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WESTERN BALKAN'S TRADE WITH THE EU AND CEFTA-2006: EVIDENCE FROM MACEDONIA

The objective of this paper is to examine empirically the determinants of bilateral trade of Macedonia, with particular emphasis on the trade with the EU and CEFTA-2006 countries. The standard gravity model is used to measure the determinants of the bilateral trade in a panel framework. Results suggest that Macedonian GDP per capita and foreign GDP per capita play significant role in explaining bilateral trade. When Macedonian trade with the EU is investigated only, domestic income has larger magnitude than compared to the entire sample. Importantly, no additional gains have been approximated from FTAs and from CEFTA-2006, in particular. Potential explanation of this can be the still existent non-tariff barriers across the SEE countries, in terms of technical, sanitary and phyto-sanitary barriers to trade, time and costs of export and import, improvement of infrastructure related to trade and so on.

Keywords: *bilateral trade, gravity model, Macedonia, non-tariff barriers.*

JEL classification: *F10, J51, P33.*

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ТОРГІВЛЯ ЗАХІДНИХ БАЛКАН ІЗ КРАЇНАМИ ЄС ТА CEFTA-2006: ЗА ДАНИМИ МАКЕДОНІЇ

У статті емпірично вивчено фактори, які визначають двосторонню торгівлю Македонії, з акцентом на торгівлю з країнами ЄС та CEFTA-2006. Побудовано стандартну гравітаційну модель для оцінювання двосторонньої торгівлі. Результати показують, що рівень ВВП на душу населення як у Македонії, так і в інших досліджуваних країнах відіграє важливу роль у двосторонній торгівлі. Коли досліджується торгівля Македонії з ЄС, то рівень внутрішнього доходу виявляється вищим у порівнянні із загальною вибіркою. Ніякої додаткової вигоди від Угоди про вільну торгівлю і від CEFTA-2006 не простежується. Можливо, це пояснюється існуванням нетарифних бар'єрів у Південно-Східній Європі, у вигляді технічних, санітарних та фітосанітарних обмежень торгівлі, часу і витрат на експорт та імпорт, покращення інфраструктури, пов'язаної з торгівлею, і т.д.

Ключові слова: *двостороння торгівля, гравітаційна модель, Македонія, нетарифні бар'єри.*

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ТОРГОВЛЯ ЗАПАДНЫХ БАЛКАН СО СТРАНАМИ ЕС И CEFTA-2006: ПО ДАННЫМ МАКЕДОНИИ

В статье эмпирически изучены факторы, определяющие двустороннюю торговлю Македонии, с акцентом на торговлю со странами ЕС и CEFTA-2006. Построена стандартная гравитационная модель для оценки двусторонней торговли. Результаты показывают, что уровень ВВП на душу населения как в Македонии, так и в остальных изучаемых странах играет важную роль в двусторонней торговле. Когда исследуется только торговля Македонии с ЕС, то уровень внутреннего дохода оказывается выше по сравнению с общей выборкой. Никакой дополнительной выгоды от Соглашения о свободной

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торговле и от CEFTA-2006 не прослеживается. Возможно, это объясняется существованием нетарифных барьеров в Юго-Восточной Европе, в виде технических, санитарных и фитосанитарных ограничений торговли, времени и затрат на экспорт и импорт, улучшения инфраструктуры, связанной с торговлей, и т.д.

Ключевые слова: *двусторонняя торговля, гравитационная модель, Македония, нетарифные барьеры.*

1. Introduction. Macedonia is a small and open economy with about 40% of domestic production being exported. Hence, it is argued that sustainable growth of Macedonian economy should be export-based, since the positive effect of trade-driven expansion in market size for a small country is greater than for a large country (Kathuria, 2008). In particular, small countries might benefit from economies of scale having access and being a part of a larger marketplace, more efficient factor allocation, reduced macrovolatility, innovations and so on (Hallak and Sivadasan, 2009). Macedonia signed the Stabilisation and Association Agreement (SAA) with the EU in 2001, which envisaged trade liberalisation of 95% of its export to the EU. Later, in 2006, Macedonia entered the regional Central-European Free Trade Agreement (CEFTA), with other Western Balkan states, providing fully liberalised trade in manufactured goods and largely free trade in agricultural goods.

