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Are current account deficits sustainable in EAC countries? Evidence from threshold cointegration

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Abstract

The study examines the long-run relationship between exports and imports in East African Community (EAC) member states in order to test for the sustainability of current account deficits. The study adopts the threshold cointegration test advanced by Enders and Siklos (2001). The findings suggest that imports and exports are cointegrated for Burundi, Kenya and Uganda with a cointegrating coefficient which is less than 1, whereas for Rwanda and Tanzania they are not cointegrated. This would imply that the current account deficits are weakly sustainable for Burundi, Kenya and Uganda, but unsustainable for Rwanda and Tanzania. Since use of panel data has a number of advantages over pure time-series data, panel cointegration test suggested by Pedroni (1999, 2004) was also applied and the results indicate that exports and imports are cointegrated for the EAC countries as a panel with a cointegrating coefficient statistically equal to 1. However, caution is needed in interpreting panel data results, especially when heterogeneity dimension among the cross-sections is not taken into account. The findings of this paper highlight the need for EAC countries to put in place policies to reduce their current account deficits; for Rwanda and Tanzania, to regain their external stability and for the rest of the EAC countries, to reinforce the sustainability of current account deficits which was found to be weak.

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1. Introduction

Following Husted (1992), a number of studies have analyzed the cointegration relationship between imports and exports in order to test for the sustainability of the current account deficits (see for instance, Marial Yol 2009, Mukhtar and Rasheed 2010, and Tiwari 2012). As Husted (1992) pointed out, if imports and exports are cointegrated, this would mean that the current account deficits problem is just a short-run phenomenon and that in the long-run they are sustainable (Narayan and Narayan 2005). The existence of a cointegration relationship between imports and exports would also imply that the country is not in violation of its international budget constraint (Mukhtar and Rasheed 2010).

However, when testing for cointegration between imports and exports, most of studies use linear cointegration tests of Engle and Granger (1987), Johansen (1990) and Pesaran et al. (2001) all of which assume symmetric adjustment towards the long-run equilibrium. According to Balke and Fomby (1997), because of the presence of transaction costs and asymmetries in price transmission, there is no reason to expect a symmetric adjustment. They therefore initiated the idea of threshold cointegration where the adjustment towards the long-run equilibrium occurs only when the deviation from the equilibrium exceeds some threshold (Stigler 2012). Following Balke and Fomby (1997), Enders and Granger (1998) and Enders and Siklos (2001) employed threshold Autoregressive (TAR) and Momentum threshold Autoregressive (M-TAR) models to develop a threshold cointegration test which allows for asymmetric adjustment towards the long-run equilibrium.

The objective of this paper is to establish the relationship between imports and exports using the threshold cointegration test advanced by Enders and Siklos (2001) to test the sustainability of the current account deficits of the East African Community (EAC) Countries.

The rest of the paper is organized as follows; Section 2 presents the conceptual framework. Section 3 presents data and methodology. Section 4 presents and discusses the results and section 5 gives the concluding remarks.

2. Conceptual Framework

Testing for the cointegration relationship between imports and exports as a way of checking the sustainability of current account deficits was first proposed by Hakkio and Rush (1991) and Husted (1992).

They proposed a conceptual framework in which a representative individual of a small open economy faces the following budget constraint:

$$C_0 = Y_0 + B_0 - I_0 - (1+r_0)B_{t-1} \quad (1)$$

where Y_0, C_0 and I_0 stand for current income, consumption and Investment respectively. B_0 is the current borrowing, $(1+r_0)B_{t-1}$ is the initial debt size and r_0 is the world interest rate.

