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FACTORS AFFECTING CURRENT ACCOUNT IN THE REPUBLIC OF MACEDONIA

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Abstract

Large and persistent current account deficit in most of the transition countries have attracted considerable attention, especially with the beginning of the world economic crisis. Even though common trends in the transition countries are included in the analysis, the main focus of this paper is to provide theoretical and empirical study of the main determinants of the current account in Macedonia. Multiple regression model with ordinary least squares estimator (OLS) was used for the analyzed period January 2003 – September 2012. According to the results, the variables: budget deficit, foreign direct investments, ratio of export and import, new approved credits are statistically significant determinants of the current account in Macedonia. In general, these are structural factors that affect the external imbalance. Still, part of the deepening of current account deficit (especially during third quarter of 2007 and first quarter of 2009) appears to be related to external shocks: global increase of the prices and world economic crisis. These cyclical factors reversed alongside the economic recovery during 2009, and the current account deficit was back to its average levels. This indicates the urgent need for structural changes in the Macedonian economy in order to decrease its external vulnerability in the future.

Keywords: Current account, external imbalance, trade, foreign direct investments
JEL classification: F32, F37

Introduction

The balance of payments is a statistical statement that systematically summarizes the economic transactions of an economy with the rest of the world, for a specific time period. The standard components of both sets of accounts are the current account, the capital and financial account. The current account pertains to goods and services, income, and current transfers. The capital and financial account pertains to (i) capital transfers

and acquisition or disposal of non-produced, nonfinancial assets and (ii) financial assets and liabilities (IMF, 2009).

The current account can be expressed in two ways. First, as a difference between the value of exports and value of import of goods and services and second, as the difference between national savings (both public and private) and investments. According to the both definitions, if the deficit reflects an excess of imports over exports, it may be indicative of competitiveness problems. However, because the current account deficit also implies an excess of investments over savings, it could equally be pointing to a highly productive, growing economy. If the deficit reflects low savings rather than high investments, it could be caused by reckless fiscal policy or a consumption binge. Or the deficit can be temporary as a result of cyclical factors (changes in output growth, oil prices, and exchange rates) or permanent as a result of structural factors including cross-country differences in demographics, fiscal deficits, oil dependency and intensity, stage of economic development, financial market development, and institutional quality.

Since, the global external imbalances widened persistently over the last several years and have narrowed the current account deficit significantly as the economic crisis begins, in this paper we will focus on the changes in the current account balance of Republic of Macedonia. The country has permanent current account deficit and therefore we will discuss whether the deficit is "good" or "bad", and which factors had the most significant influence at a different point of time.

The paper is consisted of four sections. In the first section it is given an overview of the Macedonian current account (according to the first definition). Second section focuses on the sources of financing of the Macedonian current account, and gives comparison with the rest of the transition economies (according to the second definition). Third section, summaries the main factors that influence the current account, as the literature points out, in order to use them in the econometric analysis in the last chapter. According to the theory about the current account balance and results from the econometric analysis we draw the findings in the conclusion.

1. Overview of the Macedonian current account

The current account in Macedonia since its independence has permanent negative balance, and its average value in the period 1999-2012 was 5% of GDP. The deficit in the current account is explained by the large trade deficit, which in the same period amounted up to 22% of the GDP. In figure 1 we present the structure of the trade account.

Total foreign trade of Macedonia had its highest growth in 2000 (32.79%), in 2007 (29.03%) and in 2011 (23.53%) compared to one year previosely. Latest data since 2012 show that the total volume of trade fell to 3.29% compared with the 2011. This is a result of the higher fall in the export (6.89%), rather than import (0.93 %). Still, we can say that the Macedonian trade sector is recovering compared with 2009/2008 when the drop on annual level was 24.80%. The implication on the trade balance for 2012 is still negative -1855.7 million Euros or 24.9% of GDP.

The negative trade balance and its unpredictable values are understandable for countries like Macedonia as a small and open economy. Due to the high trade openness which in average values is around 93% for the analyzed period, it is understandable that the economy is under great influence of the external factors. Having in mind that the dominant trade partner of Macedonia is the EU (the external trade with countries from the EU is around 60% of the total trade of Macedonia), the stage of the economic cycle in the European Union countries has very important role in the performances of the foreign trade sector of Macedonia.