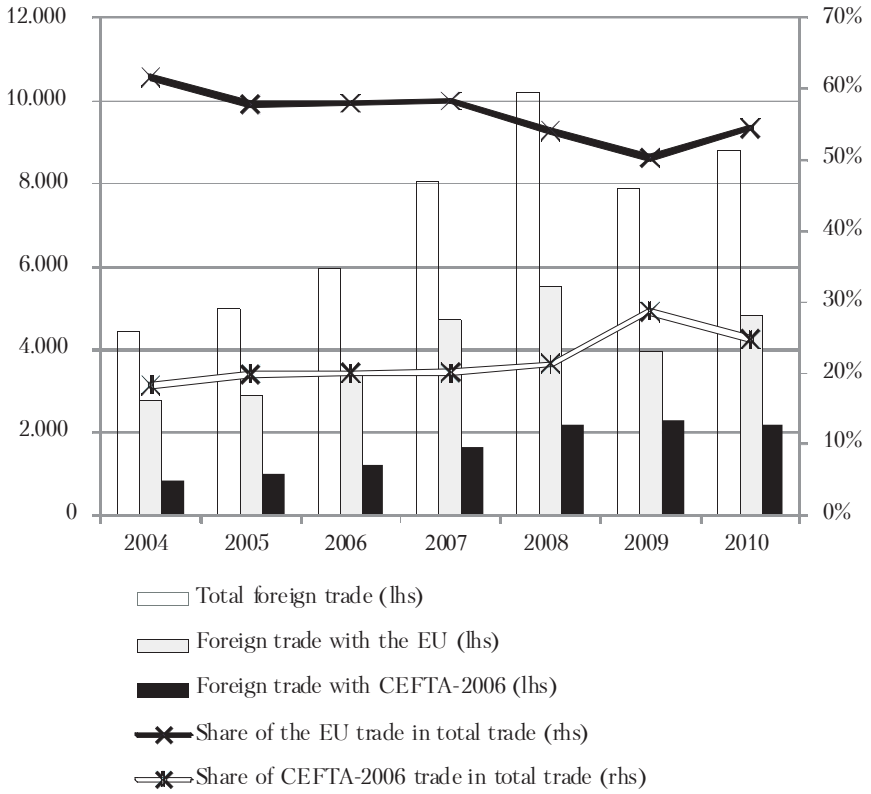
This study is among the first attempts to examine and empirically test the importance of the EU for Macedonian foreign trade (SAA), as well potential benefits for Macedonia from the CEFTA-2006 membership. The paper is organized as follows: the next section gives an overview of the facts and the background literature. In the next section, we provide the theoretical background. Sections 4 and 5 deal with the model and the data used, respectively. Section 6 presents the methodology, whereas the results and some discussion are offered in Section 7. The last section concludes.

2. Stylised facts and background literature. The trade integration of Macedonia with the EU is quite large given that trade with EU-27 accounts for about 60% of total trade (Figure 1). Within the EU, Macedonia mostly trades with Germany, Greece and Italy, which account to nearly half of the total trade with the EU. The second largest trade partner of Macedonia is CEFTA-2006 with about 25% in total foreign trade of Macedonia, wherein the largest trading partners remain Serbia and Kosovo, accounting for about 2/3 of the total trade within CEFTA.

In terms of the preferential trade agreements, the country has so far signed 2 regional agreements: i) the Stabilisation and Association Agreement with the EU, establishing political and economic conditionality for the development of bilateral relations with Western Balkan countries, and ii) the CEFTA-2006 agreement with the countries of the South-Eastern Europe (Albania, Kosovo, Macedonia, Montenegro, Moldova, Croatia, Serbia and Bosnia and Herzegovina), which replaced the bilateral agreements existing before.

SAA was signed in 2001 and came into force April 2004. The EU announced that SAA would improve the existing autonomous trade preferences for the Western Balkan countries, and provide autonomous trade liberalisation for 95% of all their exports to EU. The exports of these countries, including Macedonia, to the EU are without quantitative restrictions or measures having equivalent effect and are exempted from custom duties and charges having equivalent effect, for all products, except a

limited number of products such as baby beef, wine and fishery products. On the other hand, Macedonia accepted a complete abolition of quantitative restrictions and gradual reduction of its custom duties over a (maximum) period of 10 years, for industrial products, textile, steel, agriculture and processed agricultural products.



Source: Authors' own calculations based on the data from State Statistical Office and Ministry of Finance.

