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Democracy and Exchange Rate Regime Choice in Sub-Saharan Africa

Rita Biswas
University at Albany, State University of New York, rbiswas@albany.edu

Campus Conversations in Standish

Democracy and Exchange Rate Regime Choice in Sub-Saharan Africa

Dr. Eric Ofori, Assistant Professor, Siena College

Dr. Rita Biswas, Associate Professor,

University at Albany – SUNY

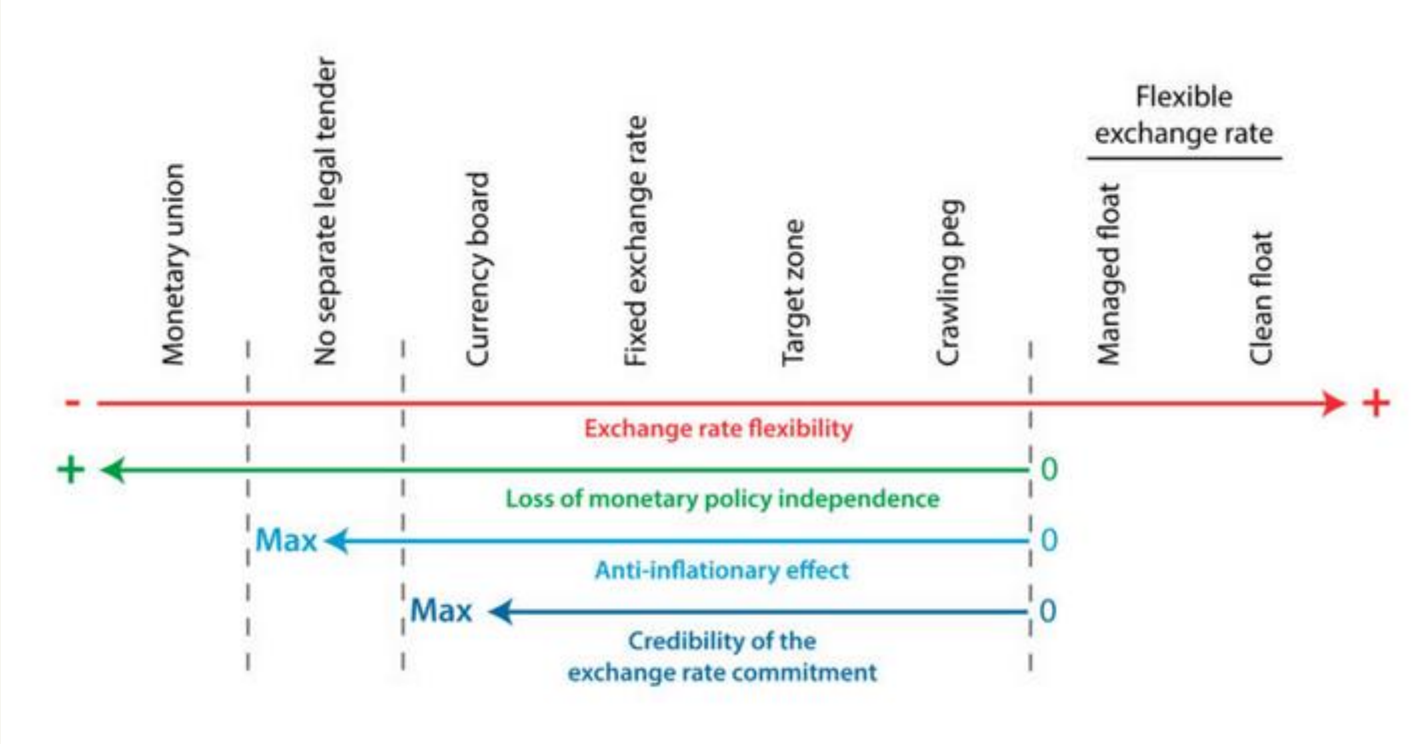
Introduction

- Definitions
- Understanding the Research Issue
- The Broader Context and Motivation
- The Narrower Context – Related Literature
- Specific Research Question
- Data, Methodology, Analysis & Results
- Implications of Findings

Some Definitions

- What is an exchange rate regime?
  - It is the system a country's monetary authority uses to determine its exchange rate against other currencies
  - Freely Floating System: supply and demand in the foreign exchange market determines the price of our currency, the USD, against say, the British Pound
  - Opposite extreme – Fixed Exchange Rate System: the Central Bank determines what the price of your currency will be in terms of another currency. E.g. The Hong Kong dollar is pegged to the USD.
  - Range of arrangements in between