The most significant shock of the Macedonian economy happened at the fourth quarter of 2007 until the first quarter of 2009 due to the economic crisis. The annual data show that the highest negative value of the current account was achieved in 2008 in amount of 862.2 million Euros or -12.83% of the GDP (figure 2). The most important reason for high current account deficit is the negative trade balance in the same year of

29.7% of GDP. The external shock, such as the global economic crisis was the main factor for lower foreign demand (especially from the EU countries) and consequently lower export from Macedonia. Also in this period there was significant increase of the oil prices and prices of the raw materials and natural resources that influenced on the more expensive import. After the effect of the two external shocks the balance in the current account deficit stabilized and got back to average values (6.82% of GDP in 2009 and 2.03 of GDP in 2010).

The most important item in the current account is the private remittances that in the period 1999-2012 covered 77.06% of the trade deficit. The private remittances in Macedonia consist of: remittances from the immigrant by formal channels, cash transfers by informal channels shown as net redeemed money from the foreign exchange market that are canalized through the banking sector and rest of the remittances (mostly rents, pensions etc). The cash remittances are the most important component, consisting around 70% of the total private remittances in Macedonia. In lack of official data, the amount is calculated by the following indicators: net redeemed foreign exchange currencies that the official exchange offices are selling to the banks, and net foreign exchange currencies that the banks had repurchased from the exchange offices (Nacevska et al, 2006).

The private remittances are not stable source of current account financing and therefore sudden stop of remittances inflow is a great danger for the stability of the current account of Macedonia. That suggests that the country has competitiveness problems, or in other words it is not able to improve its export performances.

2. Financing of the deficit in current account in Macedonia

The current account can also be expressed as the difference between public and private savings and investments. The most important source of current account deficit financing is foreign direct investments (FDI). In this regard, a current account deficit that is financed by large FDI is more sustainable than a deficit financed by short-term "hot money" flows that may reverse if market conditions (Roubini and Wachtel, 1998). Also, significant source of financing are foreign loans from international financial institutions. Both of these sources are dominant at the transition economies in order to finance their current account deficit and stimulate economic growth.

There are similar movements in the current account of the transition economies. Basically all transition countries have been involved in their own catching-up processes which includes financing a huge amount of productive investments without endangering their external sustainability as far as their current account positions and external debt are concerned. In fact, these countries suffer from relatively low and even stagnant saving rates. Hence, to close the gap they need to turn to foreign savings which has generally induced the high and even growing current account deficits of the last decade (Aristovnik, 2006).

Still, there are significant differences in the level of the current account deficit, different reasons for the deficit creation and difference in the sources of financing. In the following we will elaborate three groups of countries that have similar characteristics of the current account. The first group consists of countries that have high rates of national savings and investments. In theory, high level of investments implies higher future growth by creating a larger productive capacity. At the same time, high saving and investment ratios at the same time can be an indicator for creditworthiness for the foreign investors. In the case of the first group of countries this argument is valid. These countries have sustainable and low current account deficit, below 4% of GDP. Slovenia has the best indicators from this group, with an average current account deficit of 0.9% of GDP (figure 3).

The second group consists of countries that have lower national savings than the first group, and the current account deficit is significantly higher, more than 6% of GDP (figure 3a). The selected countries are Hungary, Lithuania and Slovakia. Despite the similarities there are also some differences between them. While Hungary and Slovakia, have modest amount of national investments, in case of Lithuania together with

Estonia and Latvia the national investments are much higher, especially before the beginning of the economic crisis, prior 2008. In the last couple of years due to the cyclical movements caused by the recent economic crisis the national investments are generally lower, reflecting positively on the current account. In the case of the Baltic countries, the argument about the positive effects of higher investments on the current account is not valid. The reason for that is because investments were not allocated efficiently and were driven by political priorities. That not only caused economic slowdown but also influenced the external positions of these countries.

The third group of countries is characterized by the lowest level of savings of all three groups and relative low level of investments. Therefore, the countries have moderate current account deficits. Bulgaria has average current account deficit of 6.13% of GDP, with record negative value achieved in 2007 of 25.2% of GDP. The main driving source of high current account deficit is the high level of investments in the years before the crisis. Also in Romania, the deficit is mainly result of high investments, and in Macedonia the negative balance in current account is due to the low level of national savings (figure 3b).