Figure 1. **Macedonian foreign trade, 2004-2010**

The CEFTA-2006 is a comprehensive free trade agreement (FTA) between the SEE countries. It provides fully liberalised trade in manufactured goods and largely free trade in agricultural goods, aiming at supporting trade and investment among its members. The Agreement augmented previous 32 bilateral FTAs between the SEE countries.

The trade of the SEE countries with the EU or within CEFTA-2006 did not evoke considerable attention. Some studies include Christie (2002), Bussiere et al. (2005), Krizmanic (2007); Pere (2008); Druzic et al. (2009); Jelisavac and Zirojevic (2009); Handjiski et al. (2010). Virtually all of these studies evaluate the SEE potential for trade and/or the potential of CEFTA-2006 and in general conclude that the potential in the region has not been fully utilized, nor has CEFTA-2006 reached its full effect onto regional trade. Therefore, the present paper will give a contribution to the current literature by trying to quantify trade effects of the SAA and CEFTA-2006 using Macedonian data.

3. Theoretical framework. The gravity model used in social sciences is a modified version of the Isaac Newton law of gravitation. It has been consistently used in modelling bilateral international trade flows and is usually referred to as a "workhorse for empirical studies" (Baier and Bergstrand, 2007), although it can be used to predict other flows as well, such as migration and foreign direct investment, people, information ets. (Martinoz-Zarzoso, 2003). In its simplest and conventional form, gravity model estimates bilateral trade flows as a function of income levels (GDP expressed in nominal terms) and the distance between 2 trading partners. Domestic income level approximates supply and is assumed to push export, while foreign income approximates demand and is assumed to pull export. Distance between capital cities is used as a proxy for transportation costs and hence is considered as a trade resisting factor (Clark et al., 2004).

Besides the above variables, empirical specifications of the gravity model typically include the (dummy) variables that support or reduce trade between 2 countries, such as common border, common language, land areas, cultural similarity, geographical position, historical links, and preferential trade arrangements. These variables tend to affect transaction costs relevant for bilateral trade and have proven to be statistically significant determinants of trade in various empirical applications (Anderson, 1979; Helpman and Krugman, 1985). The Linder effect might also be incorporated in the model, meaning that countries on a similar development level (GDPs per capita) will trade more.

In addition to such conventional gravity models, generalised gravity models include price and exchange rate variables (Clark et al., 2004). According to Pugh and Tyrrall (2000), the exchange rate effect on exports is undoubtedly negative, though some studies undermine the existence of 2 channels through which such effect is realised: uncertainty and political economy.

The omitted variable of great concern is termed "multilateral resistance" and is emphasized in the theoretical foundation of the gravity model (Anderson and van Wincoop, 2003; Frankel, 2008). This effect is defined as a function of unobservable equilibrium price indices and depends on bilateral trade barriers and income shares of all trading partners. Assume a given bilateral trade barrier between the countries. Higher barriers between them and their other trading partners would reduce the relative price of goods traded between them, raising bilateral trade. In empirical applications, the multilateral resistance indices can be conveniently proxied by individual country effects. Since we use the panel approach, these aspects are accordingly included into the country-specific effect. Given that no study, to our knowledge, so far analysed Macedonian foreign trade in the panel context, this uprights to be among the most important contributions of this paper. We also include time effects in the model to control for time-specific factors such as world business cycles, global shocks and so on, as a commonly suggested strategy in the recent panel literature (see, for instance, Sarafidis et al., 2009).

4. Empirical model. The benchmark panel specification for the analysis of aggregate trade is similar to that used by Rose (2000) and Clark et al. (2004). We estimate the following model:

$$ltr_{ijt} = b_0 \text{ x } lgdp\_d_{ijt} + b_1 \text{ x } lgdp\_f_{ijt} + b_2 \text{ x } rer_{ijt} + b_3 \text{ x } dist_{ij} + b_4 \text{ x } trade_{ijt} + b_5 \text{ x } border_{ijt} + b_6 \text{ x } language_{ijt} + b_7 \text{ x } cefta_{ijt} + b_8 \text{ x } linder_{ijt} + alpha_i + time_t + epsilon_{ijt}, \quad (1)$$

