An Assessment of Demand for Imports through the VECM Model

Authors: **Dr. Soana Jaupllari (Teka)**, Faculty of Economics, University of Tirana, Albania, **Dr. Olta Zoto**, Faculty of Economics, European University of Tirana, Albania

This chapter analyses the factors that affect the demand for imports in Albania during the period 1999-2011. This paper use an error correction model to measure the elasticity of import flows of goods in Albania, related to real demand, developments in trade liberalization, and transfers from abroad and fluctuations in the value of currency; as well as shed light on economic policies in restricting trade deficits. Econometric analysis of this study includes a set of variables part of demand for imports.

Based on theoretical principles and research experience, the analysis in this paper consists in treating imports as a function not only of GDP (economic activity), effective exchange rate, but also as a function of remittances and the level of liberalization of the trade regime, represented by the average import tariff (trend which clearly shows the progress of trade liberalization). The assessment of the impact of these factors is achieved using the vector error correction model (VECM = vector error correction model). At first, the analysis begins by specifying tests theoretical hypotheses and analytical equations, which describes the theoretical relationship.

The following step consists on the selection of econometric model, which in our case was chosen to be the VECM model. The following section consists on a deeper analysis in econometric model specification, and the steps to follow to calculate its parameters.

Metodology

The bilateral relationship between several variables makes more complex the process of an econometric modelling. One of the main steps in modelling a certain relationship between variables is econometric model specification. The choice of the method depends on the purpose of evaluation and assessment of data availability. For our case, the measurement methods in the estimation of general trade elasticity, and elasticity of demand for imports in particular, differ significantly. OLS (Ordinary Last Square) method is consistently used to assess the elasticity of demand for imports in respect to income and relative prices. However, this method is criticized in some aspects. Critics believe that this approach has not proved successful in its suitability with time series data and that this method is based on a number of limitations, which are questionable. Models such as VAR (Vector Autoregressive) and VECM are most often used in the treatment of such relationships, which have more than one endogenous variable. Various authors as Maquez (1994), showed that the method "Full Information Maximum Likelihood" (full information on the maximum opportunity) of VAR and VECM models, performs better than OLS; and Senhadji (1997) proves that the assessor " Fully Modified (FM) using the method „Monte Carlo " performs better than OLS. However, many authors continue to use OLS method, arguing that it is easier and more convenient or advantageous.

The estimation of VECM model in the case of import demand function

As stated above, the VECM model provides long-term relationship and also short-term dynamics of the endogenous variables. This model shows the achievement of long-term equilibrium and the rate of change in the short term to achieve equilibrium. In the long run, endogenous variables must converge to their co-integrated relations. To determine the characteristics of time series for each of the variables in the model, the modelling strategy adopted for this paper passes through three stages. Previously must be estimated the stationary of time series. Further steps of modelling are: Firstly, determine the order of integration of variables via Augmented Dickey Fuller test (ADF). Secondly, if the variables are

integrated in the same order, (eg I (1)), we apply the Johansen method of co-integration, technique which serves to find long-term relationship and short-term dynamics. Based on the theoretical derivation of VECM mode, we determine:

$$X_t = \{\ Ln(IMP_t), Ln(GDP_t), Ln(REER_t), Ln(REM_t), (Taver_t)\ \} \quad (2.1)$$

$$\Delta X_t = \{\ \Delta Ln(IMP_t), \Delta Ln(GDP_t), \Delta Ln(REER_t), \Delta Ln(REM_t), \Delta(Taver_t)\ \}$$
$$(2.2)$$

