre in shaping its tariff structure. Poland had no legal constraint in the form of a "bound" tariff schedule, although it was a GATT member since 1967.

The preferential tariff liberalization started in 1991. In that year, Poland signed the Europe Agreement (EA) with the European Communities (EC). The commercial part of the EA came into force by 1992. The EC and Poland started FTA for non-agricultural products since March 1994 over a maximum period of ten years. The FTA was not applied to agricultural products. In the case of European Union's (EU) imports this

liberalization has taken five years and was completed by the end of 1997. The timetable of tariff liberalization of Polish imports was extended in time.

Poland signed a similar free trade agreement with EFTA countries. The agreement covered mainly trade in non-agricultural products. EFTA members eliminated most import duties in 1993. Poland gradually liberalized its tariffs and quantitative restrictions on EFTA imports by 1999 (except for steel, petroleum products, and automobiles).

Poland, along with the Czech Republic, Hungary and the Slovak Republic, established also CEFTA (Central European Free Trade Area) in 1992. Afterwards Slovenia 1996, Romania and Bulgaria joined the CEFTA. The CEFTA Agreement established a free-trade area by 2001. CEFTA covered all goods, except for a few agricultural products. Thus, by the end of 1990's almost all Polish duties on non-agricultural imports from European countries have been eliminated. The share of all these European countries exceeded 65% of Poland's total imports.

The non-preferential (MFN, conventional) liberalization of Poland's trade policy towards non-European countries started in 1995. The country took part in the GATT Uruguay Round as the only state having the formal status of a developed country without any "bound" customs duties. After submitting its initial offer on tariff concessions Poland had bilateral negotiations with several countries. Poland's main commitments on trade in goods in the Uruguay Round were to bind 94% of its duties and to reduce tariffs by 38% on industrial products and by 36% on agricultural goods over six years. The simple average bound MFN Polish tariff rate for non-agricultural products was reduced from 16.73 to 9.89 per cent.

The tariff structure was determined, almost from scratch, in the early 1990s by governmental decision. It seems that the interest groups probably did not have very strong influence on the process. The organizations of producers (chambers) were just being established. However, the trade unions were quite powerful. It is possible to show some anecdotal evidence that the tariff changes were influenced by lobbies' pressure. Afterwards the level of import duties was gradually reduced over the next years. The scope of reductions was quite impressive in the case of preferential duties.

In order to verify the possible impact of different lobbies we applied the Grossman-Helpman (G-H) “Protection for sale” model to analyze tariff policy. The governmental policy –in this model - is determined by elected politicians. They simultaneously consider the consumer welfare of the electorate and contributions of lobbies, representing various sectors of the economy. Thus, in the model, various lobbies in organized industries provide contributions to the government in return for influencing the tariff schedules.

Our empirical implementation (similar to that of Maggi and Goldberg for United States) is dealing with Polish trade policy in the late 1990s. We have used the instrumental variable approach to estimate the model, taking into account possible endogeneity of the regressors (import penetration). In the absence of direct measures of industry contributions, we have used similar variables to those used in literature, as a proxy for industry organization. The Herfindahl concentration index seems to be the best proxy for the industry organization. It means that more concentrated industries with fewer companies have better chances to coordinate their actions and are more effective in lobbying. The model was estimated for years 1996-1999.

Our results are broadly in line with the predictions of the Grossman-Helpman (G-H) model. Most of our regressions support the theory and we find support for the (minor) significance of lobbies in the formation of trade policy in Poland. The G-H model seems to work well in the case of MFN tariffs. The importance of the lobbies is, however, significantly lower than in the case of the United States. According to the model the Polish government attached very high weight to social welfare, paying almost no attention to pressures from lobbies. The model finds only very weak support using preferential data. This result seems plausible since in late 1990’s Poland had already no freedom in its preferential policy, due to tariff reductions, in line with provisions of the Europe Agreement.

Thus, we can conclude that the Polish government paid almost no attention to organized protectionist lobbies, and due to external pressure from the EU, EFTA and WTO liberalized its tariff policy very rapidly in the second half on 1990’s. It seems that a similar situation prevailed in other Central and East European, future NMS. All of them

signed Europe Agreements, EFTA and CEFTA agreements and reduced their conventional tariffs in line with Uruguay Round commitments.

## **2.2. Testing Grossman-Helpman model for Israel**

Since 1991 Israel has moved slowly but steadily towards a very open trade regime. The average applied MFN tariff was only 8.9% in 2005. Some 46.4% of the tariff lines carry duties between zero (excluded) and 15% (included). MFN tariffs on agricultural products remain high, with an average tariff of 32.9%, and rates varying considerably among product groups. Israel has bound rates on just half of its tariff lines. The bound rates are often above the applied MFN rates, giving Israel the possibility to unilaterally raise its applied tariffs. However the significance of MFN tariff schedules is limited. The bulk of Israel's imports is conducted within the framework of free-trade agreements.

The oldest NTB in Israel is the kosher certificate requirement. Because of the power of the Rabbinate, any overseas exporter who aims to reach maximal market access and share must comply with kosher requirements. Another idiosyncratic NTB originates from its centralistic structure regarding imports. In many instances, only one firm is allowed to import a certain label.

Protectionism via the use of government procurement has plagued the Israeli economy since Independence in 1948, as public expenditure is unusually high for an OECD-type economy, with the Army and the Ministry of Defence playing a central role. While Israel has been for years party to the plurilateral Agreement on Government Procurement (GPA), it has always invoked developing-country status, allowing it to implement offset arrangements. Foreign governments, particularly the one of the US, have been complaining for years, about the lack of transparency in Israeli practices.

Invoking the status of developing country for applying Uruguay Round resolutions has not been limited to the domain of government procurement, but to other highly relevant issues in the case of Israel, such as TRIPS, where Israel was given until 2000 to change its law on intellectual property.

Since July 2003, Israel has lifted its general prohibition on imports from WTO Members that had no diplomatic relations with it or prohibited imports from Israel. However, a licensing requirement remains in place for some other countries that prohibit imports from Israel.

The agricultural sector is still highly protected, especially in comparison to industrial goods. The only exception to agricultural self-sufficiency is feed grains such as wheat and soybeans, where Israel is a net importer. MFN tariffs on agricultural products did actually rise more than 2.5 times from 1993 to 1999 with the adoption by the GATT's principle of *tariffication*. The huge tariffs protect all local producers, including those kibbutzim and Arab meat producers which are allowed to supply non-kosher meat. Because there are still tariff quotas on some product groups, there is some scope for lobbying the Ministry of Agriculture and Rural Development as well as the one of Industry, Trade, and Labour, which are the ones in charge of the administration of those quotas.

Regarding textiles and wearing apparel, Israel has accepted since at least a decade that the survival of its firms under Israeli ownership and management implies that they have to be "de-localized" to neighbouring countries such as Jordan and Egypt. The process has taken place in an orderly way and is now almost completed.

In our project we also tried to estimate the "Protection for sale" model for Israel. But, in this case we faced some serious problems resulting from limited availability of statistical data. The core estimation equation of the Grossman-Helpman model involves the inverse import penetration ratio as an explanatory variable that is clearly endogenous. The original modeling framework uses instrumental variables to overcome that problem. However, it was impossible to get a robust estimate of predicted import penetration ratios for Israel. The problems stemmed mainly from the lack of sectoral data on capital stock required to predict import penetration in a Heckscher-Ohlin, factor-intensity fashion. Thus, it was impossible to estimate the G-H model correctly using the original framework. Nevertheless, an attempt has been made to estimate the model neglecting the endogeneity problem. Estimates are in line with the theory only for the case of the export intensity ratio (i.e. share of exports in domestic production)



used as industry organization variable for both applied MFN tariffs and weighted average of applied duties (for preferential and non preferential imports).

Poor performance of the G-H model may result from the fact that the Israeli government paid relatively little attention to organized lobbies or that they were poorly organized. Our results suggest that only the export oriented industries in Israel, managed – to a very limited extent - to exert some influence on the government and receive some tariff protection in the framework of preferential agreements. This statement has to be treated with extreme caution, since these estimates are not robust and are subject to statistical problems. Moreover, this policy was probably not a real obstacle in Israeli trade liberalization, since export oriented industries are, almost by definition, not seriously threatened by import competition.

Perhaps, these results explain partially why Israeli governments managed to follow fairly liberal trade policies. Unfortunately, sectoral data, necessary to estimate G-H model, appeared to be unavailable for other more protectionist Mediterranean Partner countries.