where ltr_{ijt} denotes the logarithm of the aggregate trade (export and import) between Macedonia (country *i*) and country *j* at time *t*; $lgdp\_d_{ijt}$ is the logarithm of the GDP per capita of Macedonia; $lgdp\_f_{ijt}$ is the logarithm of the GDP per capita of the country *j*; rer_{ijt} is the real bilateral exchange rate between Macedonia and country *j*; $dist_{ij}$ is the physical distance between Macedonia and *j*; $trade_{ijt}$ is a dummy variable taking the value of 1 if Macedonia has a trade agreement with country *j* at time t; $border_{ijt}$ is the dummy variable taking the value of 1 if Macedonia shares a border with country *j*; $language_{ij}$ is a dummy taking the value of 1 if Macedonia and *j* have a common language; $cefta_{ijt}$ is a dummy taking the value of 1 if country *j* belongs to CEFTA-2006; $linder_{ijt}$ is the quotient of foreign and domestic income capturing the Linder effect. $alpha_i$ is the country-specific effect, to capture the abovementioned effects; $time_t$ is the time-specific effect, to capture global influences like the Great Moderation and the 2008 economic crisis; while $epsilon_{ijt}$ is *i.i.d* random shock and is assumed to be well-behaved.

5. Data. The study uses the panel dataset on the foreign trade between Macedonia and 39 trading partners over the period 1999:Q1-2009:Q4. The data for Macedonia are compiled from the State Statistical Office and the Central bank; the data on trade agreements are obtained from the Ministry of Economy. The data on foreign-countries variables are collected from World Economic Outlook and International Financial Statistics. Distance is approximated by physical distance between Skopje and country's *j* capital and is obtained from the Internet. The bilateral real exchange rate is estimated through the product of the logarithm of the nominal bilateral exchange rate of the denar to the currency of country *j*, and the relative prices, expressed as the foreign price level divided by the domestic price level. For both price levels, consumer price index is taken. The common language variable is assigned to all the countries of ex Yugoslavia plus Bulgaria.

6. Methodology. Given our earlier exposition, a reasonable strategy to follow is to run a fixed-effects (FE) or random-effects (RE) regression. Both have intuitive grounds and, hence, the distinction will be performed quantitatively. Namely, FE estimation is preferable when all the countries of interest are included and when regressors are assumed to be correlated with country-specific effects. Although all trade partners of Macedonia enter the regression, still there might be a concern that not all right-hand side regressors are correlated with the unobserved country-specific effect (like the distance, border, language - which are fully exogenous). Hence, from that viewpoint, RE is needed. However, RE estimator has the drawback that conclusions cannot be generalized out of the sample, which is, to an extent, acceptable in this case.

Nevertheless, following the strand of literature (Bahmani-Oskooee and Alse, 1993; Buffie, 1992; Dutt and Ghosh, 1996; Giles and Williams, 1999) discussing the export-led growth hypothesis, and, in particular its interference with the growth-led export hypothesis (Xu, 1996), there is a concern over the endogeneity of domestic income in the gravity equation. Other variables are not suspect of being endogenous. Endogeneity of regressors causes inconsistency of usual OLS estimates and requires the use of instrumental variables to correct it. An instrumental variable (IV) is highly

correlated with the regressor (which is assumed to be endogenous), but is not correlated with the error term. 2 general IV estimation techniques were developed to correct the endogeneity bias: 2-stage least squares (2SLS) and the generalized method of moments (GMM) techniques. In the 2SLS technique at the first stage, new endogenous variables (the so-called instruments) are created to substitute the original ones and then, at the second stage, the regression is computed by OLS, but using newly created variables, which are not correlated with the error term (i.e., are exogenous). In GMM estimation, the information contained in the population moment restrictions is used to define the instruments (Hall, 2005). In addition to 2 general IV methods, Hausman and Taylor (1981) developed, and Amemiya and MaCurdy (1986) advanced, an IV estimator, applicable to panel data only, based on the RE model. Namely, in RE model, regressors are assumed to be uncorrelated with the individual-specific error; the Hausman-Taylor estimator allows some of the regressors to be correlated with the individual-country effect, but not with the idiosyncratic error. This is still a source of endogeneity bias and requires an IV correction. Still, 2SLS and GMM estimates, on the one hand, and Hausman-Taylor, on the other, are not directly comparable, because they correct endogeneity arising from different sources (Greene, 2003). Though Hausman-Taylor might give interesting insights in our case, because of the aspect mentioned above: only incomes and real exchange rate might be thought of being correlated with the unobserved country-specific effect, and Hausman-Taylor affords this. Hence, in what follows, 5 estimators are presented: FE, RE, Hausman-Taylor, IV-RE, IV-FE and GMM. We later explain our preference.