Solving for B_0 in equation (1) yields expression (2) where the trade balance $(X-MM)_t = Y_t - C_t - I_t$ and ϖ_t is the discounting factor:

$$B_0 = \sum_{t=1}^{\infty} \varpi_t (X - MM)_t + \lim_{n\to\infty} \varpi_n B_n \quad (2)$$

To get a testable equation, Husted (1992) makes the following assumption where $W_t = MM_t + (r_t - r)B_{t-1}$ and MM_t is expenditure on imports:

$$X_t + B_t = W_t + (1+r)B_{t-1} \quad (3)$$

From equation (3), solving for $(MM_t + r_t B_{t-1})$ yields:

$$MM_t + r_t B_{t-1} = X_t + \sum_{j=0}^{\infty} \lambda^{j-1}[\Delta X_{t+j} - \Delta W_{t+j}] + \lim_{j\to\infty} \lambda^{t+j} B_{t+j} \quad (4)$$

Husted (1992) assumes further that expenditure on imports and exports are non-stationary processes which can be written as:

$$\mathrm{W}_t = \theta_1 + W_{t-1} + \mu_{1t} \quad (5)$$

$$X_t = \theta_2 + X_{t-1} + \mu_{2t} \quad (6)$$

Substituting equations (5) and (6) in equation (4) and rearranging gives:

$$X_t = [(1+r^2)/r](\theta_1 - \theta_2) + (MM_t + r_t B_{t-1}) - \lim_{j\to\infty} j^{t+j} B_{t+j} + \sum \lambda^{j-1}(\mu_{1t} - \mu_{2t}) \quad (7)$$

By letting $\beta = [(1+r^2)/r](\theta_1 - \theta_2)$ and $u_t = \sum \lambda^{j-1}(\mu_{1t} - \mu_{2t})$, equation (7) can be written as:

$$X_t = \beta + (MM_t + r_t B_{t-1}) - \lim_{j\to\infty} j^{t+j} B_{t+j} + u_t \quad (8)$$

Finally, equation (8) can be written as follows where $M_t = MM_t + r_t B_{t-1}$ and assuming that $\lim_{j\to\infty} j^{t+j} B_{t+j} = 0$:

$$X_t = \beta + \delta M_t + u_t \quad (9)$$

According to Hakkio and Rush (1991) and Husted (1992), the current account deficits are sustainable if exports X_t, and imports M_t, are cointegrated. It has been argued however that for the current account deficits to be strongly sustainable, the sufficient condition should be that $\delta = 1$ and in case $0 < \delta < 1$, they are only weakly sustainable (see for example, Herzer and Nowak-Lehmann 2005, Serdar 2008, Rahman 2011 and Tiwari 2012).

3. Data and Methodology

This study uses annual data on exports and imports (in logarithm) for the East African Community (EAC) Countries, Burundi, Kenya, Rwanda, Uganda and Tanzania covering the period 1960-2012. Data were collected from UNCTAD database available online. Figure 1 presents the evolution of exports and imports (in logarithm) for the EAC Countries for the period

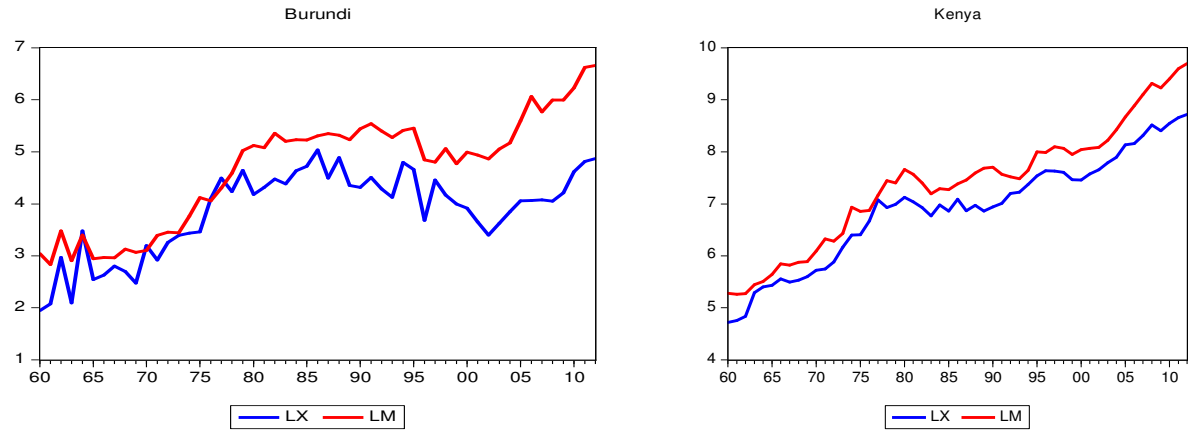
of study. The graph seems to indicate that imports and exports have a co-movement between them, giving an impression that there might be a cointegration relationship between them in the countries under study.

