An empirical investigation on the impact of EU integration on trade flows of Albania

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Abstract— Free trade agreements are an instrument to foster trade exchange, in particular important to expand export potentials and ease import regimes. The trade volume of Albania has increased constantly after 90's. Albanian Exports' performance during 2007-2013 was better compared to that of imports. Trade openness index has also improved, while trade deficit showed signals of shrinking. However, these dynamics cannot be fully explained by the setting of the free trade agreements. Using annual data for the period 2001-2013 on 22 major trade partners of Albania, this study aims to investigate the impact of free trade agreements on the imports and exports of the country, and provide policy recommendations on how to exploit the trade potentials of the country. The empirical methodology comprises fixed and random effects estimation of the gravity model. The results indicate that the random effect is preferred to the fixed effects model, although standard errors have to be corrected for heteroscedasticity and autocorrelation both in the exports and imports models, and for cross-sectional dependence in the case of exports. The estimation results indicate that our findings confirm the theoretical grounds of the gravity model, but free trade agreements are not significant determinants of bilateral trade flows of Albania..

Index Terms— Albania, exports, free trade agreement, imports, gravity model, panel diagnostics.

1 INTRODUCTION

Albanian trade policy has undergone tremendous transformation following an intensive liberalization of tariffs and prices, eliminating unnecessary barriers to trade and boosting its trade relation with neighbouring countries. This transformation process resulted in a substantial increase of trade exchange after '90s. Trade liberalization reached a peak in 2006 with the signing of free trade agreements with EU, Balkan countries, EFTA States and Turkey. This policy affected both imports and exports, although the impact was fluctuating over time.

Trade data show a constant increase in absolute and relative terms. During 2007-2013 trade volume is increased, with some fluctuations though. Average growth of trade volume for the period is 11 per cent. The trade volume in 2009 was affected by the global economic crises and therefore the trade volume increase was 3% only. The crises did not affect the Albanian economy directly though the shrink in trade was considerable. Trade volume with the main trading partners decreased, in particular with Greece, reflecting the problems and difficulties faced by these economies. The optimistic figures of 2010-2011, offering an increase in trade volume by 20 and 16 per cent respectively, were not preserved for long time. Trade volume of 2012 and 2013 showed again modest increase at 3 per cent.

Albania has 4 free trade agreements with EU countries (SAA), Western Balkans (CEFTA 2006), EFTA States and Turkey. Their entry into force is different and their importance to Albania varies. The trade regime for industrial products, chapters 25-97 of Combined Nomenclature, is duty free with all signatories of the abovementioned agreements. Trade regime for agriculture products, chapters 1-24 of Combined Nomenclature, is differentiated, from duty free with Western Balkans, to still a limited list of sensitive products for the remaining signatories protected with tariffs. There are potentials for further liberalization in agriculture products but the process hasn't started yet with any of the signatories.

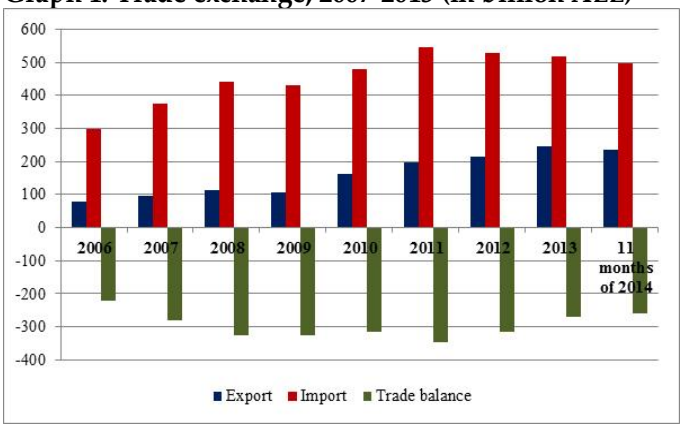
This paper is organized as follows. Section 2 describes the trade flows of Albania for 2007-2013, describing major patterns of the export and import flows. Section 3 presents the methodology and the data that will be used in the empirical analysis. The specification of the equation, estimation results and their interpretation are presented in Section 4 for the exports' model, and in Section 5 for the imports'. Section 6 concludes.