The relative indicator for Macedonia about the investments is relatively stable in the period 1992-2012 and in average it is 20.31% of GDP (National Bank of the Republic of Macedonia database). The indicator shows its continuous increase. The deficit in the current account of Macedonia is mainly financed by the foreign direct investments and loans. The foreign direct investments as the dominant source of financing are 4.08% of the GDP in the period of 2003-2012, and cover around 80% of the deficit in the same period.[100] The long term obligations to foreign creditors are around 3.75% of GDP in the same analyzed period.

On the other hand, the national saving rate in GDP in the period 1992-2012 is 15.54%. Low national savings is mainly caused by reckless fiscal policy. The public spending increased significantly during the last couple of years and did not produce significant economic growth. In 2008 the budget deficit was 0.9% of national GDP and in 2012 increased to 3.9 % of GDP, and 4.1% in 2013 (National Bank of the Republic of Macedonia database).

3. Variables that influence the current account

In the following text we will elaborate the factors that influence the current account. There can be structural factors including cross-country differences in demographics, fiscal deficits, oil dependency and intensity, stage of economic development, financial market development, and institutional quality and so on, and also cyclical factors including changes in output growth, oil prices, and exchange rates, and may be expected to reverse alongside the economic recovery (Cheung et al, 2013). Also, the factors can be divided between internal economic determinants that influence the current account, such as: economic growth, relative GDP per capita, budget balance, financial intermediation, demographical factors, and also external economic determinants: foreign direct investments, trade openness, appreciation of the real effective exchange rate, terms of trade, net foreign exchange assets and oil intensity/dependency (Unevska, Jovanovik, 2011). According to the scientific review, we will elaborate the most important factors, that determine the value of the current accout (annex: table 4):

a.) *Economic growth* – The economic growth, achieved whether by increased investments, human capital or factor productivity can lead to sustainability of the current account deficit, without increasing the external indebtedness, because the country is capable of servicing its external obligations (Ghosh and Ramakrishanan, 2012). As we already mentioned the deficit can stimulate higher economic growth and development. Very important requirement is developed domestic financial system that can allocate foreign capital efficiently. Therefore, net effect of the economic growth is unpredictable, even though in most of the studies is negative.

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25) The year of 2006 is not calculated since the value of FDI coverage of the current account is significantly higher than the average. The reason for that is that current account deficit in that year was significantly low- 23. 4 million Euros.

b.) *Budget balance* – an increase in the public deficit can lower national savings in the absence of a complete Ricardian private savings offset. In situation of Ricardian equilibrium, private savings totally replace the public savings and there can be no relation between the budget balance and the current account (Cheung et al, 2013). Still, most empirical studies have found a positive relationship between fiscal and current account balances (Chinn and Ito, 2008; Gruber and Kamin, 2007). The effects depend on how the government expenditures are allocated, and how large is the effect on the saving rate (higher decrease in the saving rate, decrease the current account balance in absence of any offsetting effects). Also, it can depend on the degree of development of the financial markets. In countries with underdeveloped financial markets we would expect to find stronger positive links between budget and current account balance.

c.) *Level of financial intermediation* – the financial intermediation is measured by the following variables: private loans to GDP and M2 in GDP. Therefore, if the financial system is more developed it can generate higher savings that will influence positively the current account balance (Unevska, Jovanovik, 2011). Also, countries that have undeveloped financial system can export their excess capital to countries with more developed financial system, that also influence lowering of national savings. Still, empirical results are rather mixed. Chinn and Prasad (2003) find that the ratio M2 to GDP is positively associated with current account balances, while Gruber and Kamin (2007) find that the ratio of private loans to GDP is insignificant.

d.) *Demographics* – The life-cycle hypothesis suggests that among younger population the levels of savings are very low, and the borrowings are at higher level, during the productive years the saving rates are increasing and at retirement age the savings are again lowering. That would mean that countries with high proportions of young and elderly population will have lower private savings that would reflex negatively on the current account balance (Cheung et al, 2013; Gruber and Kamin, 2007).

e.) *Foreign direct investments* – We already mentioned that financing the current account deficit by FDI is considered to be much sustainable source of financing than portfolio investments. Still in the early 1990s - a period of large capital inflows to many developing economies, the economies initially did not benefit significantly from this trend. In 1990-91, there were actually net capital outflows and a net loss of official reserves in the transition economies. But, this poor performance of the capital account was a reflection of the serious domestic and external macroeconomic problems faced by the transition economies. On the contrary, FDI are considered to be source of new knowledge, transfer of technology, new employments and also higher investments. The inflow of FDI has negative effect on the current account.