As a result, based on econometric form (matrix), for our case the VECM model can be written:

$$\begin{bmatrix} \Delta LOGIMP \\ \Delta LOGGDP \\ \Delta LOGREER \\ \Delta LOGREM \\ \Delta Taver \end{bmatrix}_t = \Gamma(L) \begin{bmatrix} \Delta LOGIMP \\ \Delta LOGGDP \\ \Delta LOGREER \\ \Delta LOGREM \\ \Delta Taver \end{bmatrix}_t + DZ_t + \Pi \begin{bmatrix} LOGIMP \\ LOGGDP \\ LOGREER \\ LOGREM \\ Taver \end{bmatrix}_{t-1} + \varepsilon_1$$

$$\downarrow$$
(Short-Run relationship)

where: $\Pi = \alpha\beta''$, Δ – the operator of change

The analysis of empirical results; the case of Albania

Data, methodology and model specification

Data and methodology

This research aims to identify factors that affect the demand for imports in the short and in the long term, as well as in achieving

sustainability. As stated above, to assess the short-term dynamics and long-term relationship we use VECM model. Through this model will verify the basic hypothesis: the demand for imports depends on economic growth, the real effective exchange rate, trade liberalization and remittances. This research covers the period 1999T1 - 2011T4. The data are in the form of 3 - month time series. Demand for imports is measured by nominal imports expressed in millions of lek. Imports data used in this model are in the (c.i.f) form, including in the value of imports the cost of insurance and transportation. Real gross domestic product and real effective exchange rate measure the economic effects. The effects of relative prices and nominal effective exchange rate on imports are combined through the use of a single variable, represented by the real effective exchange rate (REER). The average tariff is taken as a proxy variable to assess the impact of trade liberalization in Albania. This variable is expressed as a percentage, in the form of quarterly time series. Remittances measure the effects on the demand for imports of assets (transfers) which are used as sources of funding, mainly in form of transfers by emigrants. The data for real GDP, REER and Remittances are provided by Bank of Albania, while the average tariff data for the import of goods provided by the General Directorate of Customs. The methodology used by the Bank of Albania in calculating REER is based on the following formula:

$$REER = \pi \left[C_h \cdot K_n / C \right]^{W_n}$$

where C_h represents the consumer price index in partner countries; C represents the consumer price index in the country, K_n is the nominal exchange rate, Wn is the weight attributed to the partner country, based on the weight that it occupies in trade. Under this method of calculation, the increase in REER means real depreciation of the domestic currency, thus an increase in the real price of imports and, consequently, a decrease in imports.

REER lowering effect will be the opposite. Albanian economy is assumed as a small economy, because our demand for imports is relatively small compared with domestic demand in trade partner countries. Consequently, it does not lead to changes in the price of imports and the country is defined as a price taker for imports denominated in foreign

currency. Also, because the amount of goods we export is relatively small (much smaller than imports) we can consider the Albanian economy as a small one, so there is no impact on the price of these goods in the partner countries.

The model specification

Basically, the demand for imports appears imports as a function of domestic income and as a function of the domestic price relatively to the price of import substitutes. Consequently, the imports function, if assume constant prices and constant income elasticity, can be written as follows:

$$IMPORTS = \left[P_d \, {E}\!\!\diagup\!\!{P_f} \right]^{\lambda} Y^{\Omega}$$

Where y is the domestic income; Pd domestic prices; Pf foreign prices; E corresponds to the nominal effective exchange rate; while λ and Ω elasticity of demand for imports on price and income respectively.

Income is expected to have a positive sign, as well as the relative domestic prices relative to foreign prices, approximated by REER (according to the above formula, an increase in the REER, means an evaluation, which has a positive effect on demand for imports). Looking back at the above equation, converting the variables in logarithmic nature, imports can be expressed as follows:

$$IMPORTS = \lambda \left(p_d + e - p_f \right) + \Omega(y) \qquad (3.1)$$

Based on the above theoretical principles and in research experience, the analysis in this paper consists in treating imports as a function not only of domestic income (economic activity), effective exchange rate, but also as a function of remittances and level of liberalization of trade regime, represented by the average import tariff (trend which clearly shows the progress of trade liberalization).

$$IMPORTS = f\left(reer, gdpreal, averagetariff, remit\tan ces\right)$$

In the simplest form, long-term relationship in the import demand equation can be shown as follows, in a model of log-line form. The above form can be expressed in the log-linear form (logarithmic), as in equation (3.2).

