Romanian current account sustainability after the adhesion to European Union

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ROMANIAN CURRENT ACCOUNT SUSTAINABILITY
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Abstract: After the fall of communist regime the Romanian current account passed from exceeds to substantial and persistent deficits. This evolution raised concerns over the country external sustainability. Since 2007, in the Romanian foreign trade dramatic changes occurred, being induced by the adhesion to European Union and by the global crisis. The adhesion to European Union stimulated both exports and imports. However, because the exports growth was much less consistent than the imports growth, the deficits of current account widened. Beginning with the end of 2008, the national economy was affected by the global crisis which discouraged both exports and imports. This time, because the decline of exports was less sharp than the decline of imports, the deficits of the Romanian current account narrowed. However, the country external sustainability is still an actual problem in the circumstances of the new challenges of a changing international context. In this paper we investigate the sustainability of the Romanian current account from January 2007 to January 2013. In our analysis we employ monthly values of the main components of the current account. We also use unit root and cointegration tests that allow taking into consideration the structural breaks. Our results suggest the deficits of the current account are not sustainable.

Keywords: Romanian Current Account, Sustainability, Adhesion to European Union

JEL Classification: F10, F15, F40

1. Introduction

The recent threats to the global stability reignited the debates over the current account deficits. From a macroeconomic equilibrium perspective it is useful a distinction between temporary and persistent foreign trade deficits. As Wu et al. (1996) stressed, temporary deficits had no significant impact on the macroeconomic stability [24]. Instead, Baharumshah et al. (2003) highlighted the negative effects of persistent external deficits which led to the interest rates increase and to the external debt accumulation [6]. In an analysis on the United States external deficits, Mann (2002) used the concept of the sustainability to describe a current account evolution in which "the external imbalance generates no economic forces that change its trajectory" [17]. Arize (2002) proposed a similar approach of the current account sustainability which occurred when external disequilibrium was corrected on long run [5]. In the last decades the analysis of the current account sustainability was performed, with different results, for several developed countries [12, 15, 17, 23]. Other studies revealed some particularities of the external deficits sustainability in the case of least developed countries [4, 8, 12, 18, 19, 20].

In this paper we examine the Romanian current account sustainability in the years that followed the adhesion to European Union (EU). In the last decades Romanian foreign trade experienced dramatic changes. In the early 1980s the economic policy of the Ceausescu regime was dominated by the objective of paying back the external debt. The imports were drastically cut while large sectors of industry were oriented to the exports. As a result, the significant foreign trade deficits were replaced by surpluses.

In the years that followed the fall of the Ceausescu regime, in December 1989, the difficulties of transition led to a severe decline of the exports, while the imports increased. In 1990s, the substantial current account deficits, which governments hardly managed to finance, were in part responsible for the drastic devaluation of the national currency. Since 2000, the recovery of the national economy stimulated the exports, but the significant external deficits were still a threat for the macroeconomic stability.

In January 2007, Romania's adhesion to EU brought dramatic changes in its foreign trade. Both imports and exports substantially rose. However, the import increase was more consistent than the exports one, causing a significant widening of the current account deficits. That tendency was reversed, since the end of 2008, by the effects of the global crisis which determined a substantial decline of both exports and imports. This time the decline of exports was less sharp than those of imports, causing a narrowing of the external deficits. However, in the actual volatile economic context the sustainability of the Romanian trade balance is still an actual problem.

We analyze the sustainability of the Romanian current account mainly by testing the cointegration between its credit and debit components. The rest of this paper is organized as it follows. The second part describes the methodology employed to investigate the Romanian current account sustainability, the third part presents the results and the fourth part concludes.