f.) *Trade openness* – The degree of openness can be defined as its ratios of export to GDP. The higher the degree of openness, the higher the level of the country to attract investments, which, as we mentioned, influences negatively on the current account. But, the trade openness can make the country more vulnerable to external shocks. The vulnerability is increased if the county has a narrow export base or depends on imported raw materials. Therefore the trade openness can influence in some cases positiveuy and in some just opposite on the current account.

g.) *The degree of exchange rate flexibility (exchange rate policy)* – The exchange rate policy in response to external shocks can affect the current account balance, depending on how well the policy is used. Nevertheless, the level of real exchange rate is an important factor of sustainability of the current account. The appreciation of the real exchange rate can happen as a result of higher productivity level in the tradable sector, increased net inflows or positive terms of trade shocks. The appreciation decreases the price competitiveness and therefore widens the current account deficit. In case of depreciation the situation is reverse.

h.) *Terms of trade* – this indicator is calculated as a ratio between the export and import prices. If the terms of trade are in favor of the import prices, then the terms of trade are worsening. That will influence on the decrease on the temporary income compare to the permanent income, it can lower the

savings. This is so called Harberger – Laursen Metzler effect. Therefore the worsening of the terms of trade indicated higher deficit in the current account (Aristovnik, 2007).

i.) *Net foreign assets to GDP ratio* – the level of official foreign reserves directly influence its net investment income and thereby current account balance. Most of the authors find positive relation of the net foreign assets positions on current account balances, in particular for debtor countries (Chinn and Pasad, 2003). For example, several emerging Asian countries have built large foreign exchange reserves since the Asian crisis of the late 1990s, in order to stimulate export led growth by limiting real exchange rate appreciation. These developments have led China and other Asian economies to become the major net creditors in the world market, and to have substantial current account surplus. On the other hand higher level of official foreign reserves can give countries safety in sustaining deficit in the current account for longer period of time.

j.) *Oil intensity/dependency* – the effects if oil price fluctuations on current account balances depend on whether a country is a net exporter or a net importer of oil. If the country is oil exporter the higher prices have positive influence on the current account (higher value of export), and if the country is net importer higher prices have negative influence. With the sharp rise in oil prices since 2003, the issue of large current account surplus experienced by oil-exporting countries has become more prominent in policy discussions, especially their role in the widening global imbalances (Blanchard and Milesi-Ferretti, 2009).

Among the other important factors that influence the current account balance can be listed:

    - Political instability and policy uncertainty (Miles-Ferretti and Razin, 1996) have influence on the macroeconomic policy decisions and also affect capital flows. If there is increase in the capital inflows, the current account deficit is increasing and vice versa;

    - Rate of economic growth in developed countries (Chinn and Prasad, 2003) – higher rate of economic growth in developed countries (EU-15, OECD countries) leads to a decrease of the deficit in the current account in transition countries. This is due to the fact that higher economic growth in developed countries creates increased foreign demand for transition economies that stimulated their export performances.

4. Modeling the current account of the Republic of Macedonia

4.1. Methodology and data

Multiple regression model with ordinary least squares estimator (OLS) was used in order to identify the determinants of the current account of the Republic of Macedonia. In this model the dependent variable is the current account (represented as % from the gross domestic product) or $Current\ account_i$, while the vector of the independent variables is consisted of four variables: the budget balance (as % of the GDP) or $Budget\ balance_i$, foreign direct investments (as % of the GDP) or FDI_i, percent ratio of export and import prices or $\frac{Exp}{Impi}$ and new approved credits (as % of the GDP) or $Credits_i$. The analyzed period is January 2003 – September 2012 and monthly data are used. Total of 129 observations were used in the analysis.
The model would have the following form:

$$Current\ account_i = \beta_0 + \beta_1\ Budget\ balance_i + \beta_2\ FDI_i + \beta_3 \frac{Exp}{Impi} + \beta_4\ Credits_i + \varepsilon_i$$

Initially, five more variables were taken into consideration: degree of openness, monetary aggregate M2 (as % of GDP), loans (as % of GDP), net foreign exchange assets (as % of GDP) and real effective exchange rate (2006=100). After preliminary analysis, these variables were removed from the model, due to two reasons.

The first reason is the fact that these variables are not stationary. Two unit root tests were performed and the results are presented in table 1.