$$Ln(IMP_t) = \beta_0 + \beta_1 Ln(GDP_t) - \beta_2 Ln(REER_t) + \beta_3 Ln(REM_t) - \beta_4 (Taver_t) + \mu_t$$

(3.2)

where: Ln(IMPt)=3-month import logarithm in t time period; Ln(GDPt) =3-month GDP logarithm in t time period; Ln(REERt)= 3-month REER logarithm in t time period; Ln(REM) =3-month REM logarithm in t time period; (Taverage) = the percentage of average tariff in period t; ut = error term with normal distribution in t period; β0, β1, β2, β3, = estimated parameters ; β1 > 0, β2 < 0, β3 > 0, β4 < 0

The choice of this form is influenced by experiences that bring numerous domestic and foreign empirical studies related to modeling of demand for imports.

Selected functional form of the regression model, known as the log - linear model, has a very important feature related to the regression coefficients, which can be interpreted as partial elasticity. They measure the percentage change in the dependent variable for a given change in the independent variable. Specifically, this feature has made the log- linear model so much used in such different empirical studies. Consequently, the estimated coefficients in this case will show how will be the percentage of change in the level of imports, if the value of an independent variable changes by one percentage point, while the other explanatory variables remain unchanged. A known limitation of the model is that the partial elasticity is treated as constant throughout the evaluation period (Gujarati 1998). Equation (3.2) shows the long-term relationship between the variables in the equations of import. Because all data, except average tariff, are expressed as natural logarithms, parameters indicate import elasticity related to the explanatory variables. Parameter β1 shows the sensitivity of demand for imports to real domestic product. An increase in real production should theoretically cause an increase in demand for imported goods, meaning a positive correlation. According to the above methodology, regarding the formulation of the REER, parameter β2 must be positive because an increase in the real effective exchange rate increases the demand

for imports. Parameter β_3 must be positive, because an increase in the level of remittances normally leads to increased traded imports. And finally, parameter β_4 must be negative, because a decrease in the average tariff level, leads to increased demand for imports.

In studying the behavior of imports, the analysis begins by specifying the tests of theoretical hypotheses and analytical expression, which describes the theoretical relationship. The next step consists to the selection of econometric model, which in our case was chosen to be the VECM model. In the following case, we aim a deeper analysis on econometric model specification, presenting also the steps to follow in calculating its parameters.

The results

As indicated above, before performing the analysis of co-integration, let's make the stationary test (unit root test) for each series in the VAR model. Testing of stationary of variables is done by ADF-Test. The results of these tests show that the series are non-stationary, integrated of the first order I (1).

Table 1: Unit root test for variables

Variables	Metodology	Integration	*Prob*	C	T	VK	DW
LnIMP	ADF	I(1)	0.8793	✓	-	4	1.934
LnGDPr	ADF	I(1)	0.5788	✓	-	2	2.008
LnREER	ADF	I(1)	0.3219	✓	-	1	1.947
LnREM	ADF	I(1)	0.1759	✓	-	0	1.793
Taver	ADF	I(1)	0.7295	✓	-	0	2.273

[ADF estimated on EViews 5.0; t

Test: H_o: Exist a unit root; Critic value: 5 and 1 percent (p=0.05 dhe p=0.01) to reject H_o

If p>0.05, we accept H_o

Metodology: ADF (Augmented Dickey-Fuller);

C-constant; T-trend; Dw – autocorrelacion tes of Durbin-Watson;

Period: 1999:-2011:

Lags: The nr of lags is determined by the information criteria, SIC – Schwartz Information Criteria;

Further, the identification of lags in VAR test was provided by the residue test. Considering the small selection and residue test results for VAR (1), the further analysis will proceed with the inclusion of a time delay. The method "Maximum Likelihood" of Johanssen is applied on the group of endogenous variables in order to assess the number of co-integration vectors. After applying the Johanssen procedure, we note that there is only one vector of co-integration that means a long-term relation between the level of imports, aggregate demand (real GDP), REER, remittances and the average tariff. This information is summarized in the table below, where it is noted that both the statistical tests used recommend only a vector of co-integration.