2 FOREIGN TRADE OF ALBANIA

2.1 Review Stage

Although Albania has a negative trade balance from '90s the increase of the trade deficit has been lower every year. This is due to the improvement of the export performance and increase of export at higher rates as compared to imports (Graph 1). The coverage coefficient of export by import is at the rate of 1 unit of exports for 3 unit of imports for 2009-2012. This coefficient used to be 1 to 4 until 2008. During 2013 this ratio is almost 1 unit of export for 2 units of import.

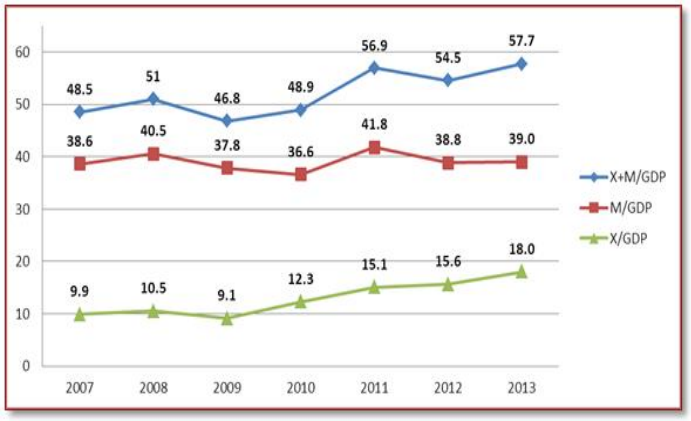
Graph 1. Trade exchange, 2007-2013 (in billion ALL)



Source: Institute of Statistics

Trade openness index, as a share of export, import and trade volume per GDP, is increased constantly (Graph 2). Only 2009 shows a decrease of the index, reflecting the shrink in trade volume and GDP growth. From 2010 this index has increased constantly for export while for import this index is almost stagnant. During 2013 this index reached at 57.7 per cent re-confirming the positive performance of Albanian export. In addition, the share of X/GDP is doubled from 2009 (i.e. 9.1 per cent in 2009 to 18 per cent in 2013).

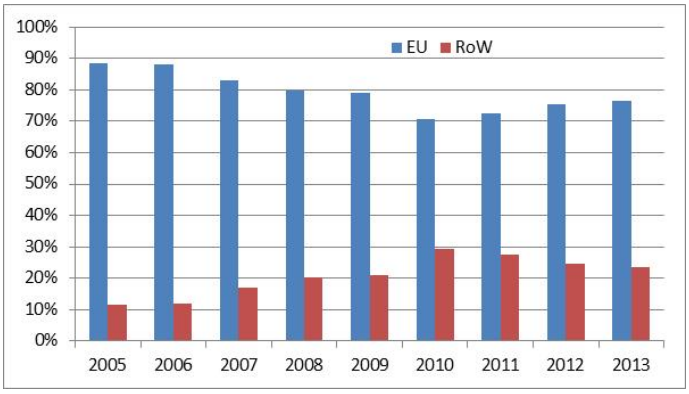
Graph 2. Trade openness index of Albania as share per GDP (in per cent)



Source: Institute of Statistics
Note: X-export; M-import; X+M-trade volume

A EU countries are the traditional markets for Albanian exports, absorbing 76.6 per cent of the total export flows. The importance of EU for Albanian export has decreased over time, from 89 per cent in 2006 to 76.6 per cent in 2013. The entry into force of CEFTA agreement diverted partially the Albanian exports toward the Western Balkan countries. In 2011 the share of Albanian export to EU reached at 71 per cent of the total export. During the last three years the importance of EU market increased, not reaching the level of 2006 though (Graph 3).