Table 1. Unit root (stationarity) tests

	Variables		p - values l (0)		p - values l (0)	
		ADF test	Phillps-Perron test	ADF test	Phillps-Perron test	
1	Current account	CA	0.0000	0.0000	-	-
2	Budget balance	BB	0.0000	0.0000	-	-
3	Foreign direct investments	FDI	0.0000	0.0000	-	-
4	Degree of openness	OPEN	0.2864	0.0015	0.0000	0.0000
5	Export/Import prices	EXIM	0.0000	0.0000	-	-
6	Monetary aggregate M2	M2	0.262	0.2548	0.0000	0.0000
7	Loans	LOANS	0.2099	0.2265	0.0899	0
8	New approved credits	CRED	0.1408	0.0221	0.0000	0.0000
9	Net foreign exchange assets	NFEA	0.3705	0.3761	0.0000	0.0000
10	Real effective exchange rate	EXCH	0.0804	0.2147	0.0000	0.0000

Source: Authors calculations

According to the p - values of the Augmented Dickey - Fuller test and Philips - Perron test, only four variables are stationary of order 0. The other six variables become stationary when they are differenced of order 1.

The methodology requires that if the variables are all integrated of order 1, co-integration test should be performed and if confirmed, error correction model should be used for estimation of the parameters. If regression with non stationary variables is performed, there is a risk of spurious regression. Variables can be transformed and become stationary, and regression can be performed with differenced variables, yet according to Gujarati (2003) "one should be extremely cautious in reading too much in the regression results based on $l(0)$ variables". In the present situation, as presented in table 1, the dependent variable and some of the independent variables are stationary, and some of the variables need to be differenced to be stationary. In this case there are few solutions: 1) perform OLS regression where only the stationary variables shall be used, 2) perform OLS regression with all variables – stationary variables and differenced variables with risk of losing some of the important information with differencing and 3) use autoregressive distributed lags method. To keep the analysis straightforward the author chooses to perform OLS regression only with stationary variables.

Second reason why the other six variables are excluded can be deducted from the correlation matrix. This reason also supports the choice of OLS regression model for the data due to the multicolinearity problem.

Table 2. Correlation matrix

	CA	BB	FDI	OPEN	EXIM	M2	LOANS	CRED	NFEA	EXCH
CA	1.00	0.18	-0.29	-0.04	-0.59	0.04	0.14	-0.24	-0.20	-0.09
BB	0.18	1.00	0.09	-0.02	-0.18	-0.21	-0.27	0.27	0.18	0.15
FDI	-0.29	0.09	1.00	0.17	-0.07	0.05	-0.14	0.42	0.41	-0.05
OPEN	-0.04	-0.02	0.17	1.00	-0.23	0.73	0.57	0.34	0.33	-0.67
EXIM	-0.59	-0.18	-0.07	-0.23	1.00	-0.07	0.00	-0.13	-0.34	0.20
M2	0.04	-0.21	0.05	0.73	-0.07	1.00	0.90	0.20	0.13	-0.87
LOANS	0.14	-0.27	-0.14	0.57	0.00	0.90	1.00	-0.17	-0.20	-0.85
CRED	-0.24	0.27	0.42	0.34	-0.13	0.20	-0.17	1.00	0.60	-0.08
NFEA	-0.20	0.18	0.41	0.33	-0.34	0.13	-0.20	0.60	1.00	-0.19
EXCH	-0.09	0.15	-0.05	-0.67	0.20	-0.87	-0.85	-0.08	-0.19	1.00

Source: Authors calculations

Among other assumptions of the linear regression there is also the assumption of no multi-colinearity. It means that the independent variables or regressors are not correlated amongst each other. According to Gujarati (2003) if multi-colinearity is perfect the regression coefficients of the X variables are indeterminate and their standard errors are infinite. If multi-colinearity is less than perfect, the regression coefficients, although determinate, posses large standard errors (in relation to the coefficients themselves), which means the coefficients cannot be estimated with great precision or accuracy. Therefore, is good to have high correlation coefficient between the dependent and the independent variable, yet is not right to have high correlation within the independent variable.

According to the correlation matrix, the dependent variable current account shares the highest inverse correlation with the ratio of export and import prices (-0.59). Then there is foreign direct investments with correlation of -0.29 and budget balance with low correlation of 0.18. These variables are all stationary and they will be included in the model.

The variable new approved credits is not stationary, yet has correlation coefficient of -0.24. It is not very high, yet it will be taken into account when creating different models to see if it contributes to model improvement.