### **3. Business environment: the causes and role of corruption in MPCs and NMS: ways for improvement**

The shape of tariff policy can be influenced by lobbies and vested interests groups, as shown in the previous research. But the real access to a given domestic market by foreign and domestic suppliers depends on business environment as well. Bureaucratic delays, costs, and the number of procedures to carry out business activities can severely limit the access to a given market. Thus, the unfavourable business environment can acutely restrict real liberalization of the economy and lead to distortions in production and consumption.

The proliferation of unnecessary regulation can benefit narrow, but powerful groups inside the state administration with privileged access to legislature. With such actions, top bureaucratic officials may organize the business environment as to enrich

themselves. In such cases, even though the government aims to realize public wants, regulatory policies can be implemented in wasteful and incompetent ways, which results in the over-regulation of the businesses. Seeing this, lower-level officials may take advantage of this situation and may seek to delay bureaucratic decisions in order to extract bribes. Thus, they can use their public power to extract bribes from those who need the authorizations or permits. As a result, an excessive number of regulations may result in widespread corruption.

There is a growing statistical evidence that corruption slows down economic growth and foreign direct investment. Corruption in candidate countries had been one of the EU's major concerns time after time, when the European Commission began publishing its annual progress reports on candidates in 1997. The grounds of that anxiety were simple: - the European legal system works under the assumption that law will be implemented, controlled, and enforced by the public administration and judiciary of the member states. Corruption endangers the implementation and execution of rules or makes their adoption merely formal. An implication of the Accession Partnerships is that that the candidate countries must fight against corruption. Moreover, the EU-Commission has adopted a requirement of an anti-corruption framework for all candidates. What is more important, the EU was a major force behind de-regulation in the NMS. Therefore, the EU accession process has had a major impact on corruption in candidate states. This can be confirmed by comparing corruption scores of non-EU post communist countries and New Member States. In our opinion, the recent accession to the EU required from the NMS to put in place measures that enforce transparency and competition.

In MPCs, there has been a tendency for reforms and economic liberalization programs to lag. This underdevelopment of bureaucratic powers and regulation has created opportunities for rent seeking associated with corruption. The MPCs had no such external pressure as the NMS had, applied on them by the European Commission. Hence, the position of interest groups within the MPC still allows rent-seeking behaviour through artificial barriers to entry to internal markets and discourage competition.

The main goal of the project was to analyze the causes of corruption and ways of improvement. Several hypotheses were tested here. Some of them appear quite general, e.g. that (i) corruption is lower in higher economically developed countries and that (ii) stable democratic institutions and corruption are expected to be positively correlated. Two other hypotheses were more important for practical reasons for MPCs; i.e. that (iii) corruption is associated with the number of bureaucratic procedures and (iv) that it rises with bureaucratic delays.

The testing started with the two exogenous variables explaining corruption: the logarithm of GDP per capita and the level of democracy proxied by the political rights variable. This pair of control variables proved to have correct positive sign and be statistically significant. Hence, the first two hypotheses have been positively verified.

Then, we dealt with licenses variables. This topic tracks the procedures, time, and costs to build a warehouse, including obtaining necessary licenses and permits, completing required notifications and inspections, and obtaining utility connections. As expected, it came out in the investigation that longer bureaucratic delays and higher number of procedures were a significant factor in the prevalence of corruption.

On the other hand, official costs of dealing with licenses came out significant only in some of the specifications, with low levels of confidence. The positive signs in all specifications indicate that official costs of bureaucratic procedures do not play a major role in corruption, since businesses prefer predictable official payments to unpredictable informal ones so they substitute one by the other. This means that official incentive payments may be one way to achieve a less corrupt and speedier bureaucracy.

To accomplish a successful reduction in the level of corruption, liberalization and improvements in working of the bureaucracy will be required in most MPCs. Decreasing the number of procedures, streamlining of the bureaucracy and other ways to limit time spent waiting for its decisions may significantly reduce corruption, even if it occurs at a higher official cost of conducting administrative procedures. Given the long history of corruption in the region, the proposed regulatory measures would probably not be sufficient to eradicate it to the level of new members of the European

Union, at least not in the short term. No doubt, it may take years or even decades to bring corruption down.

The possible improvement in the level of corruption in MPCs has been analyzed as well. First, we compared the current level of each of the variables used in the regression for every MPCs country with an average level for the eight NMS from Central Europe.

Then we analyzed the difference between the average level for the eight NMS countries and the level for each MPCs country of each of the variables used in the regression. We have estimated the 'predicted improvement' in the level of corruption in MPCs by multiplying the differences in the level of regulation by the coefficients obtained in the regression (only significant variables were used).

The result is that if the MPCs reduced their level of business regulation to that of the NMS, we would observe a predicted fall in corruption. This fall is quite large, especially for Syria and Algeria. The improvement would move these countries almost to the level of corruption observed currently in Turkey and the improvement in the corruption level in Turkey would move it to the level of corruption observed in the Czech Republic.

However, Israel and Tunisia have a lower level of regulation than the 8 New Member States' average. As a result, a change in the level of regulation to the NMS 8 level would mean an effective increase in regulation. Therefore, this would theoretically increase corruption instead of decreasing it. This hypothetical result seems plausible too, though it is very important to remember, that post-communist countries suffer from legacies of the now obsolete system of central planning. By definition, central planning involved vast and substantial direct governmental intervention in economic decision-making. Therefore, these countries have a very high level of regulation even though liberalization is still undergoing.

This is not in any way connected to the bureaucratic rigidities often ridiculed by opponents of the European Union. In fact, the level of regulation and the time spent dealing with the bureaucracy is much lower in the EU-15 countries than in the 8 NMS by almost an order of significance. Furthermore, as discussed above, the European Commission was a major force behind deregulation in many areas of economic activity in the NMS.

## Chapter 1: Assessing trade liberalization using gravity models

In this section we use the gravity model to assess the effect of trade liberalization in two regions: in Central and Eastern Europe and in the Mediterranean Partner countries.

### Introduction

Preferential trade liberalization has become a major feature of the global trading system in the last fifty years. The inability to achieve far reaching multilateral trade liberalization under the auspices of the General Agreement on Tariffs and Trade (GATT) and later the World Trade Organization (WTO) has led to the proliferation of regional trade agreements (RTAs) in the world economy. Following the WTO convention the term regional trade agreement encompasses both reciprocal bilateral free trade areas (FTAs) or customs unions (CUs) as well as plurilateral (multicountry) agreements.<sup>3</sup> During the 1990s the European Union (EU) was a major player in the RTA game and an active sponsor of bilateral association agreements with individual countries located both in the Central and Eastern Europe (CEE) as well as in the Mediterranean Partner Countries (MPC). However, despite some similarities important differences with respect to the pace and the scope of trade liberalization between these two groups of countries exist.

The first wave of regionalism was triggered by a group of Western European countries which, following the 1957 Treaty of Rome, established the customs union that later evolved into the European Union (EU) and created a network of preferential trade agreements with other partners.<sup>4</sup> In the 1990s the European Union played also an active

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<sup>3</sup> In a free trade area all members eliminate barriers to trade in goods among themselves but each member retains the right to maintain different barriers on non-members, while a customs union goes beyond a FTA by establishing a common external tariff on all trade between members and non-members.

<sup>4</sup> For many years the Mediterranean countries were the priority region for the EU. The first generation association agreements with selected Mediterranean countries were concluded already in the 1960s. In the 1970s the Global Mediterranean Policy (GMP) that resulted in a series of cooperation agreements provided non-discriminatory trade concessions to all countries in the region. Further trade liberalization took place after two waves of enlargement to the South in the 1980s that included Greece (1981) and later Portugal and Spain (1986). Following the Southern enlargement the so-called adaptation agreements were concluded with the remaining Mediterranean countries to reduce increased tariff discrimination between the Southern EU member and non-member countries. In 1995 the Barcelona conference set an ambitious

role in sponsoring trade liberalization in Central and Eastern European countries that during the communist rule remained isolated from the rest of the world for almost fifty years.

The so-called Europe Agreements concluded with the CEE countries were intended to support their economic reforms and prepare them for eventual membership in the EU. These efforts culminated in two subsequent waves of enlargement to the East that took place in 2004 and 2007. At about the same time when the Europe Agreements were signed the CEE countries started to liberalize trade also among themselves. Their efforts resulted in a matrix of sub-regional and bilateral agreements that were supposed to complement trade liberalization with Western Europe.

