Remittance Inflows and State-Dependent Monetary Policy Transmission

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Contribution

- Analysis of monetary policy transmission under two regimes using local projections.
- Illustrate remittances interference with monetary policy.
- Show that monetary policy is less effective under strong remittance inflows.

Remittance inflows

Descriptive statistics on remittance inflows

Kenya	Mexico	Colombia	Philippines
total inflows (2015, in mil USD)			
1,560	24,792	4,639	28,422
as share of GDP (2014)			
2.4%	1.9%	1.1%	9.6%
main source countries			
UK (33%)	USA (98%)	USA (31%)	USA (34%)
USA (30%)	CAN (<1%)	VEN (30%)	UAE (12%)
TAN (7%)	ESP (<1%)	ESP (15%)	KSA (11%)
CAN (6%)		ECU (6%)	CAN (7%)
UGA (5%)		CAN (2%)	MAS (6%)

Source: World Bank

Linear and Non-linear model

We estimate a single equation model as shown:

$$y_{t+h} = \alpha_h + \beta_h R_t + \gamma_h' \sum_{s=1}^{q} \mathbf{x}_{t-s} + \delta_h' \sum_{s=1}^{q} \mathbf{z}_{t-s} + \varepsilon_{t+h}, \quad (1)$$

where

- The coefficient β_h measures the impact of a change in policy at t on the dependent variable h periods ahead.

On the other hand, nonlinear model encompasses regime-dependent dynamics which is depicted by:

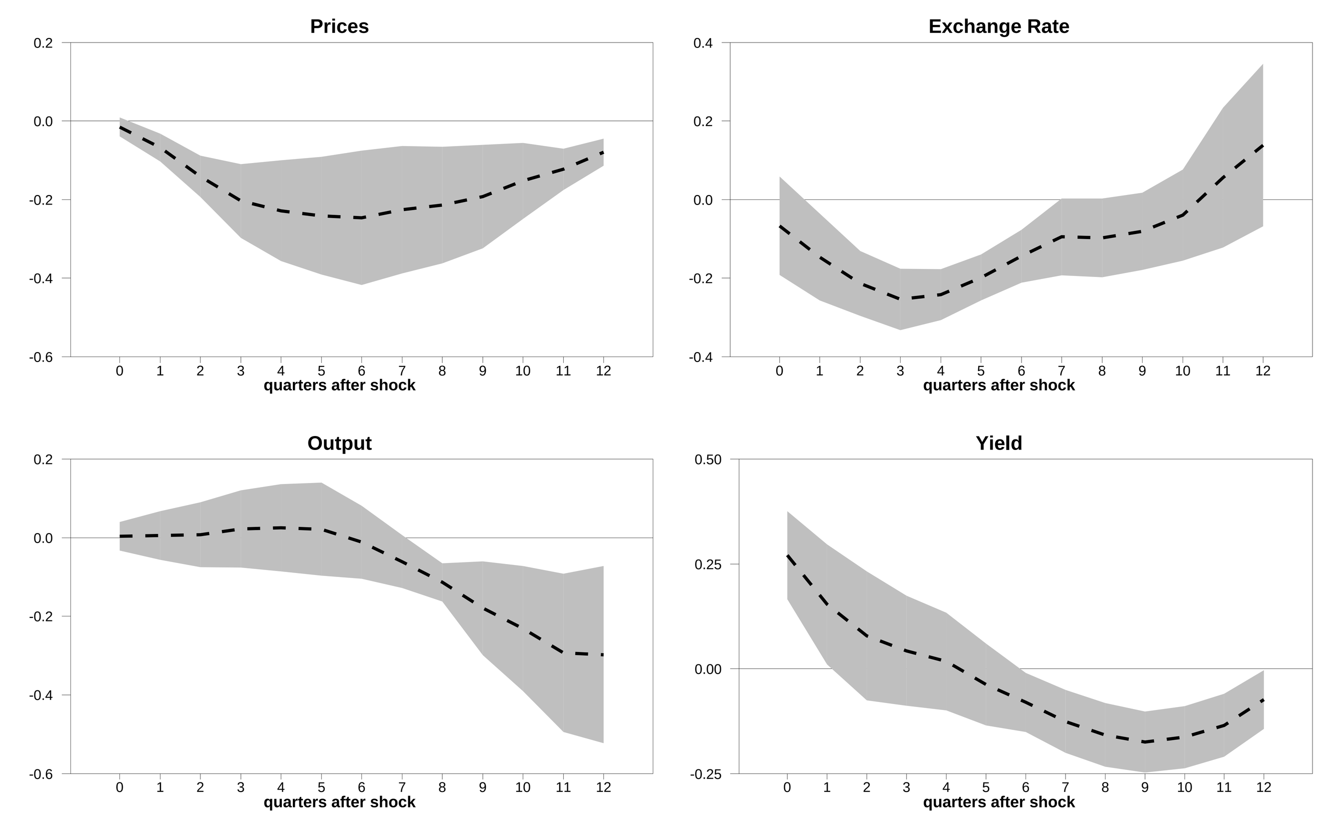
$$\begin{aligned} y_{t+h} = {} & I_{t-1}\left[\alpha_h^I + \beta_h^I R_t + (\gamma_h^I)' \sum_{s=1}^{q} \mathbf{x}_{t-s}\right] \quad (2) \\ & + (1 - I_{t-1})\left[\alpha_h^{II} + \beta_h^{II} R_t + (\gamma_h^{II})' \sum_{s=1}^{q} \mathbf{x}_{t-s}\right] + (\delta_h)' \sum_{s=1}^{q} \mathbf{z}_{t-s} + \varepsilon_{t+h}. \end{aligned}$$