Range of Exchange Rate Regimes

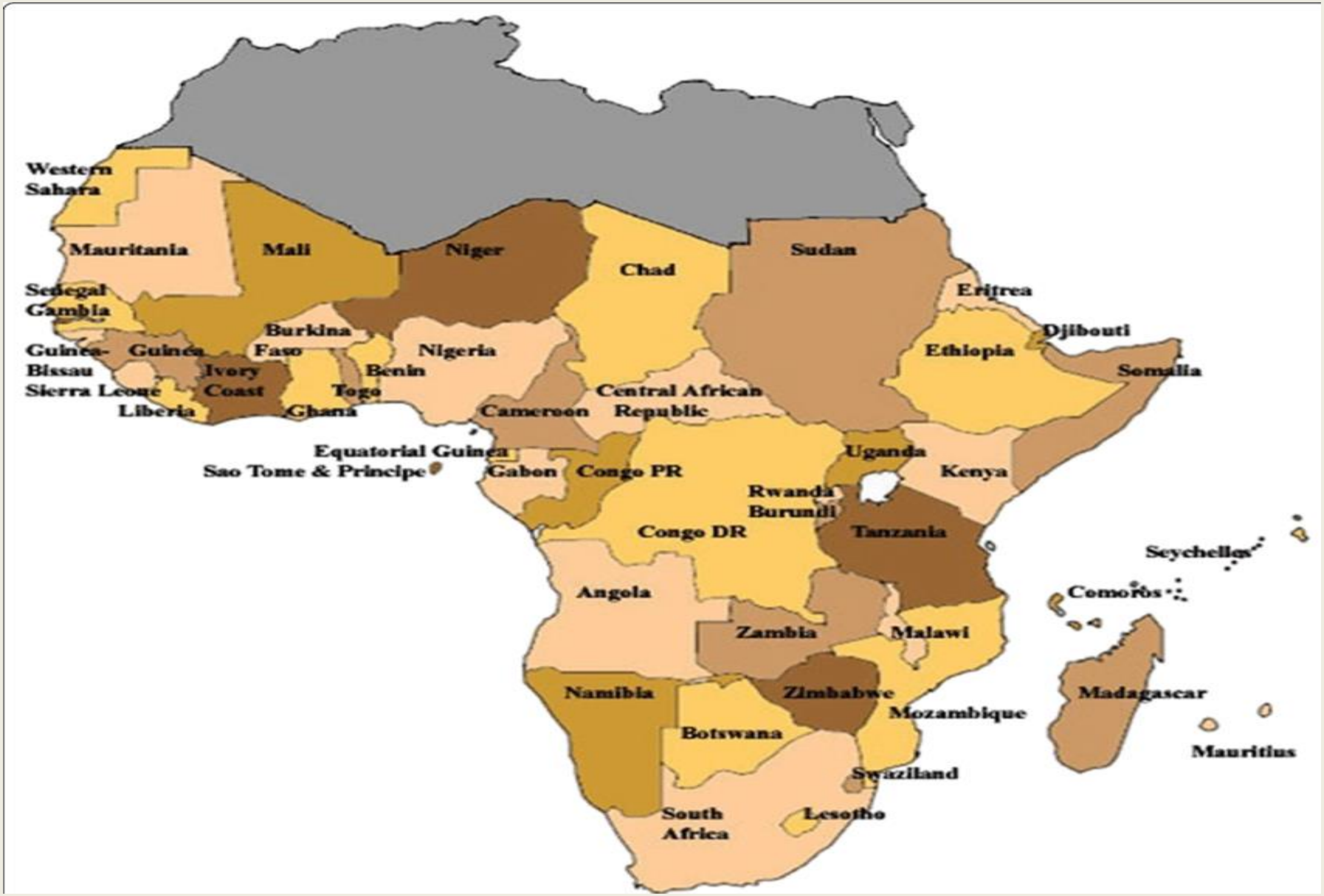


- Source: Policonomics

Polity Regimes

- The system under which the governing authority or institution of an independent country is established and operates
- Range: fully institutionalized autocracies to fully institutionalized democracies with mixed or incoherent authority regimes in between (anocracies)

Sub-Saharan Africa (Source: Researchgate)



Research Issue

- Traditionally, in advanced economies, economic considerations drive the exchange rate regime choice
- Balance of power between economic agents who stand to gain from flexible exchange rates versus agents with a strong preference for stability of exchange rates
- However, in frontier and transition economies, political factors play a significant role in the exchange rate regime choice determination
- This project examines the linkages between varying degrees of democratization and exchange rate regimes in sub-Saharan Africa
- Why Africa? Why sub-Saharan Africa?