7. Results. The results are presented in Table 1. Time effects are not presented due to space issue, but are available upon request. In the IV estimates, lags of the instrumented variable(s), lags of the foreign income variable and of the domestic price level are used as instruments. Throughout all specifications, available diagnostics are fine.

The comparison between FE and RE is made in columns (1) and (2). As argued earlier, we have more intuitive grounds to run RE regression, although magnitudes are apparently similar. Though, in the FE regression, the first differencing wipes out all dummies that have the value of 1 over the entire time period. From econometric viewpoint, the Hausman test suggests using the FE estimator. However, the "middle" solution, the Hausman-Taylor (column 3) estimator, also gives plausible estimates and is closer to the FE coefficients.

Considering endogeneity in the regressions (columns 4 to 6), we again do not observe considerable differences. The Hausman test (IV-FE vs. IV-RE model; column 4 vs. column 5) further favours the FE specification. However, these columns are interesting from another point of view. RE estimates are not robust to heteroskedasticity and autocorrelation, because the option is not developed under the respective command. On the other hand, instrumental variables FE estimators (2SLS and GMM) have the "robust" facility. Though, columns (5) and (6) suggest that heteroskedasticity and autocorrelation are not a considerable concern in our model, given that diagnostics remain stable, but estimates are slightly different.

The results suggest that Macedonian GDP per capita (supply in the model) plays significant role in explaining bilateral trade. An increase of domestic per capita GDP by 1% leads, on average, to an increase of bilateral trade by about 0.9%. However,

Table 1. **Basic results**

Dependent variable ***Log of bilateral trade***	**FE**	**RE**	**Hausman-Taylor**	**IV-2SLS RE**	**IV-2SLS FE robust**	**GMM FE robust**	**IV-2SLS FE robust (LINDER)**	**IV-2SLS FE robust (CEFTA)**
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log of domestic GDP per capita	0.977***	1.327***	1.012***	1.312***	0.890***	0.523**	0.673**	0.954***
Log of foreign GDP per capita	1.135***	0.718***	1.116***	0.793***	1.273***	1.547***	1.541***	1.374***
Log of real bilateral exchange rate (increase = depreciation)	-0.119*	-0.023	-0.178***	-0.251***	-0.499**	-0.589***	-0.438***	-0.420***
Distance (in km)	-	-0.221***	-0.217**	-0.228***	-	-	-	-
Trade agreement	0.087	0.097	0.020	0.114	0.008	-0.029	0.045	0.050
Common border	-	1.441**	2.008*	1.729**	-	-	-	-
Common language	-	1.608***	2.166*	1.852**	-	-	-	-
Linder effect (GDP_f/GDP_d)							-0.010***	-
Participation in CEFTA 2007	-	-	-	-	-	-	-	-0.060
Constant	-12.531***	-11.329***	-11.929***	-10.727***	-	-	-	-
F-statistics H0: All regressors are insignificant	121.54***	698.76***	147.52***	185.04***	31.70***	34.96***	28.38***	29.07***
Hansen test (p-value) H0: Instruments are valid	-	-	-	0.1140	0.17014	0.2179	0.1114	0.1773
Hausman test (p-value) H0: RE estimator preferred	0.0295		-	0.0000		-	-	-
Under-identification test (p-value)	-	-	-	-	0.000	0.000	0.000	0.000

note that a large share approximating over 35% of the total economy is believed to be "grey economy" (Schneider, 2007). Although grey economy may be difficult to measure, its existence may introduce a bias into our estimates and hence this parameter should be interpreted with caution. Foreign income (demand in the model) is also highly significant and predicts an increase of bilateral trade by, on average, 1.3% when income of a foreign country increases by 1%. This result can be reconciled with the contraction of economic activity in 2008-2009, when the drop of Macedonian foreign trade due to reduced foreign demand was the main channel through which global economic crisis translated into the domestic economy.

Real exchange rate is significant and suggests that a depreciation of the real bilateral rate by 1% will reduce bilateral trade by 0,5%. It is likely that the real depreciation has a larger impact on reducing import than on supporting export of Macedonia, hence resulting in overall reduction of the bilateral trade. This can be explained by the heavy import-dependence of Macedonian economy.