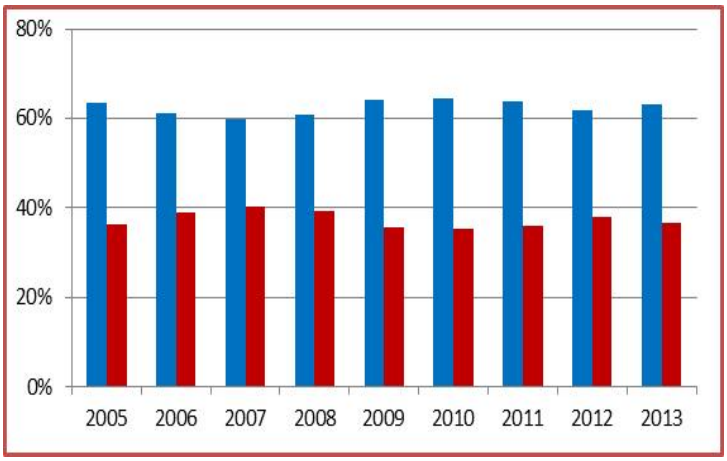
Graph 3. The share of export to EU countries versus the total export



Source: Institute of Statistics

Import figures show a different picture (Graph 4). EU countries are less important for Albanian import. They represent 62.2 per cent of the total and this figure is almost unchanged from 2005. China and Turkey are also important for Albanian imports followed by some CEFTA countries (Kosovo, Serbia and Macedonia). The share of import from EU countries and the rest of the world is the share of 65 per cent versus 35 per cent. Moreover, contrary to exports, this share is almost unchanged over time.

Graph 4. The share of import from EU versus the import from the rest of the world



Source: Institute of Statistics
Note: Blue – EU countries; Red - RoW

Free trade agreements (FTAs) are an important instrument to facilitate trade exchange between main trading block and providing more potential for export. The existence of FTAs does not create automatically the potentials to benefit from the preferential tariffs. Rules of origin[1] needs to me respected and therefore not all exports can qualify for tariff reduction. The benefit from the cumulation[2] of the rules of origin is at an average of 38 per cent. The benefit from the countries Albania has a FTA[3] are different. Exports to Turkey have the greatest number, 86 per cent in 2013, while the other countries remain at the average rate.
Similar to exports, not all imports qualify for preferential tariffs. The benefit in import for the trading blocs is higher than in export. This ratio is 39-40 per cent.

3. THE METHODOLOGY AND THE DATA

3.1. The methodology

Two common methods for the estimation of the panel data are the fixed and random effects model. Starting from a linear

[1] Compliant with rule of origin, input used in the production of a final product should have a certain processing level, expressed as a percentage of inputs to the final product, to grant the originating status. This rule varies from product to product.
[2] The principle of cumulation determines that inputs can be imported from different countries under a FTA, while the rules of origin are identical and the product in question is part of the preferential treatment specified in a given FTA. In addition, the input processed in one of the countries under FTA can be then exported in any other country under FTA, obtaining the originating status and benefiting from the preferential tariffs.
[3] EU countries through SAA, Western Balkans through CEFTA, EFTA States and Turkey.

model, the panel data comprise a dataset of N cross-sectional units that are observed in different time periods. A simple linear model can be written as:

$$Y_{it} = \alpha + \beta X_{it} + u_{it} \quad (3.1)$$

where i = 1, 2, ...N and t = 1, 2, ...T.

The estimation method may involve a common intercept as in the previous equation, fixed effects or random effects. The fixed effects method allows a different intercept for each group. The estimator is also known as the LSDV (least square dummy variable), because in order to allow for a different intercept for each group it includes a dummy variable for each. Hence the model is:

$$Y_{it} = \alpha_1 + \beta_1 X_{1it} + \beta_1 X_{2it} + \cdots + \beta_k X_{kit} + u_{it} \quad (3.2)$$

However, one must previously test whether fixed effects should be included or not. A standard F test can be used for this. One of the (dis)advantages of the fixed effects estimation is that it cannot include time-invariant variables.