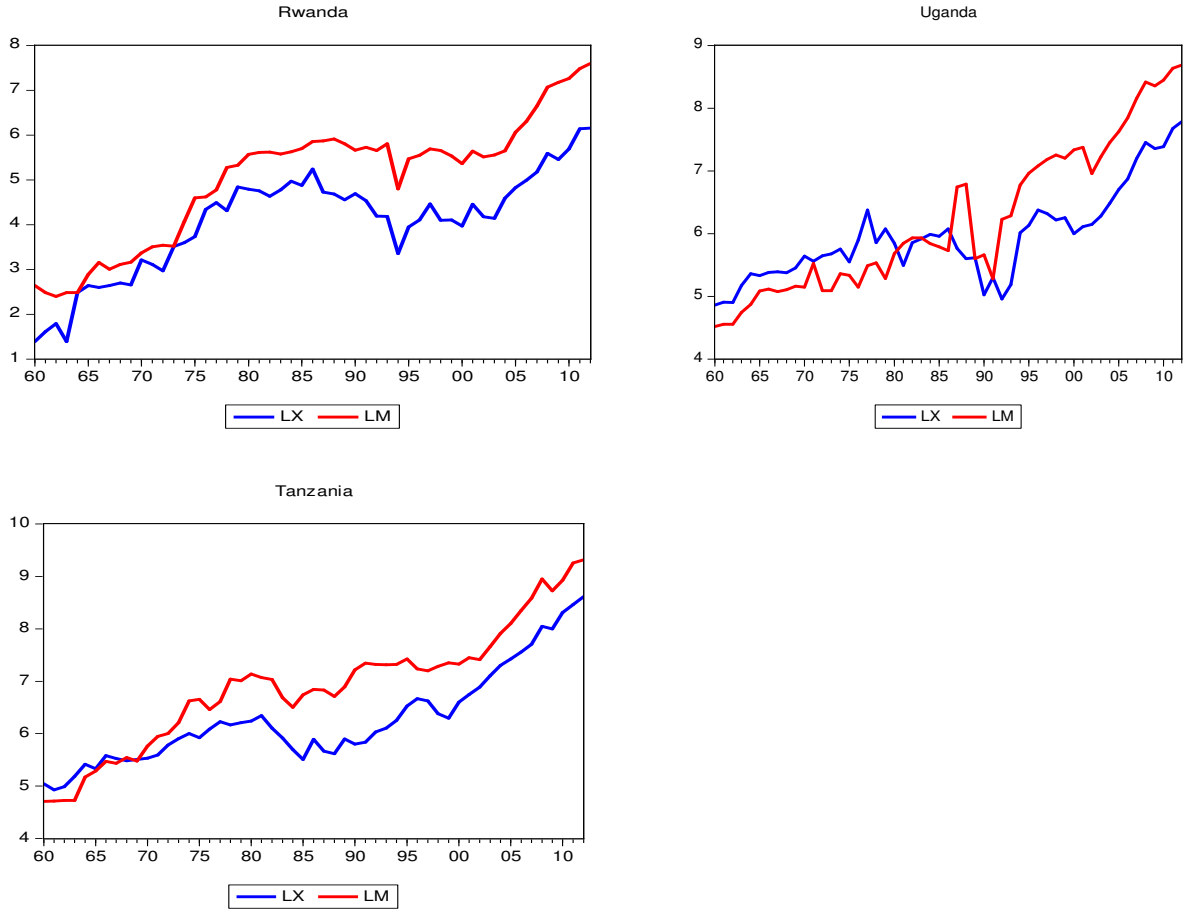
Augmented Dickey-Fuller (1981) and Phillips and Perron (1988) tests are used to test for the order of integration of exports and imports in EAC Countries. Unit root test results are presented in table 1 and suggest that exports and imports (in logs) for all the EAC countries are non-stationary processes becoming stationary after one differentiation. Since imports and exports are both integrated of order 1 for all the countries under study, we can test for cointegration relationship between them.