Table 2: The estimation of co-integration vectors

Sample (adjusted): 1999T3-2011T4, 42 observations
Trend assumption: Linear deterministic trend
Series: LNIMP LNGDPreal LNREER LNREMlek Taverage
Lags interval (in first differences): 1 to 1
Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace statistic	0.05 Critic value	Prob.**
None *	0.547155	81.09324	69.81889	0.0048
At most 1	0.454674	47.82065	47.85613	0.0504
At most 2	0.273881	22.35307	29.79707	0.2793
At most 3	0.156281	8.911342	15.49471	0.3736
At most 4	0.041360	1.774053	3.841466	0.1829

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No of CE(s)	Eigenvalue	Statistic Max-Eigen	0.05 Critic value	Prob.**

None*	0.547155	35.29535	33.87687	0.0289
At most 1	0.454674	25.46757	27.58434	0.0911
At most 2	0.273881	13.44173	21.13162	0.4124
At most 3	0.156281	7.137289	14.26460	0.4730
At most 4	0.041360	1.774053	3.841466	0.1829

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

Regarding to the cointegration vector, we can say that the vector's coefficients in the import equation are normalized in coefficients of the import's variable, a variable which is considered as an endogenous one. The cointegration vector represents the dynamics and adjustment of the variables in the long-term equilibrium. Regarding to the results of this vector, as it is expected from the economic theory, Albanian imports represent positive income elasticity: 1 % increase in GDP growth causes growth in imports to 0.93 %, which implies a fundamental role of imports in fulfilling the shortage of domestic goods, as destination for consume or used as inputs in production. Our economy is a small economy, strongly dependent on imports. The actual situation and the high levels of trade liberalization caused by the reduction of trade barriers, because of the entrance into the WTO and free trade agreements, conditioned significant levels of trade openness.

This conclusion is confirmed by the negative coefficient, which shows an increase of 6.8 % in imports for a unit (one percentage point) decline in the average tariff. This situation is quite expected, if we consider the ratio "imp / GDP ", which increased from 27.4 % in 1999 to 37.71 % in 2009. Related to the real effective exchange rate we can say that a 1% increase in the REER, causes decrease in demand for imports by 0.24% or in other words, a 1 % depreciation of the REER causes a decline in imports by 0.24%. It is notable that imports show low values of price elasticity, under the unit.

Considering the fact that Albania is a small economy and highly dependent on the imports, especially imports of raw materials, this is an expected result (as for example when fuel prices grow up on world markets). While on the impact of remittances, we note that 1 % increase in remittances causes increased imports by 0.12 %. So, it is noted that the

elasticity of demand for imports on remittances is positive but smaller than 1.

Table 3: Error correction model for quarterly level of imports

Vector Error Correction Estimates

Sample (adjusted): 1999T3 2011T4

Included observations: 42 after adjustments

Cointegrating Eq	LNIMP(-1)	LNGDPr(-1)	LNREER(-1)	LNREM(-1))	Taver(-1)
CointEq1 (Vector of cointegration in L-R)	1.000000	**0.937341** (0.14463)	**-0.240416** (0.26722)	**0.126738** (0.04526)	**-6.856178** (1.25877)
Error Correction	**D(LNIMP)**	**D(LNPBBreal)**	**D(LNREER)**	**D(LNREM)**	**D(Taver)**
CointEq (the speed of adjustment)	-1.002842 (0.19058) [-5.26193]	0.088936 (0.04851) [0.92641]	0.028537 (0.04294) [0.66451]	3.276206 (0.55878) [-5.86311]	-0.040831 (0.01264) [-3.23106]
C	0.047143 (0.03193) [1.47636]	0.039116 (0.00813) [4.81315]	0.006188 (0.00720) [0.86010]	0.017564 (0.09362) [0.18761]	0.000239 (0.00212) [0.11274]

R²	0.717558	Mean dependent	11.05378
Adjusted R²	0.610424	S.D. dependent	0.385466
Durbin-Watson	1.962435	Prob (F-stat)	6.697800

[Calculated in EViews 5.0]

Standart error in ( ) and t statistic in [ ].