In contrast to relatively fast trade liberalization with the CEE countries trade liberalization with the MPCs was a gradual process that lasted over three decades. Moreover, unlike the CEE countries that radically liberalized their trade with the EU in the 1990s, exports from the MPCs have enjoyed preferential treatment by the EU for many years. The first generation Euro-Mediterranean Association Agreements with selected MPCs that provided free access for their manufactures exports to the EU countries were concluded already in the 1960s.<sup>5</sup> In 1972 the European Commission launched the Global Mediterranean Policy (GMP) that was aimed at providing non-discriminatory trade concessions to all MPCs.<sup>6</sup>

This policy resulted in a series of so-called Cooperation Agreements that were concluded between 1973 and 1980 with all MPCs (Peridy, 2005). In particular, these agreements extended earlier preferences for MPC exports of agricultural products both in terms of coverage and the margins of preference. However, at the same time these exports were subject to protectionist measures imposed by the European Common

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goal of creating the Euro-Mediterranean Free Trade Area (EUROMED) by 2010. As a result of this new generation association agreements were concluded with most Middle Eastern and North African countries and Cyprus and Malta joined the EU in 2004.

<sup>5</sup> In addition to liberalization of manufactures goods imports from the associated countries some agricultural imports were granted reductions in the common external tariff.

<sup>6</sup> Euro-Mediterranean trade liberalization within the framework of the GPM was unilateral except for Israel where reciprocity was required.

Agricultural Policy (CAP). Further liberalization of EU imports from the MPCs took place after the Southern enlargement in 1986 to include Spain and Portugal whose exports obtained unrestricted access to the EU markets.

Following this enlargement the EU concluded a new series of agreements with the MPCs called Adaptation Agreements that were aimed at reducing increased tariff discrimination between those countries that joined the EU and those that stayed outside. As a result of this renovated policy by the end of 1993 all tariffs on exports from the MPC's were eliminated, however, non-tariff barriers (NTBs) to trade related to the CAP were still in force. The final round of trade liberalization between the EU and the MENA countries was initiated in 1995 at the Barcelona conference that set the ambitious goal of creating the Euro-Mediterranean Free Trade Area (EUROMED) by the target date of 2010.

The creation of the EUROMED is to be achieved by means of the new generation of the Euro-Mediterranean Association Agreements between the EU and the MPCs accompanied by free trade agreements between the MPCs themselves. In contrast to earlier, mostly unilateral, trade liberalization the new Association Agreements provide for the implementation of bilateral free trade between the EU and the MENA countries. The EUROMED foresees free trade in manufactured goods and progressive liberalization of trade in agricultural products.<sup>7</sup>

In this paper we use the augmented gravity model to study, first, the trade effects of the EU-sponsored trade liberalization in the CEE countries and compare them with the effects of preferential trade liberalization among themselves. Second, we use the gravity model to study the trade effects of the new EU Association Agreements for bilateral imports and exports of the MPCs.

Two strands in the empirical literature employing the gravity models in the context of Central and Eastern European countries can be distinguished. The first strand that emerged in the early 1990s concentrated on estimating the trade potential of and CEE

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<sup>7</sup> However, the scope of trade liberalization in agricultural products is somewhat limited due to EU's refusal to remove NTBs on agricultural products.

countries and predicting the volume of their trade flows with the West.<sup>8</sup> The second, less numerous, strand that emerged in the late 1990s and early 2000s focuses on evaluating the ex-post effectiveness of trade liberalization in Central and Eastern Europe. However, most studies that belong to the second genre take into account only the trade effects of the EU Association Agreements and neglect completely the intra-CEE agreements.

The notable two exceptions include studies by Adam et al. (2003) and De Benedictis et al. (2005). Adam et al. (2003) explore empirically the effectiveness of two sub-regional trade agreements: the Central European Free Trade Area (CEFTA) and the Baltic Free Trade Area (BAFTA). In their study they find that both agreements were effective in stimulating trade among the CEE countries, however, the BAFTA agreements turned out to be more effective than CEFTA. Moreover, the effects of the EU Association Agreements were smaller than either BAFTA or CEFTA. In general, the authors conclude that all the agreements were trade creators for their members.

In a more recent study De Benedictis et al. (2005) do not distinguish between BAFTA and CEFTA and use in their estimating equation only one common dummy variable for all regional trade agreements concluded among the CEE countries. Interestingly, they find that while sub-regional FTAs increased bilateral exports between the CEE countries the EU Association Agreements had no impact on their exports to the EU. They attempt to explain this puzzling result by the fact that starting from the end of the 1980s trade between the CEE countries and EU-12 was already intense because reduction of trade barriers had already taken place and there was not much left to liberalize in the 1990s.<sup>9</sup>

Our present study is related to the second strand in the literature.

While there exists substantial literature that deals with evaluating empirically the effects of trade liberalization between the new and the old EU member states relatively little attention has been devoted to studying the effects of the recent EU Association

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<sup>8</sup> The examples include. See Brenton and Manzocchi (2002) for the review of this literature.

<sup>9</sup> They also argue that their result is in line with many contributions in the earlier literature that emphasized the erosion in the unrealized trade potential of the CEE countries with the EU already in the early 1990s.



Agreements concluded with the MPCs.<sup>10</sup> Therefore, our study attempts to fill in a part of the existing gap in this important field of study.

Although the goal of our study may look similar to some of the previous studies three major differences can be identified. First, to study the effectiveness of particular trade agreements we use the augmented gravity equation that can be directly derived from the neoclassical as well as new trade theory models that assume incomplete specialization in production. Second, in addition to the gravity variables in our estimating equations we control also for the potential effects of various bilateral trade agreements concluded by the CEE countries / MPCs among themselves as well as with countries located outside the region. Third, in our study we present not only the averaged estimates of the effects of preferential trade liberalization in CEE / MPCs obtained for the whole group but also the estimates obtained for the particular countries in the region.

In contrast to previous studies we find that both the EU Association Agreements as well as various sub-regional and bilateral trade agreements were effective in promoting trade of the CEE countries. We also find that while the new EU Association Agreements increased significantly imports of the MPCs from the EU, they had no impact on their exports to the EU which can be attributed to the asymmetry in trade liberalization between the EU and the MENA countries. In particular, liberalization of the EU imports from the MENA countries was a gradual process that extended over the last thirty years and there was not much to liberalize in the 1990s while liberalization of the MPC imports from the EU took place much faster and its scope was much bigger. Moreover, we find that the estimated impact of the Association Agreements on bilateral trade of the MPCs differs greatly across countries.

The structure of this chapter is as follows. In the next section we present the analytical framework used for evaluating empirically the effects of preferential trade liberalization, followed by the definition of variables and data sources used in our

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<sup>10</sup> The notable exception is the empirical study by Peridy (2005) who finds that the preferential agreements with the EU positively influenced bilateral exports of the MPCs to the EU. According to him the gross trade creation is estimated to be about 20-27% of actual exports depending on model specification.

empirical study. Two sections each dedicated to a different region, describe, firstly, preferential trade liberalization (in the case of CEE countries focusing on the role of the EU Association Agreements and intra-CEE agreements in this process), and secondly, present and discuss the estimation results obtained for the whole CEE or MPC group as well as for separate countries in each region. Finally, the summary and conclusion for each section are presented.

## **The Analytical Framework**

To study the impact of the free trade agreements on bilateral exports and imports of the CEE countries and given the perceived failure of intra-MPC trade agreements it is interesting to study whether MPCs do any better in the case of Euro-Mediterranean Association Agreements compared to their sub-regional and bilateral trade agreements. We use a gravity model of bilateral trade flows in its extended form that can be derived from neoclassical as well as new trade models that assume incomplete specialization in production. The gravity models have been widely used in empirical studies of economic integration processes to investigate the changes in the geographic trade pattern and the effects of FTAs and currency unions on trade flows. However, most previous studies are based on the gravity models in the simplified form that assumes complete specialization in production either at the country or the firm level and foresees no role for factor proportions. These simplistic models predict that trade between two countries depends only on their size and trade costs between them.

