The East African Community Monetary Union: Ready or Not?

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31st January 2018

Outline

- **Background**

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I. Background

- Monetary union means that two or more countries have one currency or different currencies having a fixed mutual exchange rate.

- Monetary union has benefits but also it has costs.

- The main benefits of monetary unions are related to the elimination of the transaction costs of exchanging currencies and the elimination of exchange-rate volatility.

- The main costs are those attributable to the inability of national authorities to use country-specific monetary and exchange rate policies to facilitate macroeconomic adjustments to shocks.

I. Background, ctd

- In general, convergence criteria (rooted in OCA theory) are used to assess the readiness of countries for a monetary union

- The basic point of the OCA theory is that countries or regions exposed to symmetric shocks, or possessing mechanisms for the absorption of asymmetric shocks, may find it optimal to adopt a common currency.

I. Background, ctd

- East African Community (EAC) country members have signed the protocol establishing East African Community Monetary Union (EAMU) in November 2013. This will lead to the use of a common currency by 2024.

II. Objective of the research

- Are EAC country members ready for monetary union? This research question has guided this research.

- To achieve the objective: We assess if EAC countries are affected by similar demand and supply shocks.

III. Literature review

- Empirical research on the feasibility of monetary unions differ in terms of empirical methodologies, countries considered and sample periods, which makes the results from studies difficult to compare.

- Various methodologies have been applied, including:
  - analysis of correlations of real growth rates, exchange rates and terms-of trade;
  - correlations of shocks identified using statistical transformation of data or a Structural Vector Autoregression (SVAR) model; and
  - a cointegration VAR approach.

IV. Methodology

- We use a bivariate vector-autoregressive (VAR) model using the log of real GDP and inflation, adopting the identification scheme due to Blanchard and Quah (1989) to separate supply and demand shocks in EAC countries.

- In this scheme, permanent shocks are interpreted as aggregate supply shocks, and transitory shocks as aggregate demand shocks.

IV. Methodology, ctd

- The model is set up as follows:

Let $y_t = (Dy_{1t}, y_{2t})'$ (1)

- Where y_{1t} is the log of real GDP and Dy_{1t} hence is the growth rate of real output, and y_{2t} is the inflation rate, which is calculated as the change in the logarithm of the consumer price index.

IV. Methodology, ctd

- In matrix form equation (1) can be expanded as follows:

$$\begin{bmatrix} \Delta y_{1t} \\ y_{2t} \end{bmatrix} = \begin{bmatrix} \mu_1 \\ \mu_2 \end{bmatrix} + \begin{bmatrix} \theta^{(0)}_{11} & \theta^{(0)}_{12} \\ \theta^{(0)}_{21} & \theta^{(0)}_{22} \end{bmatrix} \begin{bmatrix} \varepsilon_{dt} \\ \varepsilon_{st} \end{bmatrix} + \dots$$

IV. Methodology, ctd

$$_{11}^{(s)} = \left[\frac{\partial \Delta y_{1t+s}}{\partial \varepsilon_{dt}} \right]; \theta_{12}^{(s)} = \left[\frac{\partial \Delta y_{1t+s}}{\partial \varepsilon_{st}} \right]; \theta_{21}^{(s)} = \left[\frac{\partial y_{2t+s}}{\partial \varepsilon_{dt}} \right]; \theta_{22}^{(s)} = \left[\frac{\partial y_{2t+s}}{\partial \varepsilon_{st}} \right]$$

$$\theta_{11}(1) = \sum_{s=0}^{\infty} \theta^{(s)}_{11} = 0$$

- The impulse response functions

V. Findings and discussions

- Demand shocks correlations are not statistically significant. In addition, the results indicate that the correlations are mostly positive, with a few exceptions.

		Burundi	Kenya	Uganda	Tanzania	Rwanda
Burundi	Correlation Coefficient	1.000				
Kenya	Correlation Coefficient	-0.02	1.00			
Uganda	Correlation Coefficient	0.17	0.10	1.00		
Tanzania	Correlation Coefficient	-0.01	0.17	0.06	1.00	
Rwanda	Correlation Coefficient	-0.13	-0.12	0.04	0.05	1.00

V. Findings and discussions, ctd

- Contrary to demand shocks, supply shocks correlations are positive and statistically significant .

		Burundi	Kenya	Uganda	Tanzania	Rwanda
Burundi	Correlation Coefficient	1.000				
Kenya	Correlation Coefficient	0.24*	1.000			
Uganda	Correlation Coefficient	0.19	0.39**	1.00		
Tanzania	Correlation Coefficient	0.17	0.40**	0.21	1.00	
Rwanda	Correlation Coefficient	0.37**	0.22*	0.17	0.31**	1.00

- *. Correlation is significant at the 0.05 level (2-tailed).

- **. Correlation is significant at the 0.01 level (2-tailed).

VI. Conclusion and policy recommendations

- Correlations of demand shocks are **very low** and **not significant**,

- Correlations of supply shocks **though not high are significant** between Kenya and the rest of countries and between Rwanda and Burundi as well as between Rwanda and Tanzania.

- Significant supply shocks pose **greater problems** for a monetary union because demand shocks can be expected to become more similar with a monetary policy, while supply shocks cannot.

VI. Conclusion and policy recommendations, ctd

- It may be advisable for the region to:
  - further harmonize policies and increase intraregional trade before adopting a common currency;
  - continue direct efforts to designing and establishing adequate mechanisms that can help member countries adjust to future shocks once the monetary union is established;

- Establish regional institutions to enforce convergence.

THANK YOU