Note: If the dependent variable of imports is interpreted as a LHS varable (Left hand side) in a model, than the RHS coefficient "RHS"(Right hand side,) should be multiply by -1.

The speed of reaction to changes is represented by the coefficient before a delay time value of imports level. It is approximately 0.10, meaning

that a quarterly is necessary to transmit 10 % of changes in imports, defining elements such as GDP, REER, REM, and average tariff on the level of imports. REER depreciation is transmitted every three months on imports, causing their decrease, because the real price of foreign goods increases. If we want to complete better the long-term relationship between the variables in the model, except the coefficient of the cointegration vector should take into consideration even the speed of adjustment of variables. The long-term variables that explain imports are GDP, REER, REM and tmes, and coefficients which measure the extent of changes in imports in the long term, derived from changes in these explanatory variables, are calculated as product of the coefficient shown in Table 3 (coefficient of cointegration vector) with the speed coefficient of response. These calculated values are placed in equation (3.5), equation which shows the long term dependence of demand for imports from the variables included in the model. The elasticity of changes in GDP is 0.08. This means that an increase of 1 % of GDP, which represents the increase in total consumer demand, cause an increase with 0.08% of the demand for imported goods. Elasticity to REER is - 0.007, which means that an increase of 1 % in REER causes reduction of imports by less than 1 %, concretely with 0.007 %. In general, based on the methodology used, an increase of REER makes the imported goods more expensive compared to domestic ones, increasing in this way the competitiveness of the domestic economy. Consequently, this development causes a decrease in imports.

The estimation of long term relationship of demand for imports is shown in equations (3.3) and (3.5):

$$Ln(IMP_t) = C + \alpha\beta \cdot Ln(GDP_t) - \alpha\beta \cdot Ln(REER_t) + \alpha\beta \cdot Ln(REM_t) - \alpha\beta \cdot (Taver_t) + \mu_t$$

$$(3.3)$$

$$Ln(IMP_t) = C + 0.937(0.088)Ln(GDP_t) - 0.240(0.028)Ln(REER_t) + 0.126(3.276)Ln(REM_t) - 6.856(0.040)(Taver_t) + \mu_t$$

$$(3.4)$$

The long term cointegration vector suggests that ln(GDP) and remittances have a positive impact on the demand for imports in the long run, with the exception of ln(REER) and average tarrif, which have a negative impact.

$$Ln(IMP_t) = C + 0.083Ln(GDP_t) - 0.0068Ln(REER_t) + 0.415 \cdot Ln(REM_t) - 0.279 \cdot (Taver_t) + \mu_t$$

(3.5)

As expressed slightly above, the results show that in the long run an increase of 1% of real gross domestic product of Albania, will increase the demand for imports by 0.08%. The growth of the real effective exchange rate with 1% reduces the demand for imports by 0.0068%. An increase in remittances by 1% increases the demand for imports with 0.41% and 1 percentage point decrease in the average import tariff increases the demand for imports with 0.27%. While in the short time, arrangements some times are at the same direction with the long-term outcome and sometimes not.

The speed of return to equilibrium of gross domestic product and real effective exchange rate in the short terms are respectively 8.8% and about 3%. So, within a quarter is fixed only 8.8% of GDP imbalance and 3% of the real effective exchange rate (see Annex of the model). While the velocities for return to equilibrium of remittances and the average tariff in the short term are respectively 32% and about 4%. Table 3 outlines the details of diagnostic tests for normality, serial correlation and heteroskedasticity. The normality test of Jarque-Bera shows that residues have normal distribution. Evidences show that the residues, tested up to 12 time delays, have no serial correlation. Also, they do not suffer from heteroskedasticity problems.