Variables that are indicative to multi-colinearity are: monetary aggregate M2, loans, exchange rate, openness and even net foreign exchange assets. Some of them have the correlation coefficient of 0.9. Due to this reason, and the fact that they are not stationary, they will be excluded from the regression model. If they are included in the analysis there is a possibility that the estimated coefficients might not be very accurate.

Several models were estimated and the results are presented in table 3. According to the results, the variables foreign direct investments, ratio of export and import, new approved credits are statistically significant determinants of the current account at 0.01 significance level. The budget balance proves to be a significant determinant at 0.05 significance level, except in model 3, so a little prudency is acceptable in this conclusion.

The main problem of the models is that some of the assumptions of OLS regression are not fulfilled, which implies caution while analyzing the results. The assumption of homoskedasticity is satisfied for all models. The null hypothesis of homoskedasticity is accepted at high p-value. Also the Ramsey RESET stability test (null hypothesis: the correct specification is linear versus the alternative hypothesis: the correct specification is non-linear) accepts the null hypothesis for all models, which contributes to the stability of the model. Yet, the assumptions of serial correlation and normality are not satisfied. The null hypothesis for no serial correlation of the residuals is rejected in all models, while the null hypothesis for normal residuals is accepted only

form models 1, 2 and 3. According to Gujarati (2003) in some situations we continue to use the OLS model despite the present correlation of the residuals. Once again, the results must be interpreted with caution.

Table 3. Estimated parameters from different models

	1	2	3	4	5
Budget balance	0.31 **	0.35 **	0.17	0.28 **	
Foreign direct investments		-0.73 ***	-0.80 ***	-0.54 ***	-0.56 ***
Export/Import prices			-0.74 ***	-0.76 ***	-0.79 ***
New approved credits				-5.27 ***	-4.42 ***
Constant	-6.03	-2.97	-49.86	-49.07	-51.86
Adjusted R^2	0.03	0.13	0.47	0.53	0.50
Jarque-Bera normality test (p)	0.29	0.38	0.05	0.00	0.02
Serial correlation LM test (p)	0.00	0.00	0.00	0.00	0.00
BPG heteroskedasticity test (p)	0.88	0.42	0.27	0.36	0.26
Ramsey RESET test (p)	0.17	0.93	0.35	0.37	0.18

* 0,1; ** 0,05; *** 0,01

Source: Authors calculations

It is good that the signs of the estimated parameters remain the same in all models. model 4 can be chosen as the most appropriate one, according to the adjusted determination coefficient and significance of the estimated parameters.

In this contexts we compare the result of our empirical study to the similar study that was made for the sustainability of the current account in Macedonia by Unevska and Jovanovik, 2011. Even though they use autoregressive distributed lags method, the results are quite comparable to ours.

Our model says that the budget balance is a significant determinant of the current account and the sign is positive. When the budget balance increases for 1% of the GDP, the current account also increases for 0.28% of the GDP. In the study of Unevska and Jovanovik, the relation between this two variables is stronger (1.66%) and it is also positive. The main reason for the positive correlation is the underdeveloped financial market in Macedonia, meaning that the private sector is mainly financed by banking loans. In situation when the government is increasing the budget deficit it causes the effect of "crowing out" of the private sector - higher taxes, high interest rates and therefore lower investments in the future for the private sector. That directly affects private savings which leads to deficit in the current account.

Also, the foreign direct investments have statistically significant influence on the current account. The sign of the estimated parameter is negative. This coefficient can be interpreted in following manner: when the foreign direct investments increase per 1% of GDP, the current account decreases per 0.54% of the GDP. In the study of Unevska, Jovanovik (2011), the sign is also negative and have value of 0.4%. This finding is expected since we already discuss in section 2, that the main source of financing of the current account deficit in the transitional countries is FDI.

The ratio of export and import prices determinates the current account with negative sign on the estimated parameter. If the ratio of export and import prices increases by 1%, the current account decreases by 0.76% of the GDP. This indicator had statistically insignificant coefficient in the study of Unevska, Jovanovik (2011),

and therefore was not a subject of analysis. In our finding we also got opposite sign from what we expected. That can be a result of not using absolute values for export and import prices in the econometric model. If we do, we would get positive correlation with the dependent variable which is more rational. Positive correlation would mean that if the terms of trade are in favor of the import prices (decreased price competitiveness), than it will influence negative on the current account.