The African Experience

- 18 of the 20 slowest growing countries in the world during 1960-2000 happen to be in Africa
- 38 countries in Africa recorded a mean growth rate of 0.6 percent per year over the same period (Barro & Sala-i-Martin, 2004)
- Consistent problems with obsolete infrastructure, corruption, widespread poverty and malnutrition, exacerbated with frequent epidemics of diseases such as malaria, Ebola
- Political leaders have an incentive to stay in office for a protracted period
- Selects economic policies that enhance (re)electability and minimizes likelihood of a military takeover

Factors Behind African Growth Puzzle

- Ethno-linguistic fractionalization (Barr & Oduro, 2002, Easterly & Levine, 1997)
- Corruption (Vicente, 2010)
- Environmental factors such as natural resources (Sachs & Warner, 2001)
- History of slavery (Nunn, 2008)
  - Using data from shipping records, finds negative relationship between the number of slaves exported from each country and current economic performance
- Link between precolonial statehood and current regional African development (Michalopoulos and Papaioannou, 2015)
- Tse Tse Fly-suitable areas of Africa were less likely to be politically centralized historically in the precolonial era (Aslan, 2015)
- Bottomline: heterogeneity of today’s African growth experience has multiple sources

Broader Context and Motivation

- Economic growth: objective for both advanced countries (stable growth rate) and emerging countries (high growth rate)
- Issue of concern for domestic governments, global institutions such as World Bank, IMF, BIS, OECD, etc., academics, private investor groups, public-private partnerships, policy-makers

Context & Motivation (contd.)

- Complex set of determinants of economic growth identified by the literature across disciplines of economics and finance, development economics, political science and law, history, entrepreneurship
- From economics and finance:
  - real income, savings rate, financial intermediary development: Demirguc-Kunt & Levine, (1996), Levine & Zervos, (1998)
  - Trade openness, *exchange rate regimes*, foreign direct investment: Bortolotti & Milella, (2006)
  - stock market performance, liquidity, size, turnover: Ben Naceur, Ghazouani, & Omran, (2007)

Context & Motivation (contd.)

- Inter-disciplinary literature suggests a wide range of factors:
  - democracy: Boubakri & Hamza, (2007), Biswas and Ofori, (2015)
  - inequality, legal environment, sustained program of privatization: Roe and Siegel, (2011),
  - political risk (corruption, assurance of property rights): Vicente, (2010), Sachs & Warner, (2001), Michalopoulos and Papaioannou (2015),
  - environmental factors (natural resources), colonial legacies (slave exports): Nunn (2008)
  - legal origins, ethno-linguistic fractionalization: Yang, (2011), Barr & Oduro, (2002), Easterly & Levine, (1997)
  - proximity to the equator (Tsetse fly): Aslan (2015)

Narrower Context

- Exchange Rate Regime choice has also emerged as one of the influencers of economic growth
  - though not unequivocally (Jensen, 2003)
  - direction of causality could also be reversed
- So, this study focuses on one narrow aspect of this bigger issue: <u>the nature of the influence of democratization on exchange rate regime choice</u>
- Ultimate objective of discipline: identify drivers of economic growth in poorest nations

Related Literature

- Significant differences between drivers of the exchange rate regime choice between developed and less developed countries or LDCs (Roland, 2002, Markiewicz, 2006, Berdiev, Kim and Chang, 2012)
- Advanced economies' primary considerations: unemployment, inflation, output growth
- LDCs and new democracies: Electoral considerations dominate

Related Literature (contd.)

- Electoral democracy brings with it a minimum legal infrastructure protecting property and investor rights and contract enforcements
- Political system under a democracy introduces
  - a system of checks and balances (Siegel et al, 2004)
  - a certain openness and competitiveness (Haber et al., 2007) and
  - constrains government ownership of financial institutions, including banks (La Porta et al., 1998, 1999)

Related Literature (contd.)