Threshold cointegration technique initiated by Enders and Granger (1998) and Enders and Siklos (2001) is presented hereafter, method which is employed in this study to test for cointegration between imports and exports in EAC Countries.

Extending Engle & Granger's (1987) linear cointegration test, Enders and Granger (1998) and Enders and Siklos (2001) developed a threshold cointegration test where negative and positive deviations from the long-run equilibrium are not corrected in the same way, that is, in which the adjustment towards the long-run equilibrium is asymmetric (Stigler 2012).

Figure 1: Trend of Exports and Imports (in logs) in EAC Countries for the period 1960-2012 (LX is the logarithm of exports and LM is the logarithm of imports).





Let x_t and m_t be the logarithm of exports and imports respectively. Using TAR and M-TAR models, Enders and Siklos (2001) propose the following steps to test for threshold cointegration.

In the first step, the following long-run equilibrium relationship is estimated:

$$x_t = \alpha_1 + \alpha_2 m_t + u_t \tag{10}$$

In the next step, the following equation[1] is estimated using Ordinary Least Squares (OLS):

$$\Delta u_t = I_t \rho_1 u_{t-1} + (1 - I_t)\rho_2 u_{t-1} + \sum_{i=1}^{k} \alpha_i \Delta u_{t-i} + \eta_t \tag{11}$$

where u_t is the residuals series from equation (10) and I_t is the Heaviside indicator function such that:

$$I_t = \begin{cases} 1 \; if \; u_{t-1} \geq \lambda \\ 0 \; if \; u_{t-1} < \lambda \end{cases} for \; TAR \; model \tag{12}$$

[1] Engle & Granger (1987) equation is a particular case where ρ_1 and ρ_2 are equal to zero.

$$I_t = \begin{cases} 1 \; if \; \Delta u_{t-1} \geq \lambda \\ 0 \; if \; \Delta u_{t-1} < \lambda \end{cases} for \text{ M-TAR } model \tag{13}$$

where λ is the threshold value to be estimated.

Equations (11) and (12) together form the threshold autoregressive model (TAR) and equations (11) and (13) form the momentum threshold autoregressive model (M-TAR). The threshold value is selected using Chan's (1993) method where the optimum value is such that the residuals sum of squares is at a minimum (Sun 2011).

From equation (11), to test for threshold cointegration, Enders and Granger (1998) and Enders and Siklos (2001) propose to test the following hypothesis of no threshold cointegration:

$$H0: \rho_1 = \rho_2 = 0$$

The test statistic used is known as Φ statistic and the critical values are from Enders and Siklos (2001).