2. Data and Methodology

In our investigation we employ monthly values of the credit and debit Romanian current account transactions from January 2007 to January 2013 as provided by the National Bank of Romania. The evolution of the two variables suggests the presence of structural breaks (Figure 1).
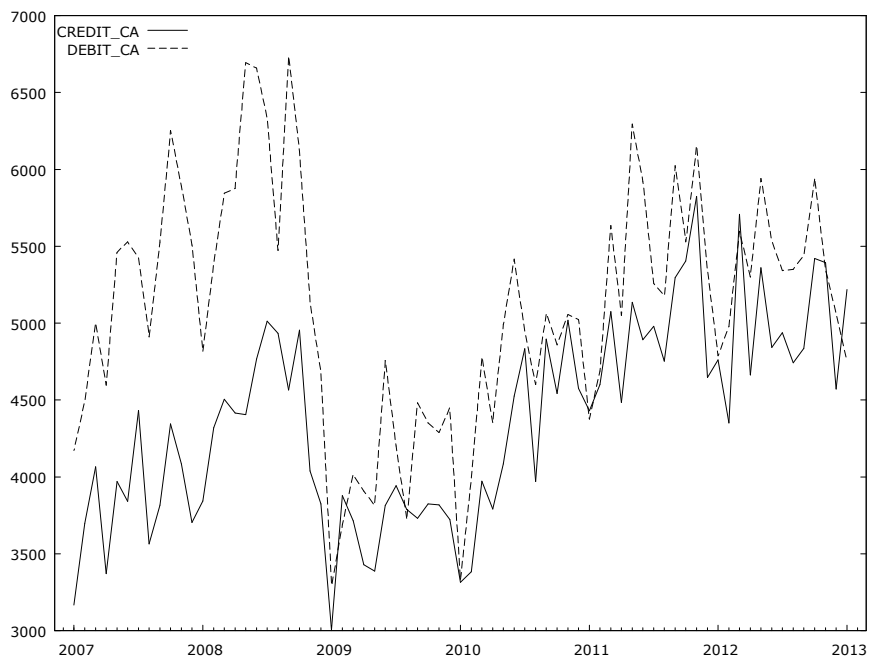

Figure 1: Evolution of the Romanian current account credit and debit transactions between January 2007 and January 2013

We analyze the sustainability of the   Romanian current account in the

framework provided by Husted (1992) and Arize (2002) [5, 12]. The relationship between the main components of a current account is described by the equation:

$$M_t = a + bX_t + \varepsilon_t \qquad (1)$$

where, M_t represents the natural logarithms of the current account debit transactions, X_t represents the natural logarithms of the current account credit transactions, a is the intercept coefficient, b is the slope coefficient and ε_t is the error term.

The current account will be considered as sustainable if two conditions are fulfilled:

M_t and X_t are cointegrated;

The slope coefficient b is statistically equal to 1.

We start the analysis of M_t and X_t cointegration by investigating the stationarity of the two variables in levels and in their first differences (d_M_t and d_X_t). For this purpose we employ the classical Augment Dickey Fuller (1979) test and the unit root test proposed by Saikkonen and Lütkepohl (2002) and Lanne et al. (2002) which allowed taking into account the structural breaks [7, 16, 21].

Based on the graphical representation of the four time series we chose as deterministic terms the intercepts and trends for the level values and only intercepts for the first differences (Figure 2).
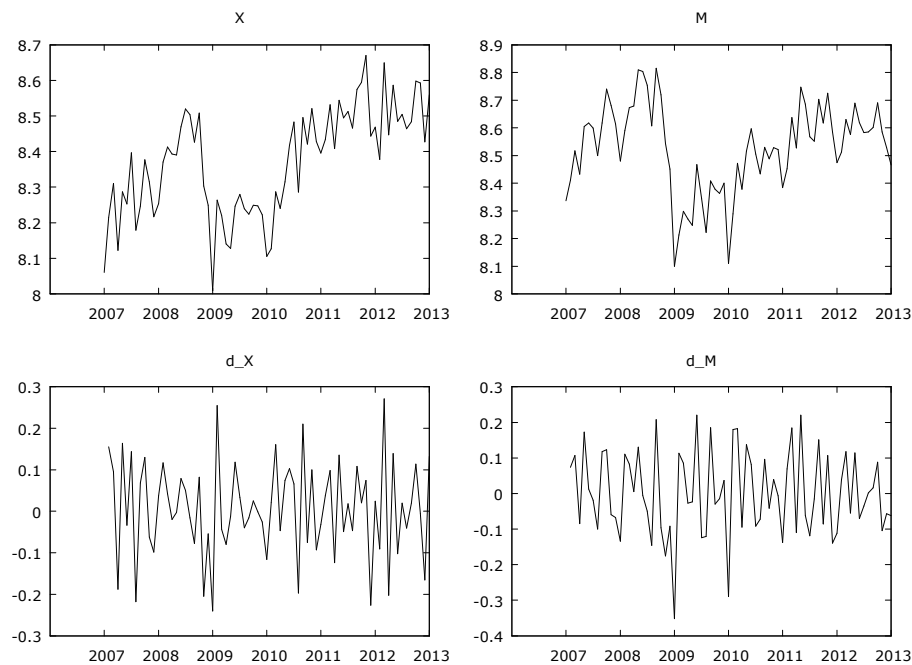