Surprisingly, the trade agreement variable is insignificant in all specifications. It suggests that any FTA that Macedonia has with a foreign country, including the CEFTA-2006 and the SAA, has not exerted any influence on bilateral trade. This can be justified by the considerable significance of foreign demand, suggesting that bilateral trade between countries is driven by supply and demand and not by trade agreements. Alternatively, these FTAs might not have exerted any influence on trade because they have not managed to mitigate or eliminate non-tariff barriers on trade. This point is returned to.

The remaining variables are wiped out from the FE regression. However, for intuition, their coefficients can be discussed from the RE regression, which is not completely discarded. In column (4), distance is expectedly negative, suggesting that the larger the distance is, the lower the bilateral trade will be. If countries share same border and speak similar language, then trade is higher, on average, 1.7 and 1.9 times, respectively, as compared to other countries that do not belong to these categories. This can be reconciled with the fact that Serbia and Kosovo from CEFTA-2006 are among the top 5 trading partners of Macedonia (shared border and similar language), while Greece from the EU is the third partner (shared border).

In column (7) the Linder effect is added. We observe that all remaining coefficients stay along the above magnitudes, which is a kind of robustness check of the results. The Linder coefficient suggests that if a country has double GDP per capita than Macedonia has (meaning higher by 100%), then bilateral trade will be on average smaller by 1%.

To analyse the potential gains from the CEFTA-2006, column (8) of Table 1 is drafted. For this purpose, the FTA variable is altered. Now, this variable has the value of 1 if Macedonia has a FTA with the respective country, other than the CEFTA-2006 agreement. Accordingly, a new variable is created, CEFTA, which takes the value of 1 if the respective country is a member of CEFTA-2006. Similarly to all FTAs, the CEFTA-2006 agreement is found not to have exerted any role in Macedonian foreign trade. There are a few plausible explanations for this: i) many countries in CEFTA-2006 have already had some business culture of mutual cooperation, dating back to former Yugoslavia, so that the whole effect of CEFTA-2006, if any, has already been used before; ii) CEFTA-2006 might not have significant implication for Macedonian

trade, given that member-countries are more oriented to trade with the EU than among themselves; and iii) though CEFTA-2006 eliminated tariffs and quotas, it led to increased significance of nontariff barriers, such as technical, sanitary and phyto-sanitary measures (Handziski et al., 2010).

Table 2. **The results for the EU**

Dependent variable ***Log of bilateral trade***	**FE**	**RE**	**Hausman-Taylor**	**IV-2SLS RE**	**IV-2SLS FE robust**	**GMM FE robust**
	(1)	(2)	(3)	(4)	(5)	(6)
Log of domestic GDP per capita	1.029***	1.547***	1.107***	2.312***	2.089***	2.202***
Log of foreign GDP per capita	1.192***	0.677***	1.104***	0.142**	0.455**	0.429**
Log of real bilateral exchange rate (increase = depreciation)	-0.010	0.076*	0.009	-0.095	-0.112	-0.102
Distance (in km)	-	0.000***	0.000**	-0.581**	-	-
Trade agreement	-0.008	0.023	0.002	0.053	-0.004	-0.007
Constant	-13.824***	-11.683***	-11.687***	-11.595***	-	-
F-statistics H0: All regressors are insignificant	319.95***	1043.21***	1163.57***	261.32***	31.67***	106.35***
Hansen test (p-value) H0: Instruments are valid	-	-	-	0.1132	0.2198	0.2198
Hausman test (p-value) H0: RE estimator preferred	0.0003		-	0.0000		-
Under-identification test (p-value) H0: Model is under-identified	-	-	-	-	0.000	0.000

Note: *, ** and *** signify significance at the 10, 5 and 1% respectively.

In Table 2 we perform a similar analysis with the countries which are the EU members only. Hence, the period of investigation remains the same, but the sample is halved. We get largely similar results, with some notable differences, though. FE is further preferred in the ordinary estimation. Hence, conclusions are based on both columns (5) and (6). Domestic income is significant with larger magnitude than compared with the entire sample. Interestingly, though unexpectedly, the EU income has smaller magnitude than foreign income in general, see Table 1. This suggests that although the EU economy significantly affects Macedonian foreign trade performance, bilateral trade is more determined by supply than demand. This is, though, consistent with the observation that Macedonia's growth is fed by the imports of intermediate inputs, while export is pulled by foreign demand, but the first effect is stronger. Inter alia, the implication is that Macedonian exporters need to improve export quality, invest in export promotion and so on, in order to supply more competitive product to the EU market. Relative prices do not matter here, likely because of the anchoring of the denar to the euro. The SAA is found insignificant suggesting that demand and supply drive trade between Macedonia and the EU countries and not the provisions within the SAA.