In our view such models cannot be regarded as fully satisfactory as the estimates of the effects of FTAs obtained on the basis of such models may be seriously biased due to the lack of controls for factor proportions that play a key role in the determination of trade flows in the incomplete specialization models especially when they are estimated for the middle- or low-income countries. Therefore, in contrast to such models, the generalized estimating equation that encompasses particular estimating equations derived from various theoretical models used in our empirical study can be expressed in its logarithmic form as follows:

$$\ln T_{ijt} = \sum_{k=1}^n \beta_k \text{RTA}_{ijt} + \alpha_1 \ln Y_{it} + \alpha_2 \ln Y_{jt} + \alpha_3 \ln K_{it}/L_{it} + \alpha_4 \ln K_{jt}/L_{jt} + \alpha_5 \ln \text{DISTANCE}_{ij} + \alpha_6 \text{CONTIGUITY}_{ij} + \alpha_7 \text{LANGUAGE}_{ij} + \alpha_8 \text{COLONY}_{ij} + \alpha_9 \text{COLONIZER}_{ij} + u_i + u_j + u_{ij} + v_t + \varepsilon_{ijt}. \quad (1)$$

where:  $T_{ijt}$  is the value of trade flows (exports and imports, respectively) between countries  $i$  and  $j$  in year  $t$ ;  $\text{RTA}_{ijt}$  is a dummy variable indicating whether countries  $i$  and  $j$  are both the members of a bilateral or a plurilateral regional preferential trading agreement in year  $t$ ;  $Y_{it}$  and  $Y_{jt}$  are the levels of GDP in countries  $i$  and  $j$  in year  $t$ , respectively;  $K_{it}/L_{it}$  and  $K_{jt}/L_{jt}$  are the capital per worker stocks in countries  $i$  and  $j$  in year  $t$ , respectively;  $\text{DISTANCE}_{ij}$  is the distance between countries  $i$  and  $j$  in year  $t$ , respectively;  $\text{CONTIGUITY}_{ij}$  is a dummy variable indicating whether countries  $i$  and  $j$  share a common border;  $\text{LANGUAGE}_{ij}$  is a dummy variables indicating whether at least 9% of the population in countries  $i$  and  $j$  speak a common language (for the MPCs two other dummy variables were used instead:  $\text{ARABIC}_{ij}$  and  $\text{TURKISH}_{ij}$  are two dummy variables indicating whether countries  $i$  and  $j$  share a common language);  $\text{COLONY}_{ij}$  is a dummy variable indicating whether countries  $i$  and  $j$  were in a colonial relationship;  $\text{COLONIZER}_{ij}$  is a dummy variable indicating whether countries  $i$  and  $j$  shared a common colonizer (after 1945 the CEE countries being in the Soviet Union's zone of influence);  $u_i$  and  $u_j$  are the individual fixed effects for countries  $i$  and  $j$ , respectively;  $u_{ij}$  is the country-pair specific effect;  $v_t$  is the time specific effect, and  $\varepsilon_{ijt}$  is the error term that satisfies the standard properties.

The preferential trading agreements once implemented should increase bilateral trade of both trading partners in the case of reciprocity, hence  $\beta_i > 0$  for all effective agreements. All theoretical models predict that trade flows should increase with the economic size of both trading partners, hence  $\alpha_1, \alpha_2 > 0$ . However, the impact of the factor proportion variables cannot be *a priori* determined as it varies across various models of incomplete specialization in production and could be either positive, negative or none depending of the extent of product differentiation. Therefore, the signs of the estimated parameters on the factor proportion variables  $\alpha_3, \alpha_4$  and their statistical significance have to be determined empirically.

We expect trade flows to be negatively related to distance that serves as a proxy for transportation costs which should be low when countries are located close to each other, hence  $\alpha_5 < 0$ . Common border and language indicator variables serve as proxy for transaction costs which should be lowered when trading partners share a common border and/or speak a common language, therefore  $\alpha_6, \alpha_7 > 0$ . The colonial ties serve as proxies for historical ties and should positively influence bilateral trade flows, hence  $\alpha_8, \alpha_9 > 0$ .

## **Preferential trade liberalization in Central and Eastern Europe: The EU-CEE versus intra-CEE free trade agreements**

In this section we study the effects of three types of preferential trade liberalization in ten CEE countries that joined the EU in two subsequent waves of enlargement to the East in 2004 (the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia), and in 2007 (Bulgaria and Romania): trade liberalization with an already existing trade bloc such as the EU or EFTA, the creation of a new sub-regional free trade area such as BAFTA or CEFTA and finally bilateral trade agreements concluded by particular CEE countries among themselves as well as with other countries outside the region.

### **Trade liberalization with Western Europe**

The ultimate goal of joining the EU has been the major factor shaping foreign trade policies in the CEE countries throughout the 1990s. The EU concluded bilateral association agreements (so-called the Europe Agreements) with the majority of the CEECs in the first half of the 1990s (see Table 1).

**Table 1. The EU Association and EFTA Agreements**  
[years in force]

<b>Country</b>	<b>EU</b>	<b>EFTA</b>
Estonia	1995-2004	1996-2004
Latvia	1995-2004	1996-2004
Lithuania	1995-2004	1996-2004
Czech Republic	1992-2004	1992-2004
Slovakia	1992-2004	1992-2004
Hungary	1992-2004	1993-2004
Poland	1992-2004	1993-2004
Slovenia	1997-2004	1995-2004
Romania	1993-2007	1993-2007
Bulgaria	1993-2007	1993-2007

Source: European Commission (2007)

The Europe Agreements aimed at establishing a hub-and-spoke free trade area covering industrial products and granting some preferences to agricultural goods between the CEECs and the EU over a maximum period of ten years. In contrast to a typical FTA

the Europe Agreements implied asymmetric trade liberalization between the EU and the CEECs with more rapid liberalization by the EU. The trade components of the Europe Agreements overshadowed and extended the Generalized System of Preference status granted by the EU to most CEECs in the early 1990s.<sup>11</sup> By January 1, 1997 the EU eliminated practically all tariffs on imports from the CEECs with the exception of agricultural and “sensitive” products.

Although trade parts of the Europe Agreements with some CEE countries entered into force on different dates ranging from 1992 (former Czechoslovakia, Hungary and Poland) to 1997 (Slovenia), schedules of elimination of tariffs and non-tariff barriers on industrial products had one important element in common. They all had to be completed by the target date of January 1, 2002. The liberalization of trade in agricultural goods between the EU and the CEECs, however, did not take place until the two waves of enlargement of the EU to the East in 2004 and 2007. Only since then the CEECs have been able to participate fully in the EU Single Market.

In addition to trade liberalization with the EU the CEE countries liberalized in the early 1990s their trade also with other Western European countries that were the members of the European Free Trade Association (EFTA) – another main trade bloc in Europe, although much smaller and much less integrated than the EU. The bilateral free trade agreements between the CEECs and the EFTA member states were patterned on the trade parts of the Europe Agreements as far as the scope and timing of trade liberalization are concerned. These agreements covered mainly trade in industrial products as well as some marine and processed agricultural products.

Similar to the EU Association Agreements also the EFTA agreements implied asymmetric trade liberalization. These agreements opened the EFTA markets to imports from the CEECs faster than the CEE markets to EFTA products. In 1995, as a result of

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<sup>11</sup> Unilateral trade liberalization with the CEE countries was initiated by the EU immediately after the fall of communism in Central and Eastern Europe. In 1990 the EU granted the Generalized System of Preference (GSP) status to Hungary and Poland, in 1991 to Bulgaria and former Czechoslovakia, and in 1992 to three former Soviet republics: Estonia, Latvia and Lithuania. Slovenia retained the preferential status for its exports into the EU under the so-called autonomous trade preferences granted to former Yugoslavia in the 1980 Cooperation Agreement. The GSP status significantly improved access of exporter from the CEE countries to the EU markets, especially for industrial products. GSP preferential rate embraced 63 percent of all CN tariff lines in EU imports with most of them subject to zero rates.

the EU enlargement, the EFTA lost three of its most important member states: Austria, Finland and Sweden that jointly accounted for more than 50 percent of EFTA's output. However, already in 1992 most EFTA countries signed the agreement with the EU establishing the European Economic Area (EEA).<sup>12</sup>

Through the EEA agreement that entered into force in 1994 the EFTA member states can participate in the EU Single Market. The EEA agreement created a free trade area covering trade in industrial goods and most services as well as liberalized the movement of labour and capital between EFTA and the EU. Therefore, the enlargement of the EU in 1995 did not change much the trade relations between the old and the new EU member states that left the EFTA except for trade in agricultural products.

### **Trade liberalization among the CEE countries**

In addition to trade liberalization with Western Europe the CEE countries liberalized trade also among themselves by creating a matrix of bilateral and plurilateral sub-regional free trade agreements (see Table 2).

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<sup>12</sup> The only exception was Switzerland which decided in 2002 in a referendum not to join the EEA. Instead, Switzerland concluded later a separate bilateral agreement with the EU.