The difference between the fixed and random effects method is the assumption of the model intercepts, which in the random effects model are considered as random parameters. The variability of the intercepts can be expressed as:

$$\alpha_1 = \alpha + v_1 \quad (3.3)$$

where v_1 is a random variable with zero mean and constant variance. One of the obvious disadvantages of this model is the need for the distribution assumption of the random component. It relies on the assumption that the fixed effects are not correlated with the explanatory variables. If this is the case, i.e. the unobserved group effects are correlated with the explanatory variables, the estimates will be biased and incosistent. However, it has some advantages, such as the lower number of parameters to be estimated compared to the fixed effects, and the possibility to control for time-invariant variables.

Given the advantages and disadvantages of each method, one must test whether the data at hand support one estimation method or the other. This is usually done by using the Hausman test. Hausman (1978) based the test on the idea that under the null hypothesis of no correlation, OLS and GLS are consistent, but OLS is not efficient. Hausman assumed that two estimates of the vector of β parameters exist, namely β_0 and β_1, so he raised two procedures of testing the hypothesis. Under the null hypothesis, both estimators are consistent, but β_0 is not efficient, and under H_1, β_0 is consistent and efficient, but β_1 is not consistent. The best choice between the models for panel data is by investigating whether the regressors are correlated to the individual (unobserved) effect. The advantage of using the fixed effects model is that it is consistent even when the regressors are correlated to the individual effect. Given this, the Hausman test investigates whether the random effects model will be equally good.

3.2. The data

Different sources are used for the data used in this study for the estimation of the gravity model. The figures on the imports and exports of Albania with its trade partners come from the Albanian Institute of Statistics; the GDP of Albania and that of its partners, as well their respective populations are downloaded from the World Bank website, and the distances between the capitals from http//www.mapcrow.info. The calculations for the trade complementarity index (TCI) are undertaken using data from the United Nation Statistical Division (UNSD) Commodity Trade (COMTRADE). The formula used in these calculations is that of Sohn (2005):

$$TCI_{ij} = \sum_{k=1}^{K}[X_{ki} \times M_{kj}] \Big/ \sqrt{\sum_{k=1}^{K} X_{ki}^2 \times \sum_{k=1}^{K} M_{kj}^2}$$

22 countries have been included in the empirical analysis, namely Bosnia and Herzegovina, Bulgaria, Croatia, Germany, Greece, Italy, Macedonia, Montenegro, Poland, Romania, Serbia, Spain, Austria, France, United Kingdom, China, Malta, Netherlands, Rusia, Switzerland, United States of America and Turkey. The data comprise the period 2001-2013. Thus, using annual observations of 13 years for each country pair, and 22 cross-section units (the pairs), our dataset is a balanced panel of 286 observations. Table 1 presents the descriptive statistics of the data under consideration.

Table 1 Descriptive statistics

Variable		Mean	St. error	Minimum	Maximum
X_{ij}	Total	46441.87	148552.7	0.00001	1080276
	Between		136175.2	341.9409	650040.1
	Within		65612.48	-386538.5	476677.6
M_{ij}	Total	141339.4	263724.9	6.189286	2132905
	Between		241367.7	1207.371	1095894
	Within		117241	-531252.1	1178351
GDP_i	Total	9642072	3220331	4091020	13000000
	Between		0	9642072	9642072
	Within		3220331	4091020	13000000
GDP_j	Total	1.5e+09	3.01e+09	1159892	1.68e+10
	Between		2.98e+09	3148517	1.38e+10
	Within		7.37e+08	-1.67e+09	6.51e+09
N_i	Total	3123197	150948.7	2800138	3286084
	Between		16554.02	3049081	3126727
	Within		150076.7	2796609	3360200
N_j	Total	1.03e+08	2.73e+08	393028	1.36e+09
	Between		2.79e+08	407698+07	1.32e+09
	Within		6105738	5.85e+07	1.44e+08
D_{ij}	Total	1603.141	2099.98	131.99	8172.89
	Between		2145.637	131.9908	8172.86
	Within		0.062	1602.708	1603.594
TCI	Total	0.274	0.217	0.002	1.24841
	Between		0.146	0.006	0.455
	Within		0.164	-0.097	1.135
CMBR	Total	0.136	0.344	0	1
	Between		03512501	0	1
	Within		0	0.136	0.136
Agree	Total	0.580	0.494	0	1
	Between		0.275	0	0.923
	Within		0.415	-0.343	1.273
N = 286		T = 13		n=22	