Table 4: The results of diagnostic tests

The tests for normality, autocorrelation, heteroskedasticity			
	H_o	df	Prob
VEC Residual Normality Tests	residuals are multivariate normal	5	0.0748
VEC Residual Serial Correlation LM Tests	no serial correlation at lag order h	25	>0,05
VEC Residual Heteroskedasticity	Residuals are homoskedastic	330	0.7582

Tests

[Joint test for heteroskedasticity calculated in EViews 5.0; Skewness test for normality, LM Tests for serial autocorrelation of residuals]

If $p > 0.05$, we accept H_o

df – degrees of freedom;

The following table presents the summary results of the evaluation of the demand for imports in the long run (where besides the cointegration vector we consider even the speed of adjustment) during the period 1999-2011.

Table 5: Summary results of import demand estimation in the long run

Depended variable	Intercept	LnGDP	LnREER	LNREM	Taver	R^2	R^2 adj	F (stat	DW
LnIMP	4.919370	0.088	-0.0068	0.415	-0.279	0.7175	0.6104	6.6978	1.962

The results show that all variables have regular signs: that means that they are all consistent about what the theory says.

The equation has a good explanatory power, with an $R^2 = 0.7175$ and Adj $R^2 = 0.6104$. Similarly, the F statistics reinforces the strong influence of the explanatory variables in the model. Durbin Watson test statistics, with the value of 1.962435, indicates that the model has not autokorrelacion problems. This finding suggests that aggregate demand for imports is a positive function of all the explanatory variables in the model, with the exception of the real effective exchange rate and the average fee. Also, it can be said that the variation of aggregate demand for imports in the case of Albania, is directly influenced by factors such as gross domestic product, remittances and trade liberalization regime. Regarding on the course and outcome of the real effective exchange rate, it can be said that it is consistent with the theoretical view, for an inverse relation between the latter one and the demand for imports. At the same time, the results show that the demand for imports reacts relatively well to changes in real GDP and remittances, even more so tightly against average tariff rate (trade liberalization), as well as less to changes in the real effective exchange rate. Regarding to real GDP, estimated results show a positive correlation with the demand for imports. This shows that economic developments in

Albania, during these 10 years, have not been successful in replacing imports with domestic production, or perhaps such initiatives lacked, while imports have been increased by increasing revenues.

About foreign policy, in general we can say that those policies which aim to depreciation of the nominal effective exchange rate will affect the reduction of flow of foreign products. But, in Albanian economic nature is difficult for this conclusion to find its place. Dependence on a high degree of Albanian economy from imports (as a result of the inability of production structures to fulfill domestic demand, even for those products which can be produced in the country) does not give hope for an elastic demand curve for imports. The emphasized price inelasticitety of this curve (represented by the very low coefficient before the variable REER) and high weight that he occupies in trade relations suggests a very negative impact on its trade balance. Moreover, the main products of consumer basket are imported products. Consequently, the rise in prices of imported goods expressed in domestic currency would also imply an increase in the general price level in our country, associated with deterioration of the trade balance. From the correlation table (Annex 4, -0231) can been seen that correlative link between the exchange rate and import is very weak. So, can we conclude that foreign policy can hardly be effective in such conditions, especially in the short term (the long term parameter β_2, according to cointegration vector is 0.24, while in the short 0.02).

Regarding the impact of remittances on the demand for imports, according to the results of this model, it is clear that the relationship is positive, with an elasticity greater than zero but less than one (β_3 =0.12 in the long term). It is already known the role of remittances in Albania in the financing of the current account deficit. During the transition period, especially during the past decade, remittances have financed more than half of imports. Remittances are mainly used for imported consumer goods, for services and for buying or building homes. Let us not forget that a good part of their entering is done through informal and undeclared channels. Only a small portion is saved or invested in businesses, primarily in the agricultural sector. Precisely, the latter one is the proper way how remittances should intervene in the economy. The impact of remittances would be worth if they would fund most of the demand for capital goods and raw materials than the demand for consumer goods. In order to avoid their impact only on financing the import of goods, particularly those for consumption,

remittances should be seen and should interfere as development instruments, such as investment funds, even if in the forms of relatively small initiatives. Normally, all these claims require additional structural reforms, improvement of the business climate, creating more reliability and incentives. In recent years, remittance flows have decreased significantly compared to previous years. This fact creates incentives for accelerated efforts to exploit the potential of remittances as soon as possible. However because that remittance flows in the medium and long run period are expected to come narrowing, this way of financing imports does not seem to be a lasting and sustainable one.