- However, there could be some inherent inhibiting factors, especially with nascent democracies
  - uncertainty about the political state
  - weak economic environment
  - inadequate financial infrastructure
  - Inequality - benefits of democratization accruing only to a few segments of society while leaving ethnic minorities unaffected

Democracy and Exchange Rate Regime Choice: The Trade-offs

- Fixed Exchange Rates – domestic currency pegged to a more disciplined foreign currency
  - Pros
    - Exchange rate stability
    - Lower, stable inflation
    - Commitment to peg implies credibility of leadership
  - Cons
    - Government loses monetary policy authority
      - Unable to use monetary policy tools such as interest rate changes to combat recession or unemployment

Democracy and Exchange Rate Regime Choice: The Trade-offs (contd.)

- Floating Exchange Rates – FX markets determine exchange rate
  - Pro
    - Monetary policy autonomy
      - Government has leeway to deal with macroeconomic issues
  - Cons
    - Exchange rate volatility
    - Possibility of high inflation
    - Uncertainty and instability deters foreign investment
- In the end – an empirical issue

Hypothesis Development

- We test the following relationship:

  The higher the degree of democracy, the greater the likelihood of adopting a pegged exchange rate regime

- We test three specific components of the electoral process
  - Openness of a country’s executive recruitment
  - Electoral competition
  - Separation of power in country’s political economy

Data and Methodology

- Screen:
  - Data availability
- Final sample: 49 countries; 2000 to 2016
- Data sources:
  - World Development Indicators (2018)
  - Polity IV
  - Database of Political Institutions

Data & Methodology (contd).

- Model:
- $y_{it} = \alpha_i + \quad \beta_1 Z_{it} + \beta_2 X_{it} + u_{it}$
  - where y_{it} denotes the exchange rate regime of country *i* at time t
  - the vector Z is our key independent variable representing the democracy index for country *i* at time t
  - X is a battery of control variables
- We use Ordered Logit Regression method

Model Specifications

- 3 key components of the electoral process examined – sub-categories in Polity IV:
  - Openness of a country's executive recruitment process (EXECRECRUIT)
    - Closed = situation where leader of nation is a monarch or chosen via hereditary succession
    - Open = every politically active member of the population can contest for the highest office

Model Specifications (contd.)

- Political competition (EXECCOMP)
  - Possibility of 2 or more candidates or parties contesting for the highest office
    - 1 = little to no competition in the electoral process
    - 3 = very competitive process
- Constraints on chief executive (EXECCONST)
  - Separation of powers in a country's political system
    - 1 = little or no constraints
    - 7 = constraints on the chief executive; separation of power

Findings and Implications

- Sub-Saharan African (SSA) countries with higher scores of democratization have a greater likelihood of pegging their currency (Table III in Appendix)
  - Lower inflation is perceived as key to (re)electability
- SSA countries with greater electoral openness are more likely to peg their currencies
  - Closed electoral system African leaders prefer floating their currencies – gives them monetary autonomy to print money to enhance (re)electability (Table IV in Appendix)

Findings and Implications (contd.)

- SSA countries with greater electoral competition have a greater preference for pegging their currency
  - Curbing inflation and establishing their credibility in doing so for (re) electability is achieved more easily with a fixed exchange rate (Table V in Appendix)
- SSA countries with greater separation of powers (more constraints on the chief executive) tend to prefer a pegged currency
  - Central banks in countries with greater separation of power are more independent so leaders do not derive any benefit from floating their currencies (Table VI in Appendix)
- SSA countries with military (authoritarian) leaders have no relationship with the exchange rate regime choice
  - Military ruler has no re-election concerns; actions are independent of exchange rate regime choice (Table VII)

Summary and Conclusions

- Using ordered logit regression analysis on 49 sub-Saharan African countries during the period 2000 to 2016, we examine the role of political factors in influencing the choice of the exchange rate regime
- We find supporting evidence that as the degree of democratization increases, there is a stronger preference for fixed exchange rates
- Next steps:
  - Distinguish between de jure and de facto exchange rate regimes
  - Test for Threshold effect – minimum threshold level of trade with single trading partner (former colonial power or powerful neighbor) dominate political considerations