4. SPECIFICATION AND DIAGNOSTICS OF THE EXPORTS'

MODEL

Given that it is more logical that the variables change in percentage terms rather than in their original units of measurement, the natural logarithm was used for the dependent variable and the independent ones that are strictly positive. The fixed effects model is recommended when the interest lies on investigating the effects of time-variant variables, and the model performance is reduced when the variation within the group is minimal or when the variation in time is minimal. For this reason, the common border indicator and the distance between the countries were removed from the fixed effects, and included in the random effects estimations.

Table 2. Estimation results of fixed and random effect models

Variable	FE_1	FE_2	RE_1	RE_2
lngdpi	0.473	2.547	2.201***	2.044***
lngdpj	2.721***	2.339**	.712**	1.399***
Lnni	-6.217	-12.38	-5.011	-6.203
Lnnj	14.207**	11.294	-0.472	0.267
TCI	0.238	-1.834	1.755	0.314
Agree	-0.173	-0.089	-0.049	-0.271
Years	no	yes		
Lnd				-3.095***
CMBR				1.750*
_cons	-197.341	-81.229	41.419	57.51
sigma_u	32.836	26.451	1.624	0.976
sigma_e	2.396	2.368	2.396	2.4
Rho	0.995	0.992	0.315	0.142
N	286	286	286	286

*legend: * p<.1; ** p<.05; *** p<.01*

The estimation results are presented in Table 2. The first two columns represent the results from fixed effects estimations with and without time dummies, while the results of the random effects estimations with and without the time invariant variables are presented in the last two columns. Different authors suggest to control for time dummies when the dependent variables may be affected by various events or when there is reason to believe that part of the its variation could be explained by time (Hamilton, 2013; Torres-Reyna, 2007). Since the results of the first model seem to be problematic, we included dummy variables for each year[4]. Their inclusion has only slightly changed the results. The population variable has lost its significance, while Albania's GDP is still significant at the 5 per cent level. However, joint significance test of the time dummies suggests that they are statistically insignificant. Based on the theoretical grounds of the gravity model, the last model performs better than the others: the GDPs of the two partner countries are highly significant and have the expected positive signs, and the effect of the distance between them is negative and significant. The Hausman test results (Table 3) indicate that there is evidence in favour of the fixed effects when testing the model in the first column versus that on the third. However, the random effects model is favoured when testing between the fixed effect model and the random effects model in the last column.

Table 3. Hausman test results

Test: Ho: difference in coefficients not systematic

chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 7.39
Prob>chi2 = 0.2866

In the next step, some diagnostic tests were conducted especially with regards to the fixed effects model. One of the main concerns in these estimations is the cross-sectional dependence, which was tested using Pesaran's test. The value of the statistic is 5.879 (p-value=0.000). Hence, the null hypothesis of cross-sectional independence is rejected. The modified test of heteroscedasticity for the fixed effects model also provided evidence against the null. With regards to autocorrelation, we conducted the test proposed by Wooldridge (2002) which provided sufficient evidence to reject the null of no autocorrelation.

Several methods have been proposed for the correction of the standard errors for each of the individual problems identified in the previous diagnostic checks. Nevertheless, only a few methods can address more than one of these problems at once. Hoechle (2007) listed among others, two methods that correct for cross-sectional dependence, autocorrelation and heteroskedasticity at the same time.