Table 1: Augmented Dickey Fuller and Phillips-Perron Unit Root Tests Results

	Burundi		Kenya		Rwanda		Uganda		Tanzania	
	ADF	PP	ADF	PP	ADF	PP	ADF	PP	ADF	PP
x_t	-2.20	-2.46	-2.22	-2.31	-2.08	-1.95	-1.52	-1.67	-0.17	-0.35
	[0.20]	[0.12]	[0.46]	[0.42]	[0.54]	[0.61]	[0.80]	[0.74]	[0.99]	[0.98]
Δx_t	-12.7♠	-12.8♠	-7.43♠	-7.43♠	-9.06♠	-9.07♠	-7.66♠	-7.64♠	-6.48♠	-6.55♠
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00	[0.00]	[0.00]	[0.00]
m_t	-0.54	-0.36	-1.48	-1.73	-1.45	-1.46	-3.02	-3.04	-1.44	-1.44
	[0.87]	[0.90]	[0.82]	[0.72]	[0.83]	[0.82]	[0.13]	[0.12]	[0.83]	[0.83]
Δm_t	-9.79♠	-9.39♠	-6.28♠	-6.26♠	-7.83♠	-7.81♠	-8.01♠	-10.41♠	-6.30♠	-6.26♠
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]

Notes: x_t and m_t are exports and imports (in logarithm) respectively and Δ is the first difference operator. Between brackets [.] are MacKinnon (1996) one-sided p-values for ADF and PP tests. ♠ denotes rejection of the null hypothesis of unit root at 1%. For ADF, the lag length is selected out of a maximum of 7 lags using Schwarz Information Criterion (SIC). A lag of 0 is selected by SIC for all the variables and for all the countries. For PP test, the bandwidth used was selected using Bartlett kernel.

4. Empirical Results and Discussion

Apart from unit root tests which are conducted in Eviews 6, the rest of the empirical analysis is done in R software, version 3.01. Specifically, threshold cointegration tests are conducted using "apt" package (version 1.3) developed by Sun (2013).

Tables 2 and 3 present the results of threshold cointegration test between imports and exports for the EAC countries, namely, Burundi, Kenya, Rwanda, Uganda and Tanzania, using TAR and M-TAR models.

The optimal threshold value λ minimizing the residuals sums of squares was estimated using Chan's (1993) method. For the TAR model for instance the estimated threshold value is $\lambda^* = -0.387$ for Burundi, $\lambda^* = 0.093$ for Kenya, $\lambda^* = -0.346$ for Rwanda, $\lambda^* = -0.207$ for Uganda and $\lambda^* = -0.383$ for Tanzania. For the M-TAR model, the estimated threshold value for

each country is reported in table 3. The results in tables 2 and 3 indicate also that Ljung-Box test fails to reject the null hypothesis of no serial correlation at 5 % level of significance.

Using Akaike Information Criterion (AIC), the number of lags k to include in the TAR and M-TAR models was also selected. For the M-TAR model for instance, out of a maximum of 7 lags, AIC selects a lag of 0 for Kenya and Tanzania, a lag of 1 for Burundi and Uganda and 2 for Rwanda. It should be noted that for the TAR model, AIC selects also the same lags except for Uganda.

We took into account the estimated threshold value and optimal lag length selected to test for threshold cointegration between imports and exports in the EAC Countries.

Threshold cointegration tests results based on the TAR model are reported in table 2. They indicate that the Φ test statistic rejects the null hypothesis of no threshold cointegration $(H0:\rho_1=\rho_2=0)$ at 1% level of significance for Kenya and Uganda, at 5% level for Burundi and at 10% level of significance for Rwanda. However, for Tanzania, the results from TAR model suggest that the null hypothesis of no threshold cointegration cannot be rejected even at the level of 10%.

The estimated TAR model for Burundi[2] can be written as follows with t-statistic in parentheses:

$$\Delta\hat{u}_t = \underset{(-1.561)}{-0.243}\, I_t\hat{u}_{t-1} \underset{(-2.255)}{-0.400}\, (1-I_t)\hat{u}_{t-1} \underset{(-2.959)}{-0.386}\, \Delta\hat{u}_{t-1} + \eta_t$$

$$\text{where } I_t = \begin{cases} 1 \; if \;\; u_{t-1} \geq -0.347 \\ 0 \; if \;\; u_{t-1} < -0.347 \end{cases}$$

Based on the M-TAR model, the results of threshold cointegration are reported in table 3. They show that the null hypothesis of no threshold cointegration can be rejected at 1% level of significance for Burundi and Kenya and at 5% level for Uganda. For Rwanda and Tanzania however, Φ test statistic fails to reject the null hypothesis of no threshold cointegration even at 10% level.