Figure 2: Evolution of the four variables

We use four information criteria to select the number of lags: Akaike Info Criterion (AIC), Final Prediction Error (FPE), Hannan Quinn Criterion (HQC) and Schwartz Criterion (SIC) [1, 2, 3, 10, 22].

If M_t and X_t are first order integrated we analyze their cointegration using the Johansen (1991) procedure [13]. Along with the classic variant we use a more

recent one, which allows taking into consideration the structural breaks [14].

Finally, in a Vector Autoregression framework we employ the Granger (2000) causality tests to investigate the interactions between d_M_t and d_X_t [9].

3. Empirical Results

The results of Augmented Dickey Fuller tests suggest that M_t and X_t are

stationary only in their first differences (Table 1).

Table 1 Results of the Augmented Dickey Fuller unit root tests

Variable	Deterministic terms	Lagged Differences	Test statistics
X	Time trend and intercept	AIC, FPE, HQC:4	-2.2748
		SC:1	-2.9156
M	Time trend and intercept	AIC, FPE, HQC, SC:2	-2.8962
d_X	Intercept	AIC:3	-4.6591***
		FPE, HQC:2	-7.7776***
		SC:1	-8.0726***
d_M	Intercept	AIC, FPE, HQC, SC:1	-8.1990***

*** indicate that results are significant at 1% level of significance

Similar results were provided by unit root tests with structural breaks (Table 2). We conclude that M_t and X_t are first order integrated.

Table 2 Results of the unit root tests with structural breaks

Variable	Deterministic terms	Break Date	Lagged Differences	Test statistics
X	Time trend and intercept	2009 M2	AIC, FPE, HQC:4	-2.2229
		2009 M2	SC:1	-2.2006
M	Time trend and intercept	2009 M4	AIC, FPE, HQC, SC:2	-2.2039
d_X	Intercept	2009 M1	AIC, FPE:3	-3.5298***
		2009 M1	HQC:2	-3.9981***
		2009 M1	SC:1	-4.8831***
d_M	Intercept	2009 M3	AIC, FPE, HQC, SC:1	-6.0704***

*** indicate that results are significant at 1% level of significance

The results of Johansen procedure indicate there is no cointegration between M_t and X_t (Table 3).

Table 3 Results of Johansen Trace Test

r	LR Test statistics	Critical Values		
		90%	95%	99%
Without structural break				
0	13.25	17.98	20.16	24.69
1	4.61	7.60	9.14	12.53
With a structural break for 2009 M1				
0	25.73	26.14	28.72	33.99
1	6.59	12.25	14.11	18.05

Table 4 presents the results of Granger causality tests. We find a unidirectional causality from d_M_t and d_X_t.

Table 4 Results of Granger causality tests

H0	F statistic	p-value	Causal inference
H0: "d_M" do not Granger-cause "d_X"	2.8579	0.0398	"d_M" do Granger-cause "d_X"
H0: "d_X" do not Granger-cause "d_M"	0.8532	0.4674	"d_X" do not Granger-cause "d_M"

4. Conclusions

Although the Romanian current account narrowed in the last year, mainly because of the global crisis, it remained unsustainable. Our investigation found Granger causality from the current account debit to the credit transactions that could be explained by the fact that Romanian exports largely incorporate imported intermediate goods and raw materials. However, the Johansen procedures failed to find a cointegration relationship between the two variables.

For a long term analysis of the Romanian current account sustainability we have to take into account the post crisis challenges. In the new context, Romanian low cost exports could lose their attractiveness. Moreover, the increase of the domestic impact could stimulate the imports. Facing the perspectives of the widening current account deficits Romanian authorities should take into consideration a mix of exchange rates policy, stimulants for the foreign direct investment and direct support for the exporters.

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