Consequently, the results suggest that Macedonian foreign trade is highly dependent on both domestic supply and foreign demand. Real depreciation of currency shrinks trade, but is insignificant for the trade with the EU. Expectedly, close-

ness of a trading partner, its economic similarity, common language and border increase Macedonian trade. FTAs are not found to affect Macedonian trade, nor are additional gains approximated from the CEFTA-2006 agreement. This suggests that trade relationships between Macedonia and its trading partners are principally governed by supply and demand, while the imposition of frameworks that facilitate trade, like SAA and CEFTA-2006, has not affected further trade proliferation.

Nevertheless, some argue that despite the good will to promote further the trade with the EU and the intraregional trade, countries like Macedonia face non-tariff barriers. Hence, alternative explanation of the insignificance of the FTA and CEFTA-2006 variables in the specifications above can be sought in this argument. Handjiski et al. (2010) provide some evidence that non-tariff barriers are significant constraint to CEFTA-2006 trade and suggest that achieving complete trade liberalization, including the elimination of non-tariff barriers, should be one of the first authorities' priorities.

Several points are worth mentioning in regard to the reduction and elimination of non-tariff barriers. First, as all the SEE countries aim to join the EU, the easiest way to harmonize technical, sanitary and phyto-sanitary standards is by converging to the EU rules in these areas. Secondly, the SEE lags behind the EU, including new member states, in their time and costs to export and import, as measured by trading across borders (Sanfey and Zeh, 2010). At the same time, logistics performance is weak. Government commitment is hence needed to make procedures for export and import more efficient and devote more resources for infrastructure investment, mainly roads and border points. Thirdly, CEFTA-2006 trade benefits could be reaped within the rules-of-origin provision and the possibility to apply wider diagonal cumulation of origin. Fourthly, trade in services could be greatly enhanced by moving forward on some of the CEFTA-2006 areas, such as public procurement, intellectual property rights, competition and state aid rules, and so forth.

8. Conclusion. The objective of this paper is to give a comprehensive view on Macedonian trade and potential economic gains for Macedonia from the further EU integration. The standard gravity model is used to measure the determinants of the bilateral trade of Macedonia and its trading partners in a panel framework. The results suggest that Macedonian foreign trade is highly dependent on both domestic supply and foreign demand. Real depreciation of currency shrinks trade, but is insignificant for the trade with the EU. Expectedly, closeness of a trading partner, its economic similarity, common language and border increase Macedonian trade. FTAs are found not to affect Macedonian trade, nor are additional gains approximated from the CEFTA-2006 agreement. This suggests that trade relationships between Macedonia and its trading partners are principally governed by supply and demand, while the imposition of frameworks that facilitate trade has likely not affected further trade proliferation. Potential explanation of this can be the still existent non-tariff barriers across the SEE countries, in terms of technical, sanitary and phyto-sanitary barriers to trade, time and costs of exports and imports, improvement of the infrastructure related to trade and so on.

References:

1. *Amemiya, T., and McCurdy, T.* (1986). Instrumental Variable Estimation of an Error-Components Model. Econometrica, 54:869-881.

2. *Anderson, J. E., and van Wincoop, E.* (2003). Gravity with Gravitas: A Solution to the Border Puzzle. American Economic Review, 93(1):170-192.

3. *Bahmani-Oskooee, M., and Alse, J.* (1993). Export Growth and Economic Growth: An Application of Cointegration and Error-Correction Modeling. Journal of Developing Areas, 27(4):535-542.

4. *Baier, S. L. and Bergstand, J. H.* (2007). Do Free Trade Agreements Actually Increase Members' International Trade? Journal of International Economics, 71(1):72-95.

5. *Buffie, E. F.* (1992). On the Condition for Export-Led Growth. Canadian Journal of Economics, 25:211-225.

6. *Bussiere, M., Fidrmuc, J. and Schnatz, B.* (2005). Trade Integration of Central and Eastern European Countries. Lessons from a Gravity Model. ECB Working Paper Series, 545.