Regarding to the impact of the average tariff on import demand elasticities we can argue that that the elasticity that measures this relationship is clearly too high, compared with elasticties of other model parameters (β_4 = 6.8). This clearly indicates that the process of trade liberalization has significantly increased demand for imports, or better has more open entry way to import goods into the country. For an economy like ours, with weak potential in domestic production, the presence of excess in imports creates obstacles and conflicts with efforts to substitute imports and increase competitiveness. Normally, it is impossible to pretend to inhibit this move, inducing barriers to imports. Moreover, increasing barriers to imports has very limited space due to the deep integration processes in the region and beyond, the principles of which are totally in contradiction with these protectionism barriers. For more before recommending the restriction of imports, we will have to see this effect in the importation of capital goods and raw materials. Restricting imports on such goods will definitely be reflected in the productivity of firms that import these goods. Also, keep in mind that the importation of raw materials for processing provides positive effects on employment and value added growth in the value chain. Moreover, the structure of such imports helps in identifying new forms of investment from domestic producers. In such conditions, the import of capital goods and raw material should be seen positively, as this kind of import may help in the development of domestic production structures, thereby creating positive opportunities to substitute imports.

Conclusions

Comparing the theoretical criteria, especially those of the evaluation of the demand for imports in the case of Albania, it is concluded that the demand for imports is more sensitive to changes in national income (GDP), remittances and still more to tariff liberalization regime. Strategies for efficient restructuring of the economy should clearly identify the categories, the import of which should not be limited but encouraging, such as capital goods or raw materials. Importing raw materials for processing provides positive effects on employment, and the addition of value added in the value chain. Moreover, this kind of import may help in the development of domestic production structures, thereby creating positive opportunities to replace imports.

References

[1] ACIT (Albanian Center for International Trade). (2007). Annual Report. Retrieved from http://www.acit-al.org/index.php?option=

[2] Bank of Albania, Annual Report, 2012

[3] Bertola, Giuseppe and Faini, Riccardo (1991), "Import demand and non-tariff

[4] Bobirca, A. & Miclaus, P. G.. (2007). "A multilevel comparative analyses to international services trade competitiveness—The case of Rumania and Bulgaria". International Journal of Humanities and Social Sciences, 1(1).

[5] Carone, G. (1996) "Modeling the U.S. Demand for Import Through Cointegration and Error Correction", Journal of Policy Modeling, 18(1), pp 1-28.

[6] Clarida, R. (1991) "Co-integration, Aggregate Consumption, and the Demand for Imports", Columbia University.

[7] Clarida, R. (1996) "Consumption, Import Prices, and the Demand for Imported Consumer Durables: A Structural Economic Investigation", The Review of Economic and Statistics,78(3).

[8] Goce Petreski, Olivera Kostoska (2009), "Modeling the determinants of exports and imports: Assessment of the Macedonian competitive performances".

[9] Gujarati, 2002, "Basic Econometrics", Eight Edition, McGraw-Hill Ltd "International Economics, theory and policy", seventh edition, Paul R.Krugman, Maurice Obstfeld

[10] INSTAT, Annual Report, 2012

[11] Madeley, J. and Solagral, 2001, The Impact of Trade Liberalisation on Food Security int he South, CIDSE Background Paper, CIDSE, Brussels

[12] Marion Jansen & Roberta *Piermartini, 2005.* "The Impact of Mode 4 Liberalization on Bilateral Trade Flows," Working Papers id:290, esocialsciences.com.

[13] Marquez, Jaime (1990), "Bilateral Trade Elasticities," The Review of Economics and Statistics, Vol. 72, No. 1 (Feb, 1990), fq. 70-77.

[14] Senhadji, A. S. (1997), "Time Series Estimation of Structural Import Demand Equations. A cross-Country Analysis", IMF Staff Papers , 45 (June), fq 236-258