**Table 2. Bilateral and Plurilateral Free Trade Agreements among the CEE countries**

[years in force]

Country	Baltic Free Trade Area (BAFTA)			Central European Free Trade Area (CEFTA)							
	Estonia	Latvia	Lithuania	Czech Republic	Slovakia	Hungary	Poland	Slovenia	Romania	Bulgaria	Croatia
Estonia	X	BAFTA [1994-2004]	BAFTA [1994-2004]	FTA [1998-2004]	FTA [1998-2004]	FTA [1998-2004]	FTA [1999-2004]	FTA [1997-2004]		FTA[2002-2004]	
Latvia	BAFTA [1994-2004]	X	BAFTA [1994-2004]	FTA [1997-2004]	FTA [1997-2004]	FTA [2000-2004]	FTA [1999-2004]	FTA [1996-2004]		FTA[2003-2004]	
Lithuania	BAFTA [1994-2004]	BAFTA [1994-2004]	X	FTA [1997-2004]	FTA [1997-2004]	FTA [2000-2004]	FTA [1997-2004]	FTA [1997-2004]		FTA[2003-2004]	
Czech Republic	FTA [1998-2004]	FTA [1997-2004]	FTA [1997-2004]	X	CEFTA [1993-2004]	CEFTA [1993-2004]	CEFTA [1993-2004]	CEFTA [1996-2004]	CEFTA [1997-2004]	CEFTA [1999-2004]	CEFTA [2003-2004]
Slovakia	FTA [1998-2004]	FTA [1997-2004]	FTA [1997-2004]	CEFTA [1993-2004]	X	CEFTA [1993-2004]	CEFTA [1993-2004]	CEFTA [1996-2004]	CEFTA [1997-2004]	CEFTA [1999-2004]	CEFTA [2003-2004]
Hungary	FTA [1998-2004]	FTA [2000-2004]	FTA [2000-2004]	CEFTA [1993-2004]	CEFTA [1993-2004]	X	CEFTA [1993-2004]	CEFTA [1996-2004]	CEFTA [1997-2004]	CEFTA [1999-2004]	CEFTA [2003-2004]
Poland	FTA [1999-2004]	FTA [1999-2004]	FTA [1997-2004]	CEFTA [1993-2004]	CEFTA [1993-2004]	CEFTA [1993-2004]	X	CEFTA [1996-2004]	CEFTA [1997-2004]	CEFTA [1999-2004]	CEFTA [2003-2004]
Slovenia	FTA [1997-2004]	FTA [1996-2004]	FTA [1997-2004]	CEFTA [1996-2004]	CEFTA [1996-2004]	CEFTA [1996-2004]	CEFTA [1996-2004]	X	CEFTA [1997-2004]	CEFTA [1999-2004]	CEFTA [2003-2004]
Romania				CEFTA [1997-2004]	CEFTA [1997-2004]	CEFTA [1997-2004]	CEFTA [1997-2004]	CEFTA [1997-2004]	X	CEFTA [1999-2007]	CEFTA [2003-2007]
Bulgaria	FTA[2002-2004]	FTA[2003-2004]	FTA[2003-2004]	CEFTA [1999-2004]	CEFTA [1999-2004]	CEFTA [1999-2004]	CEFTA [1999-2004]	CEFTA [1999-2004]	CEFTA [1999-2007]	X	CEFTA [2003-2007]
Croatia				CEFTA [2003-2004]	CEFTA [2003-2004]	CEFTA [2003-2004]	CEFTA [2003-2004]	CEFTA [2003-2004]	CEFTA [2003-2007]	CEFTA [2003-2007]	X



The most important of these was the Central European Free Trade Area established by former Czechoslovakia, Hungary and Poland. The CEFTA agreement was signed on December 21, 1992 and entered into force on March 1, 1993. The initial CEFTA agreement eliminated tariffs on approximately 40 percent of industrial goods. Trade in industrial goods and some agricultural products was further liberalized through a series of additional protocols, mostly signed in 1994 and 1995. By 1996 almost 80 percent of the CEFTA trade in industrial products were free of tariffs. By 1999 tariffs were abolished on almost all industrial products except a minor list of “sensitive” products.<sup>13</sup>

The CEFTA membership gradually expanded overtime to include Slovenia (1996), Romania (1997), Bulgaria (1991) and Croatia (2003). The CEFTA agreement was supposed to include also three newly independent Baltic States: Estonia, Latvia and Lithuania that emerged from the former Soviet Union after its collapse in 1991. However, these three countries in about the same time when the CEFTA was built created their own Baltic Free Trade Area.

The BAFTA agreement was signed on September 13, 1993 and entered in force on April 1, 1994. In contrast to CEFTA, BAFTA did not increase its membership but the coverage of the agreement was increased over time at a faster pace than in the CEFTA member states. In particular, by January 1, 1997 BAFTA included not only industrial but also agricultural and fish products. In this way BAFTA became the first free trade area in the region that provided for completely liberalized trade in these politically sensitive areas.

Consequently, the significant differences in the pace and the coverage of trade liberalization between the BAFTA and the CEFTA member states did not allow creating a single free trade area that would embrace all the CEE countries before their accession to the EU. Instead, a number of bilateral trade agreements between the BAFTA and the CEFTA member countries was signed that complemented sub-regional trade liberalization in Central and Eastern Europe.

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<sup>13</sup> These included mainly certain types of cars whose trade was liberalized by January 1, 2002.

## Trade liberalization with other countries

In addition to bilateral and plurilateral trade liberalization among the CEE countries these countries also participated in a number of bilateral free trade agreements concluded with other countries located both in the Middle East as well as in South-Eastern Europe (see Table 3).

**Table 3. Bilateral Free Trade Agreements of the CEE countries with other countries**  
[years in force]

Country	Middle East		South-Eastern Europe		
	Israel	Turkey	Albania	Macedonia	Ukraine
Estonia		FTA [1998-2004]			FTA [1996-2004]
Latvia		FTA [2000-2004]			
Lithuania		FTA [1998-2004]			
Czech Republic	FTA [1997-2004]	FTA [1998-2004]			
Slovakia	FTA [1997-2004]	FTA [1998-2004]			
Hungary	FTA [1998-2004]	FTA [1998-2004]			
Poland	FTA [1998-2004]	FTA [2000-2004]			
Slovenia	FTA [1998-2004]	FTA [2000-2004]		FTA [1996-2004]	
Romania	FTA [2001-2007]	FTA [1998-2007]	FTA [2004-2007]	FTA [2004-2007]	
Bulgaria	FTA [2002-2007]	FTA [1999-2007]	FTA [2003-2007]	FTA [2000-2007]	
Croatia		FTA [2003-present]	FTA [2003-present]		

Most agreements were signed by the CEFTA members with Israel and Turkey in the late 1990s and the early 2000s once these two countries concluded new Association Agreements with the EU.<sup>14</sup> In addition to that the Balkan members of the CEFTA concluded also a number of agreements with neighbouring Balkan countries: Albania and Macedonia. The Baltic states also concluded bilateral free trade agreements with Turkey, and Estonia also a separate agreement with Ukraine.

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<sup>14</sup> The new EU association agreement with Turkey established a customs union with the EU that entered into force in 1996.

## The Definitions of the Variables and the Data Sources

Our dependent variables used in the estimating equation (1) are bilateral exports and imports of ten CEE countries that joined the EU in the two subsequent waves of enlargement to the East in 2004 and 2007. These include five Central European countries: the Czech Republic, Slovakia, Hungary, Poland and Slovenia, three North-Eastern European states: Estonia, Latvia and Lithuania, and two South-Eastern European countries: Bulgaria and Romania. The trade flows data comes from the single source UN COMTRADE database and is expressed in the constant US dollars in 2000 prices. The sample choice was determined by data availability. The sample covers 195 trading partners of the CEE countries in the period of 1993-2004.<sup>15</sup> This yields a total of approximately 16 thousand observations.

Our main explanatory variables include dummy variables indicating the EU Association Agreements as well as dummy variables indicating various intra-CEE bilateral trade and sub-regional trade agreements discussed in detail in Section 2 that were in force for the time span covered by our sample. In addition to this in our study we control also for potential effects of other preferential trading agreements concluded by the CEE countries. These include bilateral agreements concluded with the EFTA member states, the Mediterranean countries as well as the South Eastern European countries. Moreover, we also control for the potential effects of the EU enlargement in 2004 by including a special dummy variable for the EU-25.

Our main control variables derived from the trade theory include two types of variables. The first refers to economic country size measures while the second to the measures of factor proportions. The country size is measured using the data on trading partners' GDPs expressed in constant 2000 US dollars and evaluated in the PPP terms to assure their cross country comparability. The GDP data comes from the World Development Indicators 2006 (WDI) database compiled and published on a CD-ROM by the World Bank in Washington.

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<sup>15</sup> The sample choice was determined by data availability. The sample is limited downwards because of the political changes in Central and Eastern Europe related to the collapse of the Soviet Union and the break-up of Yugoslavia in 1992 and the 'velvet' divorce between the Czech and Slovak Republics that earlier constituted the Czech and Slovak Federal Republic.

Unfortunately, the data on capital per worker is not available for the CEE countries and most of their trading partners. Therefore, in our study we approximate capital-labour ratios in trading partners with their per capita GDP.<sup>16</sup> Data on GDP per capita also comes from the WDI CD-ROM and is expressed in constant 2000 US dollars and evaluated in PPP terms to enable its cross-country comparability.