Finally, the new approved credits represent a variable that was not stationary and included only to improve the model, yet this variable seems to be statistically significant and determinates the current account. According to the model, when the new approved credits increase by 1% of the GDP, the current decreases by 5.27% of the GDP. Again, since this variable was not stationary, this conclusion is taken with caution. The negative relation is also confirmed in the study of Unevska, Jovanovic (2011), but with coefficient of 0.54%. The relationship is logical, since new approved credits show improvement in the financial intermediation that increases investments and influence the current account balance negatively.

Conclusion

Since proclaiming independence, the current account in Macedonia has had permanent negative balance, and its average value in the period 1999-2012 has been 5% of GDP. The deficit in the current account is explained by the large trade deficit, which in the same period amounted to 22% of the GDP. A large part of the trade deficit (77.06%) is covered by private remittances, which indicates competitiveness problems of the economy. Like in most of the transition countries, in Macedonia the current account deficit is financed by foreign direct investments and foreign loans as well. Still, the level of foreign direct investments is the lowest in the region. On the other hand, the national savings remains low as a result of reckless fiscal policy.

In this research multiple regression model with ordinary least squares estimator (OLS) was used in order to identify the determinants of the current account of the Republic of Macedonia for the period January 2003 – September 2012. The empirical result shows that the budget balance, foreign direct investments, ratio of export/import prices and new improved loans are the main determinants of the current account balance.

The highest value of the current account deficit is achieved during 2008 (more precise during the fourth quarter of 2007 until the end of the first quarter of 2009) due to the external shocks of the Macedonian economy - increase of the global prices and the world economic recession. Since 2009, the current account balance return to its average values. Also, in the domestic economy during 2008 was register low level of savings and increased investments due to high level of consumption, mainly domestic.

The situation indicates the structural problems in the Macedonian external sector: high import dependence, high concentration of the export products that have high price elasticity and high reliance on private remittances as a dominant source for financing the current account deficit. These are all sources of external imbalance of the Macedonian economy and also a threat to its sustainable recovery.

Common sense suggests that if a country uses its borrowed foreign funds on spending that yields no long-term productive gains, then its ability to repay, its basic solvency might come into question. Therefore, whether a country should run a current account deficit (borrow more) depends on the extent of its foreign liabilities and on whether the borrowing will finance investments with a higher marginal product than the interest rate (or rate of return) the country has to pay on its foreign liabilities.

Therefore, the structural measures should be oriented towards higher savings, both private and public that would generate productive investments. In addition the macroeconomic measures should create positive climate for attracting investments not only foreign, but also domestic investments. Supply chains should be established between the domestic producers and foreign investors in order to decrease the import dependence of raw and semi-final materials. Lowering the import dependence is also possible if the domestic producers instead of exporting raw materials and agricultural products, export final products on the foreign markets. If the country wants to sustain and increase market shares, specialization in sectors with higher added value and use of domestic inputs will be necessary.

Annex:

Table 4. Description of the used variables, their influence on the current account and data source

Variable	Theoretically expected sign	Description	Data source
Economic growth	+/-	Real growth rates of GDP	State Statistical Office of R. Macedonia
Budget balance	+	Budget balance of the central government, as % of GDP	Ministry of finance of R. Macedonia
Level of financial intermediation	+/-		
- Private loans to GDP	+/-	Private loans, as % of GDP	Private loans - National Bank of the R. Macedonia, GDP - State Statistical Office of R. Macedonia
- New approved loans to GDP	+/-	New approved loans (difference between two succeed period)	Private loans - National Bank of the R. Macedonia, GDP - State Statistical Office of R. Macedonia
- M2 in GDP	+/-	Money base M2, as % of GDP	M2 - National Bank of the R. Macedonia, GDP - State Statistical Office of R. Macedonia
Foreign direct investments	-	FDI, net, as % of GDP	FDI - National Bank of the R. Macedonia, GDP - State Statistical Office of R. Macedonia
Trade openness	+/-	Sum of total export and import to GDP	State Statistical Office of R. Macedonia
Appreciation of the real exchange rate	-	Real effective exchange rate, 2003=00	National Bank of the R. Macedonia
Terms of trade	+	Ratio between export and import prices	National Bank of the R. Macedonia
Net foreign assets to GDP ratio	+/-	Net foreign assets of the total banking sector, as % of GDP	Net foreign assets - National Bank of the R. Macedonia, GDP - State Statistical Office of R. Macedonia

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