7. *Christie, E.* (2002). Potential trade in Southeast Europe: a gravity model approach. Working Paper No. 21, The Vienna Institute for International Economic Studies, Vienna.

8. *Clark, P. B., Tamirisa, N., Wei, S.-J.* (2004). Exchange Rate Volatility and Trade Flows: Some New Evidence. IMF Occasional Paper, 235.

9. *Druzic, I., Peneva, M. and Sekur, T.* (2009). Dynamics and Composition of Trade Relations Between Croatia and CEFTA-2006 Countries. Proceedings from the Third International Conference: Regional Cooperation and Economic Integration: Challenges and Opportunities, October, 15-17 2009, Faculty of Economics, Skopje.

10. *Dutt, S. D. and Ghosh, D.* (1996). The Export Growth - Economic Growth Nexus: A Causality Analysis. The Journal of Developing Areas, 30:167-182.

11. *Frankel, J.* (2008). The Estimated Effects of the Euro on Trade: Why are they below historical effects of monetary unions among smaller countries? Harvard Kennedy School Research Working Paper Series, December, 2008.

12. *Giles, J. A. and Williams, C. L.* (1999). Export-led Growth: A Survey of the Empirical Literature and Some Noncausality Results. Econometrics Working Paper EWP9901.

13. *Greene, W.* (2003). Econometric Analysis. 5th Ed., New Jersey: Prentice Hall.

14. *Hall, A. R.* (2005). Generalized Method of Moments. Oxford: Oxford University Press.

15. *Hallak, J. C., and Sivadasan, J.* (2009). Firms' Exporting Behaviour Under Quality Constraints. NBER Working Paper, 14928.

16. *Handjiski, B., Lucas, R., Martin, P. and Guerin, S. S.* (2010). Enhancing Regional Trade Integration in Southeast Europe. World Bank Working Paper Series No. 185, World Bank.

17. *Hausman, J., and Taylor, W.* (1981). Panel Data and Unobservable Individual Effects. Econometrica, 49(6):1377-1398.

18. *Helpman, E., and Krugman, P.* (1985). Market Structure and Foreign Trade. Cambridge: MIT Press.

19. *Jelisavac, S. and Zirojevic, M.* (2009). CEFTA-2006 and Economic Crises - Case of Serbia. Proceedings from the Third International Conference: Regional Cooperation and Economic Integration: Challenges and Opportunities, October, 15-17, 2009, Faculty of Economics, Skopje.

20. *Kathuria, S.* (2008). Western Balkan integration and the EU: an agenda for trade and growth. World Bank Publications - Business & Economics.

21. *Krizmanic, M.* (2007). The New CEFTA with Special Reference to its Influence on Accession to the European Union and on the Republic of Croatia. CYELP, 3:559-579.

22. *Martinoz-Zarzoso, I.* (2003). Gravity Model: An application to trade between regional blocks. Atlantic Economic Journal, June, 2003.

23. *Pere, E.* (2009). Economic Trade Relations in Focus of Regional Integration of West Balkans Countries. ICBS, p.167-183.

24. *Pugh, G. and Tyrrall, D.* (2000). Intra-European Trade, Exchange Rate Variability, and Monetary Cooperation in Europe: Some quantitative evidence for the single currency debate. Conference The European Monetary Union and Beyond, Prague University, June 1999.

25. *Rose, A. K.* (2000). One Money, One Market: Estimating the effect of common currencies on trade. Economic Policy, 15(30):7-46.

26. *Sanfey, P., and Zeh, S.* (2010). Trade Potential and Long-Run Growth in SEE. In: Will Bartlett and Vassilis Monastiriotis (eds). South Eastern Europe after the Crises: a New dawn or back to business as usual? London: London School of Economics. Research on South Eastern Europe, p. 35-43.

27. *Sarafidis, V., Yamagata, T. and Robertson, D.* (2009). A Test of Cross Section Dependence for a Linear Dynamic Panel Model with Regressors. Journal of Econometrics, 148(2): 149-161.

28. *Schneider, F.* (2007). Shadow Economies and Corruption All Over the World: New estimates for 145 countries. Economics: The Open-Access, Open-Assessment E-Journal, (1):2007-9.

29. *Xu, Z.* (1996). On the Causality between Export Growth and GDP Growth: An Empirical Re-investigation. Review of International Economics, 4(2):172-184.

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