The remaining control variables include proxies for transportation and transaction costs. Distance between trading partners is measured as simple geographic “as the crow flies” distance between their capital cities and is expressed in kilometres. Distance data comes from the CEPII database available online at [www.cepii.fr](http://www.cepii.fr). In addition to the simple geographic proximity of trading partners we also include a dummy variable for the existence of a common border that takes the value 1 when countries share a common border, zero otherwise.

We include two dummy variables for a common language of trading partners that take on value 1 when the same language used in both countries is spoken by at least 9 percent of the population, zero otherwise. Finally, to control for historical ties we include two dummy variables indicating whether trading countries were in a colonial relationship or had a common colonizer. In the context of Central and Eastern Europe a colonial relationship mostly means whether trading countries were the part of the Austro-Hungarian Empire that in the early 20<sup>th</sup> century embraced a larger part of Central Europe. In a similar manner the common colonizer variable applies to the Eastern European countries that were the part of the Soviet Union until the early 1990s.

## **Empirical results**

In this section we present two sets of empirical results based on estimating equation (1) that include the averaged estimates for the whole CEE sample as well as the estimates obtained separately for particular CEE countries.

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<sup>16</sup> The previous empirical research, for example studies by Hummels and Levinsohn (1995) and Evenett and Keller (2002), shows that capital per worker and GDP per capita are highly correlated.

## Estimates for the whole CEE sample

The estimation results obtained for bilateral imports of the CEE countries using different estimation methods are presented in Table 4. The baseline estimates obtained via the traditional OLS estimation method on the pooled dataset for all CEE countries used in our study with individual time effects for particular years of our sample are reported in column (1).<sup>17</sup> The estimation results indicate that both agreements with Western European countries: the EU Association and the EFTA agreements, as well as sub-regional intra-CEE agreements: BAFTA, CEFTA and bilateral agreements concluded between the members of BAFTA and CEFTA were effective in stimulating imports of the Central and East European countries. The evidence for other bilateral agreements is not clear cut. While the agreements concluded with the Mediterranean countries: Israel and Turkey appear to have increased bilateral imports of the CEE countries the estimates for other agreements are either not statistically significant or display negative signs.

The robustness of the OLS estimates is subsequently investigated in columns (2)-(5) that display the estimation results obtained using various estimation techniques that allow us to exploit the panel properties of our dataset. In column (2) in addition to time specific effects we also control for individual country-pair random effects, in column (3) for individual country-pair fixed effects, respectively. However, it has been recently argued that these estimation methods might not be fully correct as specific fixed effects for both trading countries must be taken into account. The estimation results obtained using the fixed effects for both exporting and importing countries are presented in column (4). Finally, using this estimation method in column (5) we control for potential endogeneity of trade agreements using their lagged values.

**Table 4. The estimates for bilateral imports of the CEE countries**

	OLS	RE	FE	2FE	2FE IV
GDP Partner	1.062 [121.64]***	1.068 [47.87]***	-1.396 [5.63]***	-2.037 [6.28]***	-1.956 [5.34]***
GDP Reporter	0.91 [58.02]***	0.909 [21.93]***	-6.826 [9.54]***	-5.422 [6.02]***	-4.241 [4.11]***
GDP pcap Partner	0.369 [19.54]***	0.473 [12.03]***	2.833 [11.60]***	3.318 [10.75]***	3.417 [10.16]***

<sup>17</sup> The F-tests for time specific effects confirm the appropriateness of including time dummies for particular years of our sample in all estimated regressions for the whole CEE sample.

GDP pcap Reporter	0.54	0.509	7.513	6.3	5.233
	[11.71]***	[4.92]***	[10.75]***	[7.18]***	[5.28]***
Distance	-0.874	-1.009		-1.555	-1.471
	[45.22]***	[19.80]***		[34.06]***	[32.69]***
Colonial relationship	0.275	0.227		-0.474	-0.451
	[1.90]*	[0.39]		[5.19]***	[4.96]***
Common colonizer post 1945	2.948	2.943		1.695	1.541
	[31.05]***	[9.91]***		[18.60]***	[15.82]***
Contiguity	1.178	1.214		0.241	0.285
	[18.38]***	[3.97]***		[4.21]***	[5.07]***
Language	0.793	0.887		0.797	0.768
	[4.88]***	[1.61]		[8.19]***	[7.77]***
EU Membership	0.159	0.111	0.122	0.087	0.081
	[1.67]*	[1.09]	[1.20]	[1.18]	[0.98]
EU Association Agreement	1.143	0.675	0.31	0.232	0.096
	[24.71]***	[9.09]***	[3.85]***	[3.98]***	[0.92]
FTA with EFTA	0.977	0.791	0.583	0.219	-0.15
	[13.24]***	[5.92]***	[4.10]***	[1.97]**	[0.73]
CEFTA	1.148	0.47	0.135	-0.155	-0.047
	[18.20]***	[4.06]***	[1.10]	[2.50]**	[0.66]
BAFTA	0.799	0.882	0.382	1.712	1.937
	[5.97]***	[1.80]*	[0.62]	[13.24]***	[14.33]***
FTA with Macedonia	2.297	-0.895	-1.411	1.469	1.983
	[5.65]***	[1.97]**	[3.08]***	[3.14]***	[4.41]***
FTA with Turkey	0.741	0.78	0.765	0.853	1.034
	[8.77]***	[3.72]***	[3.60]***	[9.20]***	[9.39]***
FTA with Israel	0.973	0.123	0.226	0.106	0.038
	[11.26]***	[0.47]	[0.86]	[0.89]	[0.30]
FTA with Croatia	-0.669	-1.006	-1.052	-1.06	-1.802
	[1.77]*	[1.10]	[1.16]	[9.04]***	[1.62]
CEFTA/Baltic FTAs	1.278	0.449	0.094	0.423	0.487
	[18.29]***	[3.73]***	[0.75]	[6.15]***	[6.23]***
FTA with Albania	-1.581	0.281	0.002	-0.769	0.508
	[2.72]***	[0.38]	[0.00]	[1.64]	[2.58]***
Fta with Ukraine	-0.018	0.455	0.389	-0.455	-0.407
	[0.11]	[0.44]	[0.31]	[2.75]***	[2.43]**
Constant	-42.28	-42.248	118.328	140.92	115.258
	[66.14]***	[29.07]***	[9.68]***	[8.13]***	[5.72]***
Observations	16066	16066	16066	16066	13719
R-squared	0.71	0.71	0.9	0.84	0.84
F test: time dum.	16.73	196.09	16.58	11.4	11.5
Prob > F	0	0	0	0	0
Number of pair2		1623			

Robust t statistics in brackets

Notes: \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

The estimation results obtained for the agreements with the EU Association Agreements are robust with respect to the estimation method, although the magnitude of the estimated effects is much smaller when the panel techniques are used compared to those obtained using the traditional OLS method. In all the cases our estimation results demonstrate that the EU-Association Agreements significantly contributed to the increase in bilateral imports of the CEE countries from the EU member states. The evidence obtained for intra-CEE trade

agreements is, however, mixed. While the simple OLS estimates suggest that all agreements concluded by the CEE countries significantly increased their bilateral imports, this evidence is not robust when panel data estimation techniques are employed (except BAFTA, where the coefficient is statistically significant and positive in all specifications). Also the estimation results obtained for the agreements with other countries turned out not to be robust with respect to the choice of the estimation method.

The estimation results for bilateral exports of the CEE countries obtained using different estimation techniques are reported in Table 5. The particular columns of this table are the direct counterparts of the columns in Table 4. Similar to the case of bilateral imports, the baseline estimates obtained using the traditional OLS method on the pooled dataset with individual time effects are presented in column (1), while their robustness is tested in columns (2)-(5) using panel data estimation techniques.