Bibliography

- **Alsan, M.** (2015). The effect of the Tse Tse Fly on African development. American Economic Review, 105(1), 382-410.
- **Ben Naceur, S., Ghazouani, S., & Omran, M**. (2007). The determinants of stock market development in the Middle-Eastern and North African region. Managerial Finance, 33(7), 477-489.
- **Barr, A., and Oduro, A.** (2002). Ethnic fractionalization in an African labour market. *Journal of Development Economics, 68*, 355 – 379.
- **Barro, R., and Sala-i-Martin, X.** (2004). Economic Growth: Second Edition. MIT Press. *Cambridge, Massachussets.*
- **Demirguc-Kunt, A. and V. Maksimovic** [1996]. "Stock market development and financing choices of firms." *World Bank Economic Review 10*, pp. 341 – 369.
- **King, R. G., & Levine, R.** (1993). Finance and growth: Schumpeter might be right. *The Quarterly Journal of Economics*, *108*(3), 717-737.
- **La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R.W. (**1998). Law and Finance. *Journal of Political Economy, 106*, 1113 – 1155.
- **La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R.W.** (1999). Quality of Government. *Journal of Law Economics and Organization, 15,* 222 – 279.
- **Levine, R.** (2005). Finance and growth: theory and evidence. *Handbook of Economic Growth*, *1*, 865-934.
- **Levine, R., & Zervos, S.** (1998). Stock markets, banks, and economic growth. *American Economic Review*, *88*(3), 537-558.
- **Nunn, N.** (2008). The long-term effects of Africa's slave trades. *The Quarterly Journal of Economics, 123*(1), 139 – 176.
- **Keefer, Philip** [2007]. "Beyond legal origin and checks and balances: Political credibility, citizen information and financial sector development." *World Bank Policy Research Working Paper 4154*
- **Keefer, Philip** [2010]. DPI2010. *Database of Political Institutions: Changes and Variable Definitions*. Development Research Group, World Bank.
- **Khwaja, Asim Ijaz and Atif Mian** [2005]. "Do Lenders Favor Politically Connected Firms? Rent Provision in an Emerging Financial Market." *Quarterly Journal of Economics 120*, pp. 1371 – 1411.

Bibliography (contd).

- **King, Robert G. and Ross Levine** [1993]. “Finance and Growth: Schumpeter Might be Right.” *Quarterly Journal of Economics 108*, pp. 717 - 737
- **La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny** [1998]. “Law and Finance.” *Journal of Political Economy 106*, pp. 1113 – 1155.
- **La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny** [1999]. “Quality of Government.” *Journal of Law Economics and Organization 15*, pp. 222 – 279.
- **Levine, Ross** [1997]. “Financial Development and Economic Growth: Views and Agenda.” *Journal of Economic Literature 35*, pp. 688 – 726.
- **Levine, Ross** [2005]. “Finance and Growth: Theory and Evidence.” *In Handbook of Economic Growth 1A*, pp. 865 – 934. Editors: Philippe Aghion and Steven N. Durlauf.
- **Levine, Ross, Norman Loayza, and Thorsten Beck** [2000]. “Financial intermediation and growth: Causality and causes.” *Journal of Monetary Economics 46*, pp. 31 – 77
- **Levine, Ross and Sara Zervos** [1996]. “Stock Market Development and Long-Run Growth.” *The World Bank Economic Review 10*, pp. 323 – 339
- **Levine, Ross and Sara Zervos** [1998]. “Stock Markets, Banks, and Economic Growth.” The *American Economic Review 88*, pp. 537 – 558
- **Pagano, Marco and Paolo Volpin** [2001]. “The Political Economy of Finance.” *Oxford Review of Economic Policy 17*, pp. 502 – 519.
- **Pagano, Marco and Paolo Volpin** [2005]. “The Political Economy of Corporate Governance.” *American Economic Review 95*, pp. 1005 – 1030.
- **Pagano, Marco and Paolo Volpin** [2006]. “Shareholder Protection, Stock Market Development, and Politics.” *Journal of the European Economic Association 4*, pp. 315 – 341.
- **Papaioannou, Elias and Gregorios Siourounis** [2008]. “Democratisation and Growth.” *Economic Journal 118*, pp. 1520 – 1551.
- **Roe, Mark** [2006]. “Legal Origins, Politics, and Modern Stock Markets.” *Harvard Law Review 120*, pp. 460 -527
- **Roe, Mark J. and Jordan I. Siegel** [2007]. “Political Instability and Financial Development.” *Working Paper*, Harvard Law School
- **Sylla, Richard** [1998]. “U.S. Securities Markets and the Banking System, 1790 – 1840.” *Federal Reserve Bank of St. Louis Review*. May/June
- **Yang, Benhua** [2011]. “Does democracy foster financial development? An empirical analysis.” *Economics Letters 112*, pp. 262 – 265.