The estimated M-TAR model for Burundi can be written as follows:

$$\Delta\hat{u}_t = \underset{(-1.561)}{-0.243}\, I_t\hat{u}_{t-1} \underset{(-2.255)}{-0.400}\, (1-I_t)\hat{u}_{t-1} \underset{(-2.959)}{-0.386}\, \Delta\hat{u}_{t-1} + \eta_t$$

$$\text{where } I_t = \begin{cases} 1 \; if \;\; \Delta u_{t-1} \geq -0.296 \\ 0 \; if \;\; \Delta u_{t-1} < -0.296 \end{cases}$$

Together, table 2 and 3 indicate that the null hypothesis of no threshold cointegration is rejected for Burundi, Kenya and Uganda at 5% level for both TAR and M-TAR models. However, for

[2] For space requirements, we are only reporting the estimated TAR and M-TAR models for Burundi, the rest can be obtained upon request

Rwanda and Tanzania, the null hypothesis of no cointegration could not be rejected at 5% level for both TAR and M-TAR model.

The results suggest therefore that imports and exports are cointegrated with asymmetric adjustment for Burundi, Kenya and Uganda. This would imply that the current account deficits in those countries are sustainable. However, we need to check whether they are not only weakly sustainable.

Table 2: Threshold Cointegration Test Results with the TAR model

Country	ρ_1	ρ_2	Φ^* statistic	λ	AIC	LB (4)	LB(8)	Lags
Burundi	-0.243	-0.400**	3.566**	-0.347	28.932	0.250	0.194	1
	[0.125]	[0.029]	[0.036]					
Kenya	-0.555***	-0.288*	7.913***	0.093	-72.42	0.836	0.704	0
	[0.001]	[0.054]	[0.001]					
Rwanda	-0.133	-2.248**	2.724*	-0.346	6.111	0.893	0.293	2
	[0.379]	[0.029]	[0.076]					
Uganda	-0.240	-0.461***	5.675***	-0.207	18.179	0.348	0.291	0
	[0.149]	[0.004]	[0.006]					
Tanzania	-0.069	-0.146	1.340	-0.383	-34.89	0.518	0.574	0
	[0.481]	[0.147]	[0.271]					

Notes: λ is the estimated threshold value. AIC stands for Akaike Information Criterion. Between the brackets [.] are the p-values. *, ** and *** denote rejection of the null hypothesis respectively at 10%, 5% and 1% level. Φ is the threshold cointegration test statistic. The values presented for Ljung-Box (LB) test are the p-values. The lag length used was selected using AIC

Table 3: Threshold Cointegration Test Results with the M-TAR model

Country	ρ_1	ρ_2	Φ^* statistic	λ	AIC	LB (4)	LB(8)	Lags
Burundi	-0.236*	-0.93***	5.525***	-0.296	25.43	0.103	0.063	1
	[0.059]	[0.008]	[0.007]					
Kenya	-0.730***	-0.170	11.327***	0.059	-75.42	0.667	0.806	0
	[0.000]	[0.26]	[0.000]					
Rwanda	-0.231	-0.260	1.842	-0.067	7.854	0.969	0.480	2
	[0.123]	[0.212]	[0.170]					
Uganda	-0.359**	-0.012	3.391**	-0.186	17.59	0.786	0.860	1
	[0.013]	[0.959]	[0.042]					
Tanzania	0.028	-0.179**	2.127	0.038	-35.18	0.805	0.688	0
	[0.807]	[0.046]	[0.130]					

Notes: λ is the estimated threshold value. AIC stands for Akaike Information Criterion. Between the brackets [.] are the p-values. *, ** and *** denote rejection of the null hypothesis respectively at 10%, 5% and 1% level. Φ is the threshold cointegration test statistic. The values presented for Ljung-Box (LB) test are the p-values. The lag length used was selected using AIC.