**Table 5. The estimates for bilateral exports of the CEE countries**

	OLS	RE	FE	2FE	2FE IV
GDP Partner	0.976 [72.72]***	0.969 [30.47]***	-2.707 [4.19]***	-3.105 [3.73]***	-0.094 [0.10]
GDP Reporter	0.864 [116.35]***	0.855 [50.40]***	-0.501 [2.26]**	-0.57 [1.96]*	-0.075 [0.22]
GDP pcap Partner	0.473 [13.14]***	0.585 [7.02]***	4.308 [6.80]***	4.611 [5.52]***	1.645 [1.84]*
GDP pcap Reporter	0.448 [30.23]***	0.412 [13.55]***	1.407 [6.48]***	1.296 [4.67]***	0.933 [3.02]***
Distance	-1.327 [86.49]***	-1.319 [33.56]***		-2.011 [41.98]***	-1.966 [39.72]***
Colonial relationship	0.229 [2.14]**	0.249 [0.56]		-0.112 [1.28]	-0.114 [1.30]
Common colonizer post 1945	2.292 [30.95]***	2.298 [10.00]***		1.576 [19.47]***	1.414 [16.90]***
Contiguity	0.313 [5.80]***	0.333 [1.42]		-0.079 [1.41]	-0.053 [0.92]
Language	0.541 [4.26]***	0.545 [1.29]		0.293 [3.45]***	0.27 [3.18]***
EU Membership	0.291 [3.49]***	0.216 [2.30]**	0.192 [2.02]**	0.312 [4.19]***	0.248 [3.01]***
EU Association Agreement	0.176 [4.70]***	0.378 [5.75]***	0.277 [3.76]***	0.068 [1.10]	0.215 [1.76]*
FTA with EFTA	0.129 [1.95]*	0.571 [4.81]***	0.551 [4.20]***	0.103 [0.72]	0.061 [0.25]
CEFTA	0.284 [5.66]***	0.525 [5.06]***	0.462 [4.09]***	0.693 [11.09]***	0.928 [12.35]***
BAFTA	0.328 [3.27]***	0.842 [2.02]**	0.958 [1.68]*	0.82 [6.13]***	0.97 [6.83]***
FTA with Macedonia	2.573 [8.15]***	0.325 [0.79]	-0.126 [0.30]	2.017 [4.25]***	2.273 [4.28]***
FTA with Turkey	0.012 [0.10]	0.501 [2.65]***	0.522 [2.68]***	0.49 [2.77]***	0.54 [2.90]***

FTA with Israel	-0.081	0.162	0.262	0.386	0.424
	[0.79]	[0.69]	[1.08]	[3.27]***	[3.59]***
FTA with Croatia	0.027	0.378	0.382	0.382	-0.013
	[0.42]	[0.45]	[0.46]	[1.80]*	[0.06]
CEFTA/Baltic FTAs	0.281	0.488	0.377	0.797	0.904
	[4.59]***	[4.48]***	[3.26]***	[10.29]***	[10.19]***
FTA with Albania	0.684	-0.113	-0.335	0.786	1.055
	[1.91]*	[0.16]	[0.49]	[3.75]***	[5.67]***
Fta with Ukraine	0.11	0.102	-0.305	0.006	0.115
	[0.77]	[0.11]	[0.27]	[0.03]	[0.66]
Constant	-35.059	-35.599	35.863	51.835	8.681
	[65.36]***	[31.10]***	[3.22]***	[4.05]***	[0.57]
	16750	16750	16750	16750	14509
R-squared	0.76	0.76	0.9	0.83	0.83
F test: time dum.	14.23	207.67	11.98	7.87	7.17
Prob > F	0	0	0	0	0
Number of pair2		1636			

Robust t statistics in brackets

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%



The OLS estimates suggest that both the EU Association Agreements as well as intra-CEE sub-regional and bilateral trade agreements contributed significantly to the development of exports in the Central and Eastern European countries. All other trade agreements were not statistically significant except for those concluded with Albania and Macedonia. In contrast to the estimation results obtained previously for bilateral imports, the results obtained for both the EU Association Agreements and the intra-CEE agreements remain robust with respect to the choice of the estimation method. Interestingly, the estimated parameters obtained for the intra-CEE agreements were always higher than those for the Europe Agreements. Moreover, the coefficients obtained for the BAFTA were always higher than those for the CEFTA which can be explained by the faster and the bigger scope of trade liberalization in the Baltic states than among the Central European countries that did not liberalize trade in agricultural products completely until their entry into the EU in 2004.

### Estimates for particular CEE countries

To gain a deeper insight into what drives our empirical results we disaggregate our sample into ten sub-samples for particular CEE countries and estimate the gravity equations for their bilateral exports and imports separately for each country using the traditional OLS method with robust standard errors.<sup>18</sup> The estimation results for bilateral imports of the individual CEE countries are presented in Table 6 while for bilateral exports in Table 7.

**Table 6. The estimates for bilateral imports of the CEE countries (single countries)**

	Czech Republic	Estonia	Hungary	Lithuania	Latvia	Poland	Slovenia	Slovak Republic	Bulgaria	Romania
GDP Partner	1.184 [52.48]***	0.995 [32.96]***	1.148 [49.28]***	0.784 [20.98]***	0.853 [27.03]***	0.987 [40.46]***	1.054 [44.57]***	1.12 [38.80]***	1.138 [41.62]***	1.241 [51.43]***
GDP pcap Partner	0.176 [3.28]***	0.568 [7.86]***	0.272 [4.77]***	0.893 [12.20]***	0.862 [12.62]***	0.21 [4.24]***	0.317 [6.51]***	0.335 [5.26]***	0.319 [5.47]***	0.3 [5.56]***
Distance	-0.873 [16.31]***	-0.74 [8.62]***	-0.659 [11.43]***	-0.755 [9.68]***	-0.887 [10.92]***	-0.526 [9.69]***	-1.089 [21.87]***	-0.706 [11.53]***	-1.051 [16.16]***	-1.086 [19.40]***
Colonial relationship	-0.215 [1.15]	2.254 [10.24]***	0.064 [0.34]	3.57 [15.22]***	2.988 [10.91]***	-0.882 [5.55]***	-0.011 [0.06]	-0.825 [2.71]***	-3.618 [12.16]***	
Common colonizer post 1945		3.352 [13.56]***		3.241 [15.71]***	3.721 [20.01]***					
Contiguity	1.113	0.702	1.744	0.638	0.732	1.801	1.254	1.564	1.115	1.132

<sup>18</sup> Unfortunately, in the case of single country regressions it is not possible to use panel data estimation techniques as the indicator variables are then collinear with the country-pair specific fixed effects.

	Czech Republic	Estonia	Hungary	Lithuania	Latvia	Poland	Slovenia	Slovak Republic	Bulgaria	Romania
Language	[5.83]***	[3.66]***	[11.25]***	[2.54]**	[2.75]***	[13.38]***	[7.20]***	[6.28]***	[5.35]***	[7.94]***
			-0.536					-0.334	2.642	1.512
			[2.89]***					[1.42]	[11.68]***	[9.39]***
EU Membership	0.066	-0.061	0.822	0.009	-0.326	-0.067	0.508	0.248		
	[0.28]	[0.19]	[2.68]***	[0.03]	[1.07]	[0.27]	[2.10]**	[0.81]		
EU Association Agreement	0.892	1.388	1.502	1.446	1.471	1.681	0.763	1.178	0.744	0.769
	[5.97]***	[7.50]***	[9.90]***	[8.42]***	[8.25]***	[11.71]***	[6.10]***	[6.59]***	[5.72]***	[6.17]***
FTA with EFTA	0.995	1.771	1.01	1.639	1.803	1.829	0.305	0.845	0.199	0.532
	[5.83]***	[8.92]***	[4.72]***	[7.89]***	[9.23]***	[11.44]***	[1.94]*	[3.60]***	[0.97]	[3.22]***
CEFTA	1.388		1.503			1.371	0.958	1.827	1.255	0.752
	[7.62]***		[9.49]***			[9.49]***	[7.10]***	[8.21]***	[7.47]***	[4.49]***
BAFTA		0.648		0.678	0.441					
		[2.28]**		[3.01]***	[2.04]**					
FTA with Macedonia							2.951		0.553	-1.177
							[18.55]***		[2.16]**	[5.65]***
FTA with Turkey	0.288	1.186	0.944	1.894	1.505	1.293	0.848	0.692	1.169	0.416
	[1.73]*	[5.39]***	[3.86]***	[9.85]***	[7.43]***	[6.70]***	[4.04]***	[2.49]**	[5.96]***	[2.07]**
FTA with Israel	0.899		1.41			1.223	1.354	0.83	0.431	1.342
	[7.76]***		[8.63]***			[8.54]***	[9.61]***	[4.97]***	[2.30]**	[8.58]***
FTA with Croatia						-0.273				
						[0.58]				
Bulgaria-Estonia FTA		1.126							0.069	
		[2.94]***							[0.50]	
Bulgaria-Latvia FTA					1.492				-0.332	
					[2.76]***				[2.38]**	
Bulgaria-Lithuania FTA				1.316					0.953	
				[3.33]***					[3.28]***	
Czech Rep.-Estonia FTA	1.767	2.032								
	[5.82]***	[8.23]***								
Czech Rep.-Latvia FTA	0.739				2.083					
	[4.04]***				[9.98]***					
Czech Rep.-Lithuania FTA	0.859			2.296						
	[4.62]***			[10.57]***						
Estonia-Hungary FTA		2.109	2.696							
		[10.35]***	[9.99]***							
Estonia-Poland FTA		2.018				1.537				
		[7.52]***				[5.78]***				
Estonia-Slovakia FTA		1.468						1.318		
		[7.13]***						[5.27]***		
Estonia-Slovenia FTA		1.537					-0.21			
		[6.53]***					[1.55]			
Hungary-Latvia FTA			0.434		1.927					
			[1.89]*		[7.99]***					
Hungary-Lithuania FTA			1.173	1.764						
			[3.44]***	[6.70]***						
Latvia-Slovakia FTA					2.31			1.916		
					[11.23]***			[7.61]***		
Latvia-Slovenia FTA					1.72		0.496			
					[8.25]***		[3.04]***			
Latvia-Poland FTA					2.524	1.23				
					[9.81]***	[7.20]***				
Lithuania-Slovakia FTA				1.851				0.889		
				[9.40]***				[3.81]***		
Lithuania-Slovenia FTA				2.057			-0.857			
				[9.16]***			[6.06]***			
Lithuania-Poland FTA				2.197		0.367				
				[8.38]***		[1.64]				