- Regime I depicts high remittances regime II depicts low remittances.

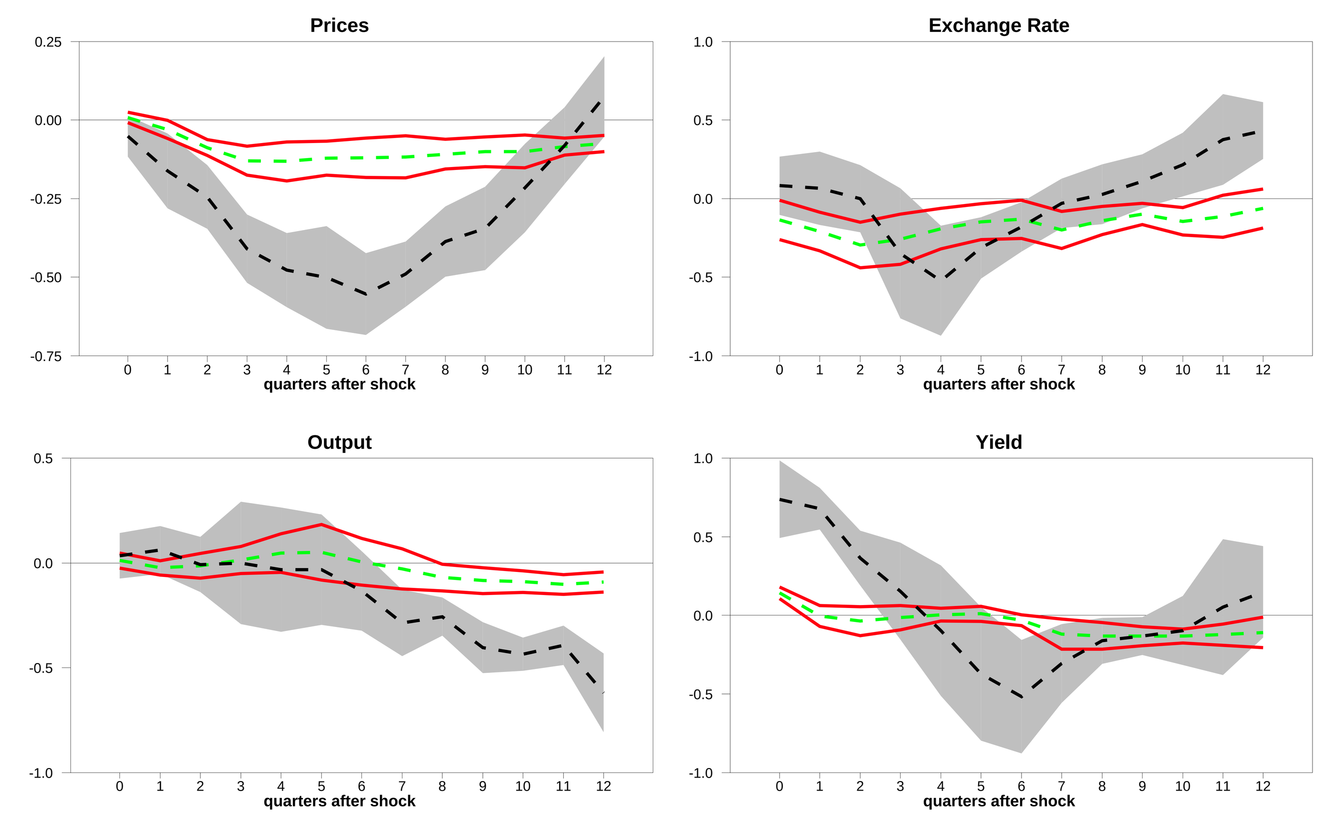
The estimated smooth-transition local projection (STLP) model is:

$$\begin{aligned} y_{t+h} = {} & F(v_{t-1})\left[\alpha_h^I + \beta_h^I R_t + (\gamma_h^I)' \sum_{s=1}^{q} \mathbf{x}_{t-s}\right] \quad (3) \\ & + (1 - F(v_{t-1}))\left[\alpha_h^{II} + \beta_h^{II} R_t + (\gamma_h^{II})' \sum_{s=1}^{q} \mathbf{x}_{t-s}\right] + \delta_h' \sum_{s=1}^{q} \mathbf{z}_{t-s} + \varepsilon_{t+h}, \end{aligned}$$

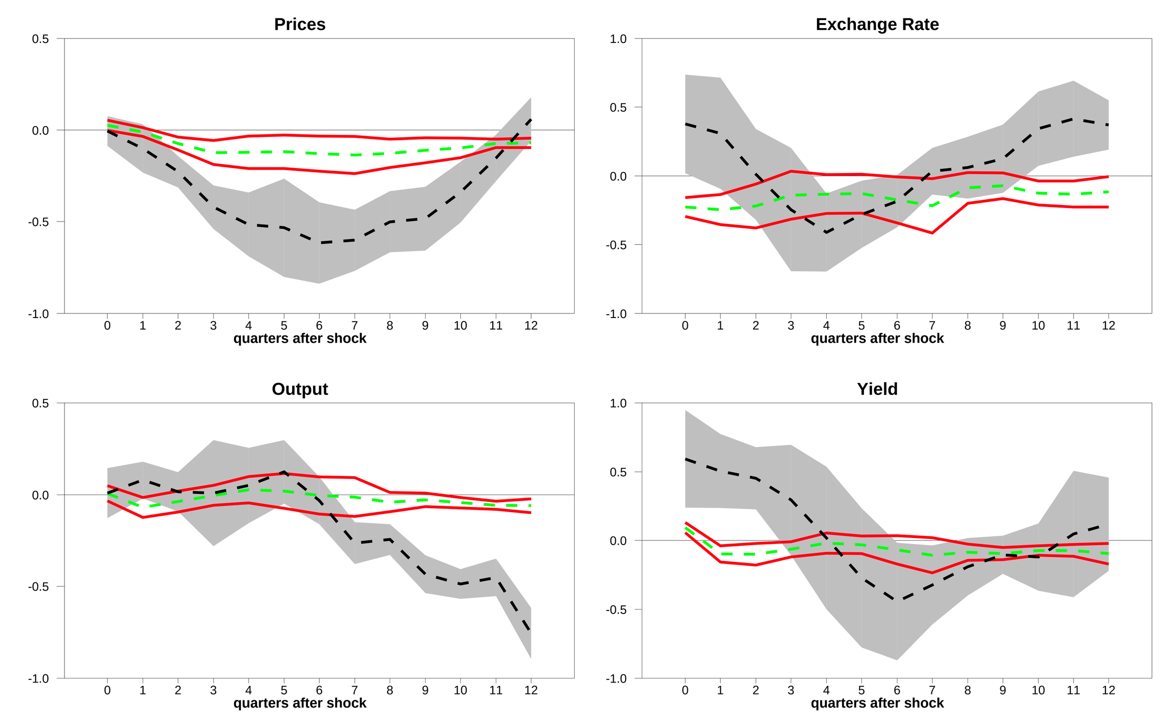
Results from linear model: Kenya



Results from Non-linear model: Kenya



Evidence from smooth-transition local projections: Kenya



Conclusion

- Evidence that high remittances inflows reduce the effectiveness of monetary policy.
- Facet of dilemma of open-economy macroeconomic policy.
- Available options to overcome the dilemma:

1. Designing policies to channel remittance inflows into long-term growth enhancing investments.
2. Designing monetary and fiscal stability policies.