The first method is that of the linear regression with panel-corrected standard errors (PCSE). It corrects the standard errors estimates, in which the coefficients are estimated by using OLS or the Prais-Winsten estimator, which corrects for autocorrelation. The method assumes that the error term is heteroscedastic and correlated between panels, and calculates that standard errors and the variance-covariance estimates based on this assumption.

The second method provides the standard errors of Driscoll and Kraay (1998) for the coefficients of the pooled regression estimated by OLS/WLS or fixed effects. The structure of the error term is assumed to be heteroscedastic, autocorrelated to some lags, and correlated between panels. The estimation method is non-parametric and although it does not place restrictions on the panel size, it is a T-asimptotically valid for balanced and unbalanced panels. However, because of the latter being a fixed effects estimator the time-invariant variables are again removed from the estimation. Both of these methods were used and the estimation results are presented in Table 4.

Table 4. Estimation results of models with corrected st.errors

[4] The coefficients on these variables are not included in the table, but they may be made available upon request.

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Variable	PCSE1	PCSE	SCC
lngdpi	3.280**	2.592*	0.473
lngdpj	.836*	1.641**	2.721**
lnni	0.222	-0.062	-6.2165893*
lnnj	-0.47	0.04870993	14.207**
TCI	4.201*	0.722	0.239
agree	-0.12	-0.457	-0.173
lnd		-3.3752524*	
CMBR		1.707***	
_cons	-57.873	-42.199	-197.34123*
N	286	286	286
r2	0.263	0.157	

*legend: * p<.1; ** p<.05; *** p<.01*

The models in the first and second column are estimated with PCSE, while the model in the third with Driscoll and Kraay's methods. The results of the first model indicate that the GDP of Albania is highly significant. An increase of 1 per cent in this GDP will be associated with an average of 3.3 per cent of the country's exports, ceteris paribus. The GDP of the partner countries is significant at 5 per cent, and an increase by 1 per cent will lead to an increase of the volume of its exports with Albania by 0.84 per cent. In addition, a standard deviation increase of the complementarity index will increase exports by about 70 per cent, holding other factors fixed.

The inclusion of the two time-invariant variables in the previous model, has changed the significance of the TCI variable, but the economic masses are again significant. The effects of a 1 per cent increase in each of the GDPs, will increase exports by 2.6 and 1.6 per cent, respectively. The distance is significant and has the expected negative sign, while sharing a common border significantly and positively affects trade between the countries. The model predicts a difference of approximately 170 per cent higher exports between neighbour compared to non-neighbour countries.

The results are different in the third model. Albania's GDP is not statistically significant, while that of the trade partner is significant at 1 per cent. An increase by 1 per cent in the latter, will cause an increase of the volume of its exports with Albania by 2.7 per cent, holding other factors constant. The populations of the two countries have significant effects and their effects are different in signs. A surprising results is that the model predicts that an increase in the population of the country will be associated with a sharp decrease in the volume of exports, while increasing the population of the partner countries will be associated with an increase of the Albanian exports' volume. This result may be explained by the overall increase in the aggregate demand for good that accompanies population growth. Based on these results, it seems like the second model is the one that provides the best fit to our expectations. It must be noted, however, that the bilateral or multilateral trade agreements are not a significant determinant of the export volume of Albania in none of the models estimated above.

A possible explanation for this result, may be that it is due to the fact that export regime to EU market is completely free from 2000[5]. The SAA, signed in 2006, reconfirmed the trade regime granted to Albanian exports in 2000, adding a few more potentials. Thus, export potentials reached their optimum level prior to the FTA with EU. 90 per cent of Albanian exports could benefit from this preferential regime for the period 2000-2006. The trade data show that after the signing of FTA with EU the share of exports to EU decreased with 13 point per cent (i.e. from 89 to 76 per cent). In addition, the market share gained with the Western Balkans Countries and Turkey reached a level that is being preserved for a long time with no further developments in this respect. Finally, export to EFTA States, having an EFTA in force from 2012, is less than 2 per cent, almost stagnating. Thus, FTAs had no determinant effect in export potentials for Albania. Imports, on the other side, did increase, less than export though, showing a weak relationship with FTAs in force.

