

Do Political institutions and financial development promote the effect of Remittances on Economic growth?

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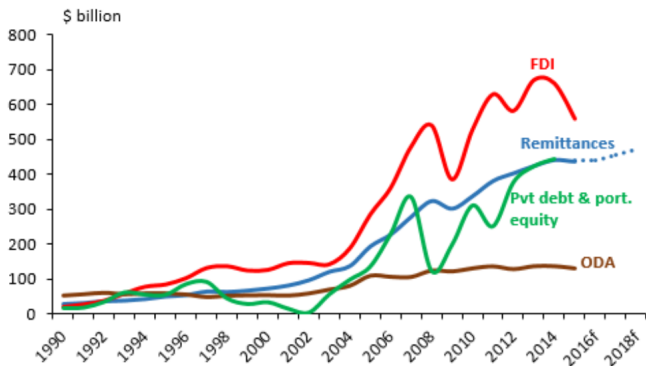
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Introduction (1)

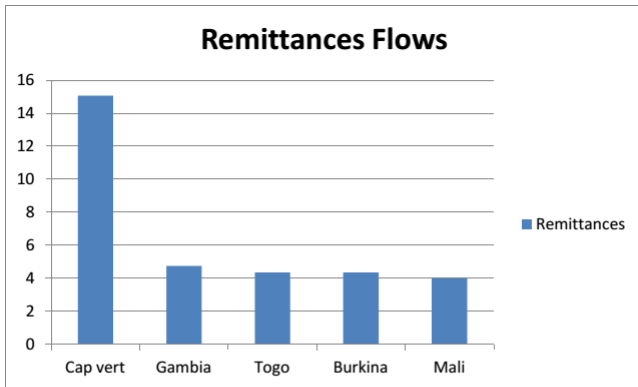
Figure: Remittances Flows larger than Official Development Assistance (ODA), and more stable than Private Capital Flows



Source: World Bank, 2016

Introduction (2)

Figure: Top five Remittances Flows in Ecowas Countries



Motivation

Remittances' contribute to growth and its impact increases at higher levels of remittances relative to GDP (**Glytsos, 2002; Giuliano and Ruiz-Arranz, 2009; Rao and Hassan, 2011; Nsiah and Fayissa, 2011; Meyer and Shera, 2016**).

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Some studies have found that remittances can have a deleterious impact on national economic growth and receivers poverty might reduce the incentives for implementing sound macroeconomic policy or to institute necessary structural reforms (**Chami and Jahjah, 2003, 2005; Lopez et al., 2007; World Bank, 2008; Lartey et al., 2008; Acosta et al., 2009; Abdih et al., 2012**).

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Others finds no empirical evidence of any effect of remittance on economic growth (**Chami et al., 2005; Leon-Ledesma and Piracha, 2004**).

Research question

Do Political Institutions and Financial Development affect how remittances impact economic growth?

Data (1)

Empirical analysis are based on a panel data set of 13 ECOWAS countries from 1985 to 2014. Data are collected from the Penn World Table 6.1 and 6.2, World Development Indicators (WDI), African Development Indicators (ADI), the IMF's International Financial Statistics and the International Country Risk Guide (ICRG).

Data (2)

- Remittances data are taken from World Development Indicators (WDI 2017 - World Bank).
- Financial Development data are extracted from Global Financial Development Database (GFDD) - World Bank.
- Political Institutions data are extracted from ICRG (International Country Risk Guide) database published by the PRS group.
- Control variables: gross national income per capita, trade, government consumption, investment, inflation.

Econometric Framework: Dynamic Panel Threshold Analysis

- Dynamic Panel Model (**Bick et al. (2013)**) - extends by **Hansen (1999)**.
- Cross-sectional threshold model of **Caner and Hansen (2004)** - GMM allow for endogeneity.

Econometric Methodology (2)

Consider the following panel threshold model:

$$y_{it} = \mu_i + \beta_1' z_{it} I(q_{it} \leq \gamma) + \beta_2' z_{it} I(q_{it} > \gamma) + \epsilon_{it} \quad (1)$$

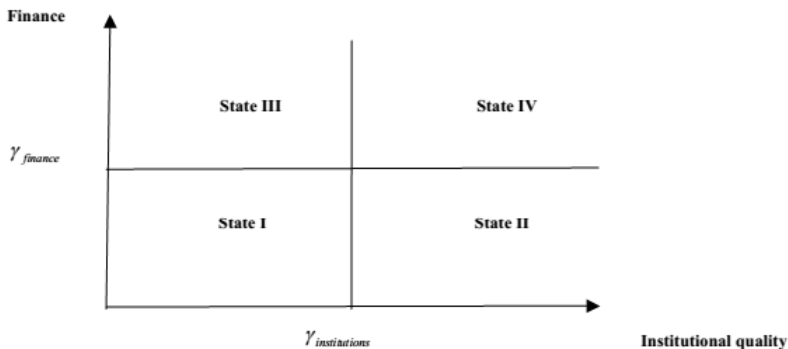
where:

- y_{it} is the growth rate of real GDP per capita of country i at time t .
- μ_i is the country specific fixed-effect.
- $I(\cdot)$ represents the indicator function, taking on a value of either 1 or 0, depending on whether the threshold variable q_{it} is less or more than the threshold level γ . This effectively splits the sample observations into two groups, one with slope β_1 and another with slope β_2 .
- z_{it} is a m -dimensional vector of explanatory variables, which may include lagged values of y and other endogenous variables.

Preliminary Analysis

We distinguish between four different states which Policymakers can face when deciding about the impact of remittances in recipient countries:

Figure: The four states of the economy



Remittance Thresholds and Economic Performance

Consider the following threshold model of the remittances-growth relationship:

$$\begin{aligned} GROWTH_{it} = & \mu_i + \beta_1 REMT_{it} I(REMT_{it} < \gamma) + \delta_1 I(REMT_{it} < \gamma) \\ & + \beta_2 REMT_{it} I(REMT_{it} \geq \gamma) + \theta_1 INVEST_{it} + \theta_2 INITIAL_{it} \\ & + \theta_3 INFL_{it} + \theta_4 FINANCE_{it} + \theta_5 INSTITUTION_{it} \\ & + \theta_6 OPNES_{it} + \theta_7 GOC_{it} + \epsilon_{it} \end{aligned} \quad (2)$$

Remittance Impact Conditional to Financial Development

Consider the following threshold model:

$$\begin{aligned} GROWTH_{it} = & \mu_i + \beta_1 REMT_{it} I(FINANCE_{it} < \gamma) \\ & + \delta_1 I(FINANCE_{it} < \gamma) + \beta_2 REMT_{it} I(FINANCE_{it} \geq \gamma) \\ & + \theta_1 INVEST_{it} + \theta_2 INITIAL_{it} + \theta_3 INFL_{it} \\ & + \theta_4 INSTITUTION_{it} + \theta_5 OPNES_{it} + \theta_6 GOC_{it} + \epsilon_{it} \end{aligned} \quad (3)$$

Remittance impact conditional to institutional quality

Consider the following threshold model:

$$\begin{aligned} GROWTH_{it} = & \mu_i + \beta_1 REMT_{it} I(INSTITUTION_{it} < \tau) \\ & + \delta_1 I(INSTITUTION_{it} < \tau) \\ & + \beta_2 REMT_{it} I(INSTITUTION_{it} \geq \tau) + \theta_1 INVEST_{it} \\ & + \theta_2 INITIAL_{it} + \theta_3 INFL_{it} + \theta_4 FINANCE_{it} \\ & + \theta_5 OPNES_{it} + \theta_6 GOC_{it} + \epsilon_{it} \end{aligned} \quad (4)$$

Remittances impact conditional to combination of two indexes

Consider the following model:

$$\begin{aligned} GROWTH_{it} = & \mu_i + \beta_1 REMT_{it} I(FINANCE_{it} < \gamma; INSTITUTION_{it} < \tau) \\ & + \delta_1 I(FINANCE_{it} < \gamma; INSTITUTION_{it} < \tau) \\ & + \beta_2 REMT_{it} I(FINANCE_{it} < \gamma; INSTITUTION_{it} \geq \tau) \\ & + \beta_3 REMT_{it} I(FINANCE_{it} \geq \gamma; INSTITUTION_{it} < \tau) \\ & + \beta_4 REMT_{it} I(FINANCE_{it} \geq \gamma; INSTITUTION_{it} \geq \tau) \\ & + \theta_1 INVEST_{it} + \theta_2 INITIAL_{it} + \theta_3 INFL_{it} \\ & + \theta_4 OPNES_{it} + \theta_5 GOC_{it} + \epsilon_{it} \end{aligned} \quad (5)$$

Results 1 - Remittance as threshold (1)

Impact of remittances	Coefficients
$\hat{\beta}_1$	-0.106 (0.4334)
$\hat{\beta}_2$	0.066 ^a (0.0018)
Impact of covariates	
Inflation	-0.069 ^a (0.0072)
Initial	0.0002 (0.8733)
Trade	0.027 ^a (0.0022)
Investment	0.027 ^a (0.0022)
Government consumption	-0.023 ^a (0.0019)
Finance index	0.052 ^a (0.0074)
Institutions index	0.155 ^a (0.0000)
$\hat{\delta}_1$	7.969 ^a (0.0000)
R^2	0.5122
J-Statistic	54.2138
Prob(J-Statistics)	0.5803
Number of observations	195

Results 1 - Remittance as threshold (2)

- $\hat{\beta}_1$: Marginal effect of remittances on growth in the low remittances regime - remittances are below the threshold value - Remittance have negative and insignificant impact on economic growth.
- $\hat{\beta}_2$: Marginal effect of remittances on growth in the high remittances regime - remittances are above the threshold value - Remittance have positive and significant impact on economic growth.