In order to check whether the sufficient condition is satisfied for strong sustainability of the current account deficits, that is, whether $\alpha_2 = 1$ in equation (10), we estimated equation 10 by OLS and used the Wald restriction coefficient test to check if α_2 is statistically equal to 1. The

results are reported in table 4 and they indicate that the estimated coefficient α_2 is statistically significant at 1% level of significance but statistically different from 1 for all the countries considered. This suggests that although imports and exports were found to be cointegrated for Burundi, Kenya and Uganda, it seems that the current account deficits are only weakly sustainable since it is found that the cointegrating coefficient α_2 is not equal to 1 but less than 1, $0 < \alpha_2 < 1$.

Table 4: The estimated long-run equilibrium relationship between exports and imports

Country	α_1	α_2	$F[H0:\alpha_2 = 1]$
Burundi	0.857*** (3.336)	0.641*** (11.989)	143.74*** [0.000]
Kenya	0.390*** (2.905)	0.882*** (49.058)	2406.71*** [0.000]
Uganda	2.732*** (10.487)	0.517*** (12.588)	158.47*** [0.000]

Notes: The estimated long-run equilibrium equation is $x_t = \alpha_1 + \alpha_2 m_t + u_t$, where x_t and m_t are the logarithm of exports and imports respectively. $F[H0:\alpha_2 = 1]$ is the Wald coefficient restriction test statistic. Between the parentheses (.) are the t-values and between the brackets [.] are the p-values. *** indicates rejection of the null hypothesis at 1% level of significance.

Following the test for sustainability of the current account deficits in EAC countries done on a country by country basis using threshold cointegration test of Enders and Siklos (2001), we further complement the analysis by using Pedroni (1999, 2004) panel cointegration test to examine the sustainability of current account deficits in EAC Countries as a panel. Prior to that, panel unit root tests (IPS and PESCADF) are conducted to detect the order of integration of the variables. Results in Table 5 suggest that exports and imports (logarithm) are non-stationary processes, integrated of order one, I (1).

The results in Table 6 show that both panel statistics and group mean panel statistics suggest that the null hypothesis of no cointegration can be rejected regardless of the deterministic components included (intercept or trend). There exists therefore a cointegration relationship between exports and imports in EAC countries, which would suggest that current account deficits are sustainable in EAC countries as a panel. Since exports and imports are found to be cointegrated, panel dynamic OLS (DOLS) is used to estimate the long-run equation. The estimation results are presented in Table 6 and the χ^2 restriction test fails to reject the null hypothesis that the cointegrating coefficient is equal to 1. This suggests that current account deficits are strongly sustainable in EAC countries as a panel.

However, although the use of panel data has a number of advantages over pure time-series data, caution is needed when interpreting panel data results, especially when heterogeneity dimension among the cross-sections is not taken into account (Hurlin and Dumitrescu, 2012).

Table 5: Panel Unit Root Test Results

Series	IPS-test W[t-bar]		PESCADF-test Z[t-bar]	
	Level	First Difference	Level	First Difference
x_t	-0.018	-22.787***	1.912	-9.579***
	[0.493]	[0.000]	[0.972]	[0.000]
m_t	-1.619	-11.036***	-0.195	-0.566***
	[0.053]	[0.000]	[0.423]	[0.000]

Notes: IPS stands for Im, Pesaran and Shin and PESCADF is a unit root test in heterogeneous panels with cross-sectional dependence, suggested by Pesaran (2007). A lag of 1 was used for both IPS and PESCADF tests. IPS and PESCADF tests were run using STATA commands "ipshin" and "pescadf", available in statistical software components archive. (***) indicates rejection of the null hypothesis of panel unit root at 1% level. x_t and m_t denote logarithm of exports and imports respectively.