	Czech Republic	Estonia	Hungary	Lithuania	Latvia	Poland	Slovenia	Slovak Republic	Bulgaria	Romania
FTA with Albania									-1.822 [2.46]**	-2.912 [14.83]**
FTA with Ukraine		-0.295 [1.13]								
Constant	-15.493 [21.76]***	-18.984 [17.61]***	-17.432 [22.85]***	-15.553 [14.05]***	-16.091 [14.34]***	-12.931 [20.48]***	-12.996 [17.32]***	-17.792 [23.50]***	-15.042 [17.25]***	-16.589 [22.57]***
Observations	1801	1427	1878	1311	1227	1813	1754	1612	1532	1711
R-squared	0.74	0.69	0.73	0.68	0.74	0.73	0.75	0.7	0.7	0.73
F test: time dum.	1.03	4.18	0.89	2.89	0.67	1.25	1.69	2.67	2.54	0.99
Prob > F	0.41	0	0.56	0	0.78	0.24	0.06	0	0	0.45

Robust t statistics in brackets

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

We find that the Europe Agreements significantly increased imports of all the CEE countries. The EFTA agreements were also effective in stimulating bilateral imports of the CEECs except for Bulgaria. Also the estimates obtained for the intra-CEE agreements were statistically significant for most countries. In particular, the sub-regional BAFTA and CEFTA agreements were significant for all the CEE countries, although at different levels of significance, while bilateral agreements concluded between the particular BAFTA and the CEFTA member states were statistically significant and displayed the expected positive signs for almost all countries except Slovenia and Bulgaria. The estimation results obtained for bilateral agreements with other countries were country specific.

The estimation results obtained for bilateral exports of the particular CEE countries are reported in columns (1)-(10). In contrast to the results obtained for imports, we find that the Europe Agreements were effective only in stimulating exports of the Baltic states. Similar results were obtained for trade agreements concluded with the EFTA member countries. The CEFTA agreement contributed to the expansion of exports in only of the three core countries: the Czech Republic, Slovakia and Poland, while the BAFTA agreement was statistically significant for all Baltic states. The bilateral agreements between particular CEE countries were statistically significant for almost all countries. The results obtained for bilateral agreements with other countries were country specific.

**Table 7. The estimates for bilateral exports of the CEE countries  
(single countries)**

	Czech Republic	Estonia	Hungary	Lithuania	Latvia	Poland	Slovenia	Slovak Republic	Bulgaria	Romania
GDP Partner	0.96 [60.72]***	0.642 [20.21]***	0.982 [61.11]***	0.756 [23.04]***	0.677 [22.63]***	0.843 [40.13]***	0.851 [39.04]***	0.943 [39.70]***	0.952 [42.16]***	0.942 [51.94]***
GDP pcap Partner	0.45 [12.51]***	0.581 [9.04]***	0.687 [18.76]***	0.451 [7.37]***	0.623 [8.80]***	0.457 [11.82]***	0.62 [14.48]***	0.458 [9.87]***	0.258 [5.78]***	0.238 [5.46]***
Distance	-1.406 [40.77]***	-0.886 [11.48]***	-1.578 [48.14]***	-0.964 [13.83]***	-0.819 [11.20]***	-1.249 [33.04]***	-1.571 [34.86]***	-1.352 [32.28]***	-1.517 [35.91]***	-1.332 [30.84]***
Colonial relationship	-0.685 [4.76]***	2.125 [12.44]***	-1.993 [10.10]***	2.756 [10.40]***	2.64 [9.72]***	0.698 [5.90]***	-0.248 [1.86]*	-1.196 [4.88]***	-1.755 [7.07]***	
Common colonizer post 1945		2.18 [11.76]***		3.624 [25.17]***	2.966 [18.74]***					
Contiguity	0.63 [4.92]***	0.639 [3.75]***	-0.163 [1.78]*	0.29 [1.14]	0.198 [0.94]	0.49 [5.11]***	-0.008 [0.06]	0.299 [1.24]	0.145 [0.75]	0.223 [1.11]
Language			0.925 [4.68]***					0.174 [0.99]	1.531 [9.66]***	0.608 [2.32]**
EU Membership	0.6 [3.81]***	0.167 [0.59]	0.552 [2.61]***	-0.137 [0.42]	-0.249 [0.66]	0.321 [1.71]**	0.191 [1.03]	0.189 [0.72]		
EU Association Agreement	-0.725 [7.69]***	1.238 [7.21]***	-0.638 [6.70]***	1.78 [11.40]***	1.452 [8.26]***	0.151 [1.70]*	-0.581 [5.20]***	-0.128 [1.15]	-0.156 [1.60]	0.083 [0.74]
FTA with EFTA	-0.571 [3.85]***	2.105 [9.15]***	-0.866 [7.15]***	2.248 [10.92]***	1.693 [6.06]***	0.291 [1.76]*	-0.79 [5.14]***	-0.217 [1.46]	-0.68 [6.26]***	-0.269 [1.82]*
CEFTA	0.317 [2.90]***		-0.356 [3.32]***			0.288 [3.54]***	-0.084 [0.70]	0.951 [4.89]***	-0.609 [4.77]***	-0.118 [0.72]
BAFTA		1.417 [6.13]***		0.634 [3.66]***	0.672 [3.90]***					
FTA with Macedonia							2.845 [22.68]***		0.55 [2.70]***	1.633 [8.91]***
FTA with Turkey	-0.384 [1.69]*	0.676 [2.06]**	-0.647 [3.80]***	2.631 [19.60]***	-0.526 [2.55]**	0.107 [0.52]	-0.137 [0.83]	-0.013 [0.05]	0.37 [3.55]***	0.093 [0.46]
FTA with Israel	-0.312 [2.47]**		-0.383 [2.71]***			-0.441 [2.63]***	-0.432 [3.89]***	-0.812 [4.78]***	0.07 [0.62]	0.676 [4.73]***
FTA with Croatia						0.383 [3.29]***				
Bulgaria-Estonia FTA		-0.627 [2.97]***							0.355 [2.66]***	
Bulgaria-Latvia FTA					-0.307 [0.68]				0.451 [4.02]***	
Bulgaria-Lithuania FTA				0.947 [1.49]					0.211 [1.95]*	
Czech Rep.-Estonia FTA	0.996 [11.07]***	0.768 [2.61]***								
Czech Rep.-Latvia FTA	0.631 [7.21]***				0.573 [2.64]***					
Czech Rep.-Lithuania FTA	0.76 [10.62]***			0.938 [3.98]***						
Estonia-Hungary FTA		1.573 [6.16]***	0.984 [9.04]***							
Estonia-Poland FTA		0.787 [3.59]***				1.212 [10.72]***				
Estonia-Slovakia FTA		-0.289 [1.39]						0.973 [7.41]***		
Estonia-Slovenia FTA		-0.833 [4.79]***					0.315 [2.80]***			
Hungary-Latvia FTA			0.376 [3.81]***		0.068 [0.32]					
Hungary-Lithuania FTA			0.086 [0.98]	0.928 [3.08]***						
Latvia-Slovakia FTA					1.107 [4.80]***			1.422 [10.80]***		
Latvia-Slovenia FTA					0.679 [3.51]***		0.338 [2.69]***			
Latvia-Poland FTA					1.172 [6.17]***	1.146 [9.62]***				
Lithuania-Slovakia FTA				0.314 [1.44]				0.923 [7.74]***		
Lithuania-Slovenia FTA				-0.298 [1.36]			0.73 [7.61]***			





















































































































































































