5. Specification and Diagnostics of Imports' Model

Following the same procedures as in the exports' modelling, the fixed and random effects are estimated first, and the Hausman test is conducted. The saturated model for the imports case, that contains the year dummies, was deemed relevant in this case, given their joint statistical significance. In addition to these, the GDP of Albania and the complementarity index also are significant at 1 per cent, while the population of country j is significant at 10 percent (Table 5). The results of the random effects estimation indicate that the the GDP of Albania is the only significant factor at 5 per cent, while the trade agreement indicator is significant at 10 per cent, although it does not have the expected sign. Despite this quick overview, it is necessary to conduct the Hausman test for the selection between the models.

Table 5. Results of the fixed and random effects estimation of the volume of imports

Variable	FE_1	FE_2	RE
lngdpi	2.753***	2.572***	2.337***
lngdpj	0.263	0.254	.561***
lnni	4.363	4.885	4.699
lnnj	-3.583	0.211	.848***
TCI	-1.585***	-1.154**	-1.368***
agree	-0.221	-0.249	-0.245
Years	Yes	Yes	Yes
CMBR			0.657
lnd			-2.035***
_cons	-42.697	-111.180	-107.399
sigma_u	7.488	1.163	0.817
sigma_e	0.629	0.629	0.630
rho	0.993	0.774	0.627
N	286	286	286

The Hausman test statistic provides evidence in favour of the random effects model. When adding the time-invariant varia-

[5] Council Regulation (EC) 2007/2000; Council Regulation (EC) 1215/2009; Council Regulation (EC) 1336/2011

bles the estimation results are significantly improved. Both GDP variables are significant at 1 per cent and have the expected signs. The population of the partner country has a positive and significant effect, while the TCI and the distance are negative and significant.

Before continuing with the interpretation of the estimated effects, it is necessary to diagnose the models. The homoscedasticity test and the Wooldridge test of autocorrelation for panel data provide sufficient evidence to reject the null hypothesis. In difference from the exports' estimations, the import model does not suffer from cross-sectional dependence.

To correct these problems, we will apply a cross-sectional regression model to time series data, in which the error term follows an autoregressive process of order 1. The estimation of the random effects employs the GLS estimator. The model can be written as

$$y_{it} = a + x_{it} * b + u_i + e_{it} \qquad (3.5)$$

where e_{it} = rho * $e_{i,t-1}$ + z_{it}, |rho| < 1 and z_{it} is an i.i.d with mean zero and variance σ_z^2. If u_i are assumed to be fixed parameters, then the model is a fixed effects one. Otherwise, if u_i is assumed to be a random variable with zero mean and constant variance σ_z^2, it would be the random effects model.

Table 6. Estimation of the imports model corrected for heteroscedasticity and autocorrelation

corr(u_i, Xb) = 0 (assumed)

Wald chi2(9) = 235.65
Prob > chi2 = 0.0000

lnm	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
lngdpi	1.093148	.2311314	4.73	0.000	.6401391	1.546158
lngdpj	.6986769	.1546568	4.52	0.000	.3955551	1.001799
lnni	-.0762526	.8575785	-0.09	0.929	-1.757076	1.60457
lnnj	.6250813	.1858945	3.36	0.001	.2607348	.9894277
TCI	.1552365	.3552541	0.44	0.662	-.5410486	.8515217
agree	-.1441156	.1266377	-1.14	0.255	-.392321	.1040898
CMBR	.7054454	.5578017	1.26	0.206	-.3878259	1.798717
lnd	-1.839502	.3363389	-5.47	0.000	-2.498714	-1.18029
_cons	-17.15019	14.32917	-1.20	0.231	-45.23485	10.93448

rho_ar	.64692078	(estimated autocorrelation coefficient)
sigma_u	.64907542	
sigma_e	.4792171	
rho_fov	.64720829	(fraction of variance due to u_i)
theta	.54409582	