Table 6: Pedroni (1999, 2004) Panel Cointegration Test Results

Statistics	I	II	III
Panel Cointegration Statistics			
Panel v-statistic	3.468*** (0.000)	1.368* (0.085)	3.540*** (0.000)
Panel rho-statistic	-5.572*** (0.000)	-4.914*** (0.000)	-4.446*** (0.000)
Panel PP-statistic	-4.269*** (0.000)	-5.306*** (0.000)	-3.267*** (0.000)
Panel ADF-statistic	-1.847** (0.032)	-3.632*** (0.000)	-1.514* (0.064)
Group Mean Panel Cointegration Statistics			
Group rho-statistic	-3.937*** (0.000)	-3.350*** (0.000)	-3.718*** (0.000)
Group PP-statistic	-3.813*** (0.000)	-4.459*** (0.000)	-4.074*** (0.000)
Group ADF-statistic	-1.713** (0.043)	-2.692*** (0.003)	-1.966** (0.031)
Panel Dynamic OLS estimation			
	Coefficient	z-stat	χ^2
Panel DOLS	0.906*** (0.000)	17.01	3.06 (0.080)

Notes: Pedroni (2004) panel cointegration test is conducted in Eviews 6 and Panel Dynamic OLS estimation is done using a STATA code "xtdolshm" available is the statistical software components. "I" indicates a model with deterministic intercept but no trend, "II", a model with deterministic intercept and trend, and "III", a model with no deterministic intercept or trend. *, ** and *** indicate rejection of the null hypothesis of no cointegration. Between parentheses (.) are the p-values. χ^2 tests whether the cointegrating coefficient in the panel DOLS is equal to 1.

5. Concluding Remarks

This paper was intended to examine whether exports and imports are cointegrated for the East African Community (EAC) countries, namely, Burundi, Kenya, Rwanda, Uganda and Tanzania, in order to test for the sustainability of their current account deficits. Using TAR and M-TAR models, the study adopted threshold cointegration test advanced by Enders and Siklos (2001), allowing for asymmetric adjustment towards the long-run equilibrium.

The findings indicated that the null hypothesis of no threshold cointegration is rejected for Burundi, Kenya and Uganda at 5% level for both TAR and M-TAR models. However, for Rwanda and Tanzania, the null hypothesis of no cointegration could not be rejected for both TAR and M-TAR models. Imports and exports are therefore cointegrated for Burundi, Kenya

and Uganda with threshold adjustment, whereas for Rwanda and Tanzania, they are not cointegrated. However, the Wald restriction test on the cointegrating coefficient, α_2, rejects the null hypothesis that $\alpha_2 = 1$. The estimated cointegrating coefficient α_2 is found to be in the range of 0 and 1, that is, $0 < \alpha_2 < 1$. The current account deficits are therefore only weakly sustainable in Burundi, Kenya and Uganda and unsustainable in Rwanda and Tanzania.

Since the use of panel data has a number of merits over time-series data, panel cointegration test proposed by Pedroni (1999, 2004) was also applied to test for sustainability of current account deficits in EAC countries as a panel. The results from panel cointegration test showed that exports and imports are cointegrated and that the cointegrating coefficient is statistically equal to 1, which would imply that current account deficits are strongly sustainable in EAC countries as a panel. However, as Dumitrescu and Hurlin (2012) point out, caution is needed when interpreting panel data results, especially when heterogeneity dimension among the cross-sections is not taken into account.

In summary, the findings suggest that Rwanda and Tanzania are in violation of their international budget constraints and should therefore put in place policies to reduce their current account deficits in order to regain their external stability. For the other country members of EAC, Burundi, Kenya and Uganda, where sustainability was found to be weak, they should also implement policies to reinforce the sustainability of the current account deficits.

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