MONETARY POLICY IN AN UNEQUAL ECONOMY

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INTRODUCTION

A key **concern** for future **decency and security of wellbeing** and **substainable development** exists as inequality has increased for more than 70% of global population (UN World Social Report, 2020). Crisis tends to **exacerbates the exposure** of inequality as noted in the 2007/8 financial crisis and 2020 Covid -19 pandemic.

MOTIVATION

Should inequality matter for Central Bank decisions? Does feedback between redistribution and monetary policy exist?

- Monetary policy makers have yet to acknowledge a relation between monetary policy and inequality, a key issue that macroeconomic policymakers seek to address
- Debates have mushroomed around the role of Central Banks and their mandate from suggestions pointing to monetary policy driving income and wealth inequality following the 2007/8 financial crisis

OBJECTIVES

- Examine the role of monetary policy on redistribution hence effect on inequality
- Examine if inequality has an impact on policy efficiency.

MODEL 1

- Adopt a two period lived overlapping generations model (Diamond,1965) with a continuum of heterogenous households, $i \in (0, 1)$
- Introduce money through a Hahn-Solow (1995) Cash in Advance constraint to channel inflation
- Inequality arises from differences in initial capital (k_0) and sustained by idiosyncratic ability(ϵ_{it})
- ϵ_{it} is an iid idiosyncratic productive shock on individuals and individual capital stock and productivity are assumed to be **lognormally distributed**
  $\ln \epsilon_{it} \sim N(\frac{\nu^2}{2}; \nu^2)$ & $\ln k_{it} \sim N(\mu_t; \sigma_t^2)$

MODEL 2

The economy is driven by capital and inequality dynamics:
Capital

$$k = [e^{0.5\alpha(\alpha-1)\sigma^2}(\frac{Z-(1+\pi)X}{\Upsilon})]^{\frac{1}{1-\alpha}} \quad (1)$$

Inequality

$$\sigma^2 = \frac{1}{\alpha^2}\ln \Psi^* \quad (2)$$

where $\Psi^*(k^*, \pi^*, \sigma^2*)$

RESULTS 1

Numerical analysis on calibrated South African economy yields:

	Capital Stock	Inequality	Total consumption	Output	Welfare
Baseline					
target inflation at 3%	0.1378	0.2609	1.7500	0.6194	-12.7449
target inflation at 6%	0.1333	0.2660	1.4642	0.6144	-12.7921
Adjustments					
↓target inflation to 0%	0.1431	0.2550	2.1308	0.6252	-12.7043
↓target inflation to 2%	0.1395	0.2590	1.8650	0.6215	-12.7305
↑target inflation to 8%	0.1309	0.2687	1.3144	0.6117	-12.8259
↑target inflation to 10%	0.1290	0.2708	1.1909	0.6096	-12.8602

Summary findings:
Adjusting inflation through productivity target inflation policy shows:

- inflation relates negatively with capital stock accumulation, total output and consumption
- income inequality increases and welfare reduces in response to increased inflation

Adjusting inequality through productivity shock/ability ν^2 shows:

- higher ability disparities increases capital inequality and reduces capital accumulation in the presence of inflation
- in absence of inflation, capital accumulation increases and inequality is reduced
- inequality reduces welfare

RESULT 2

The effects of policy changes in an inflationary but equal society are explored by setting ν^2 to zero.

	Capital Stock	Total consumption	Output	Welfare
target inflation at 3%	0.1420	2.1772	0.6383	-12.1863
target inflation at 6%	0.1374	1.8428	0.6335	-12.2056

- An equal society is most favourable for macroeconomic aggregates and general welfare.

REFERENCES

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CONCLUSION

- Feedback exists between policy and inequality as reflected by macroeconomic variables relation to livelihood of economic agents
- Heterogeneity in agents is important in policy formulation as it affects assimilation and effectiveness

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