The estimation results in Table 6 reinforce the gravity model theory for the volume of imports. Four variables are statistically significant at 1 per cent: the GDP variables, the population of the partner country, and the distance between countries. The results indicate also that when all factors are held fixed, increasing the GDP of Albania by 1 per cent will increase the total volume of imports by 1.1 per cent; increasing the GDP of the partner country by 1 per cent will increase Albanian imports by about 0.70 per cent; increasing the population of the partner country by 1 per cent will increase the imports of Albania by 0.63 per cent, and increasing the distance by 10 per cent will cause a reduction of 18.4 per cent in the country's imports.

6. CONCLUSIONS

Trade volume of Albania increased constantly, with some fluctuations over years. Exports' performance is more stable compared to imports, contributing to the shrinking of trade deficit, increased trade openness index and improved coverage coefficient. Albania has a very liberal trade regime, partly because of WTO accession and mostly due to the FTAs in force. Although the FTAs in force cover the main trading partners for Albania, potentials to expand the preferential treatment to other important partners may be considered

In this study, a gravity model was estimated using data on trade flows for 2001-2013 between Albania and 22 of its major trade partners. Our findings suggest that the random effects model suits the data better. The explanatory variables in both the models of export and import flows included GDPs of the two countries, their population, the distance between their capital cities, a dummy variable indicating common border, the trade complementarity index and a dummy indicating that the two countries are engaged in a (bilateral or multilateral) trade agreement.

Our findings indicate that the gravity model adapted to trade data is valid, given that the GDP variables are significant and have positive effects on exports and imports, while the distance between the countries has the expected negative and significant effect. The dummy of common border is also significant, indicating that common language, culture and geographical proximity have a positive impact on trade. The statistical significance of the other control variables, TCI and population variables, is not always uniform, but they have the expected signs in the cases they were statistically significant. Lastly, and most importantly, the results indicate that Trade Agreements, widely recognised and accepted as an important instrument to boost trade, were not found to be significant determinants of trade flows of Albania.

Future research could be dedicated to the necessity and benefits of having new FTAs, while having a balanced approach on cost and benefit. FTAs could not boost trade potentials for Albania as expected, though they impacted positively trade in the first years of entry into force. EU integration and Albanian accession to EU will slightly change the current trade regime of Albania and therefore the direct impact on trade flow will not be significant. Changes to policy making and institutional setup will be affected the most.

However, it must be taken into account that trade agreements do not have direct effects only. It is well-known the fact that integration brings, among others, technological changes, adaptation and innovation which may, on the other hand, fuel trade. Future research may investigate the impact of these aspects on trade and economic development of Albania. Moreover, business readiness to absorb new technologies and innovate ideas is crucial in these regards and Government should give due attention to policy incentives that promote the use new technologies in business strategies.

REFERENCES

[1] Ulrich Kohler, Frauke Kreuter, 2009. Data Analysis Using Stata. 2nd ed., Stata Press.

[2] Hamilton, L., 2013. Statistics with Stata: Version 12. Cengage

[3] Torres-Reyna, O., 2007. Panel Data Analysis Fixed and Random Effects using Stata (v 4.2), Lecture notes. Princeton University.

[4] Wooldridge, J. M. 2002. Econometric Analysis of Cross Section and Panel Data. Cambridge, Massachusetts: The MIT Press.

[5] Drukker, D. M. 2003. Testing for serial correlation in linear panel-data models. The Stata Journal (3)2, 1-10.

[6] Hoechle, D., 2007. "Robust Standard Errors for Panel Datasets with Cross-Sectional Dependence", Stata Journal 7, pp: 281–312.

[7] Baltagi, B. H., and P. X. Wu. 1999. Unequally spaced panel data regressions with AR(1) disturbances. Econometric Theory 15: 814–823.