Results 2 - Financial development as threshold (1)

Impact of Finance index	Coefficients
$\hat{\beta}_1$	-0.076^b (0.0452)
$\hat{\beta}_2$	0.100^a (0.0000)
Impact of covariates	
Inflation	-0.076^a (0.0042)
Initial	-0.0006 (0.6760)
Trade	0.022^b (0.0281)
Investment	0.092^a (0.0040)
Government consumption	-0.021^a (0.0034)
Institutions index	0.137^a (0.0000)
$\hat{\delta}_1$	7.921^a (0.0000)
R^2	0.4394
J-Statistic	57.8228
Prob(J-Statistics)	0.4819
Number of observations	195

Results 2 - Financial Development as threshold (2)

- On low financial system remittance has a negative effect on the economic growth suggesting that remittances alone can hamper economic growth but it can be avoided only if the recipient countries are characterized by a reasonable level of financial development.
- Remittances have contributed to promote growth in countries with improved financial systems.
- Remittances appear to be working as a complement to financial development.

Results 3 - Institutions as threshold (1)

Impact of Institutions index	Coefficients
$\hat{\beta}_1$	-0.087 ^b (0.0191)
$\hat{\beta}_2$	0.105 ^a (0.0005)
Impact of covariates	
Inflation	-0.031 (0.1559)
Initial	-0.0007 (0.5868)
Trade	0.034 ^a (0.0004)
Investment	0.115 ^a (0.0040)
Government consumption	-0.026 ^a (0.0001)
Finance index	0.051 ^b (0.0121)
$\hat{\delta}_1$	4.886 ^a (0.0037)
R^2	0.5396
J-Statistic	56.9522
Prob(J-Statistics)	0.5143
Number of observations	195

Results 3 - Institution as threshold (2)

- For the low-institutional quality regime, the marginal impact of remittance on economic growth is negative and strongly significant.
- In the better institutions regime, remittances has a positive impact on growth - impact of remittance on growth is function of institutional quality.

Result 4 - Threshold depending on the state (1)

Impact of different states	Coefficients
$\hat{\beta}_1$	-0.820 ^a (0.0000)
$\hat{\beta}_2$	0.057 (0.4610)
$\hat{\beta}_3$	-0.177 ^a (0.0100)
$\hat{\beta}_4$	0.178 ^a (0.0000)
Impact of covariates	
Inflation	-0.049 ^b (0.0434)
Initial	0.0001 (0.9463)
Trade	0.035 ^a (0.0069)
Investment	0.127 ^a (0.0040)
Government consumption	-0.028 ^a (0.0049)
$\hat{\delta}_1$	-1.663 ^b (0.0130)
R^2	0.6970
J-Statistic	51.0150
Prob(J-Statistics)	0.6979
Number of observations	195

Results 4 - Threshold depending on state (2)

- States I and III: Impact of remittance on growth is negative and statistically significant. Remittances are not used for the needs of the recipient country.
- State II: Impact of remittance on growth is positive - Financial Development and Institution are substitutable.
- State IV: Impact of remittance on growth is positive and statistically significant - Remittances accelerate economic development when remittances, financial development and quality of institutions are complementary and that the growth effects of remittances are enhanced in good policy environments.

Conclusion (1)

- The impact of remittances on economic growth depends on the level of financial development and the institutional environment.
- A high level of financial development and a strong institutional environment are required to enable remittances to enhance growth.
- The interaction between remittances and the political institutions indicators was more important to growth than the interaction between remittances and financial development indicators.

Conclusion (2)

- No amount of remittances will promote sustainable growth and development in ECOWAS countries if the problem of lower financial development and bad institutional quality persist.
- States II and IV are identified as determinant regimes for the effective contribution of remittances to sustainable growth and improve the welfare in ECOWAS countries.
- In order for remittances to contribute to economic growth, ECOWAS countries must possess a developed financial system and a strong institutional environment
- It is crucial for governments in the ECOWAS area to improve institutional quality and the support they provide for the financial system.

Thanks for your attention!