Fiscal and Monetary Policy in Sub-Saharan Africa

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Catalyzing Macroeconomic Policy for Development in Sub-Saharan Africa

Monetary and Fiscal Policy Globally

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    - Benefit: theoretically achieves full employment and low inflation in frictionless SOE
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   - Benefit: captures many relevant frictions (especially in parts South America)
     - finance frictions: foreign currency borrowing, limited FX arbitrage, housing market frictions
     - trade frictions: dominant currency paradigm, sticky prices
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3. "Frontier" Economies: Sub-Saharan African countries are not just poorer Argentinas
    - what are the first-order frictions that shape monetary-fiscal policy design in Sub-Saharan Africa?

IMF Integrated Policy Framework

Shocks

- Real:
  Productivity
  Commodity price
- Financial:
  World interest rate
  External debt limit
  Foreign risk appetite
  Housing debt limit

Country Characteristics

- Currency of trade invoicing
- Commodity export share
- Stock of debt
- Currency mismatch
- External debt limit
- Depth of FX market
- Housing sector debt limit

Policy Options

- Monetary policy/exchange rate flexibility
- Capital controls
- FX intervention
- Macroprudential policy

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2. Monopolies, public project financing and political rents
   - underproduction and barriers to entry
   - distortions from input subsidies and production taxes
3. Limited commitment of monetary policy
   - persistence of monetary history from colonization

A Safety Net for Senegal

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Motivation

- Unemployment Insurance (UI) is major social insurance program in developed countries
- However, lower incidence in low-income countries:
  - Issues tracking work status (Cirelli et al. 2021, Benjamin & Mbaye 2012)
  - High levels of informal work and self-employment (Breza et al. 2021, Donovan et al. 2021)
  - Other labor market frictions (skill mismatch, job search, job productivity, migration frictions) (Alfonsi et al. 2020, Behrman 1999)

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- Informal insurance networks in Sub-Saharan Africa suggest potential benefits of UI programs
- This paper: Theoretical & empirical study of welfare effects of UI in economy with high informality:
  - What are potential welfare gains with perfect enforcement?
  - What are the limits to an OECD-style contributory UI system under limited enforcement?
  - Can broad-based funding of UI through VAT/inflation tax/outside funding reap large welfare gains?

Methodology

Framework: Chetty (2006), Bailey (1978): Two welfare effects of UI

- *Moral hazard*: distort relative price of consumption and leisure
- *Liquidity/Consumption smoothing effect*: alleviate borrowing constraints

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Data: Custom labor force surveys in urban areas combined with NSA labor force survey

- background demographic info, firm characteristics, work contract → formality
- wages, consumption and expenditure, assets and liabilities, transfers → liq/consumption gap
- risk perception, lottery choices → risk aversion
- labor market flows, job search, formal and informal activity → elasticity of job search

Results: I - Large Potential Welfare Gains with Perfect Enforcement

	Tax rate	Δ benefit %	Benefit %	Benefit XOF	c_{eq}%
1% tax	1%	2.88%	9.26%	5639.09	(1.88%, 2.06%)
2% tax	2%	5.52%	11.9%	7228.94	(3.69%, 4.05%)
10% benefit	1.27%	3.62%	10%	6090.08	(2.38%, 2.62%)
Optimal benefit	13.05%	25.51%	31.89%	19421.30	(20.99%, 23.76%)

Table: Perfect enforcement, σ from data

Results: II - Smaller Gains from Contributory UI with Limited Enforcement

	tax rate	Δ benefit %	benefit %	benefit XOF	c_{eq}%
1% tax	1%	0.23%	6.61%	4912.61	(0.21%, 0.22%)
2% tax	2%	0.46%	6.84%	5081.93	(0.42%, 0.43%)
10% benefit of employed consumption	8.18%	1.80%	8.19%	6090.08	(1.68%, 1.75%)
10% benefit of formal consumption	17.08%	3.62%	10%	7434.91	(3.45%, 3.60%)
optimal benefit	24.20%	4.96%	11.34%	8431.65	(4.24%, 4.43%)

Table: Contributory UI system with limited enforcement, σ from data

Results: III - VAT/Inflation Tax Can Reap Large Welfare Gains

	Δ benefit %	Benefit %	Benefit XOF	c_{eq}%
Broad-based tax at 1% tax	1.43%	7.81%	4756.35	(1.26%, 1.37%)
Broad-based tax at 2% tax	2.81%	9.19%	5596.49	(2.53%, 2.74%)
Broad-based tax equivalent to 10% benefit	1.82%	8.19%	4990.03	(1.61%, 1.74%)
Broad-based tax equivalent to optimal benefit	15.07%	21.45%	13063.53	(16.54%, 18.27%)

Table: Broad-based taxation with limited enforcement, σ from data

Conclusion

Thinking on Monetary-Fiscal policy should account for:

- Illiquidity and underborrowing of SMEs
- Monopolies and political rents
- Limited commitment of monetary policy

Limited enforcement and funding limits are binding for meaningful unemployment insurance

- Large gains from liquidity provision and consumption smoothing
- Broad-based taxation - VAT/inflation tax (or donor funds) - can improve social insurance in Senegal