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REVISITING MONETARY POLICY EFFECTS ON INCOME INEQUALITY AND WEALTH IN AFRICA: Fresh Empirical Lessons based on Monetarist versus Keynesian Approach

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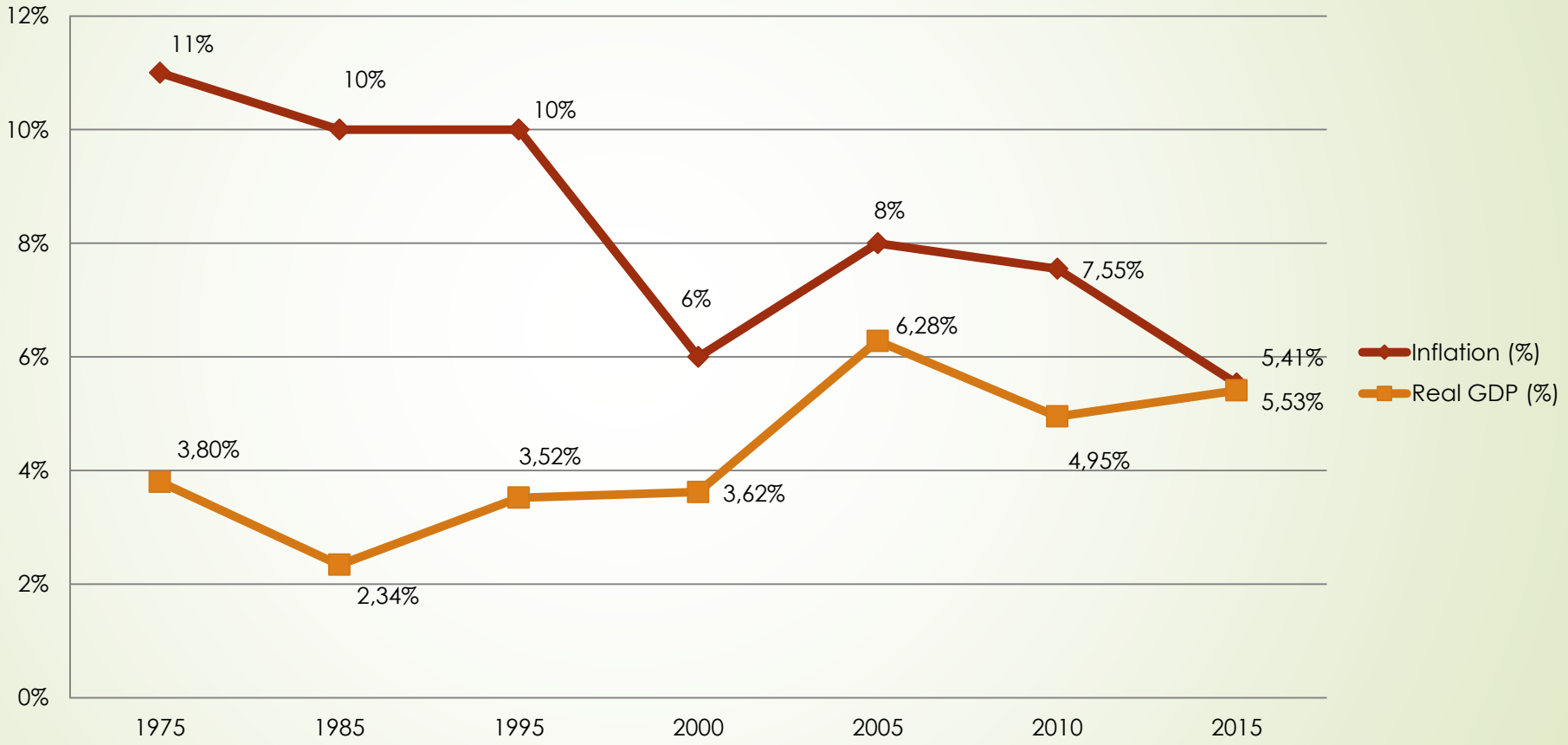
MOTIVATION

- The relative positive economic growth experienced by most African countries in the recent decade has come with insufficient demand stimulation.
- The concern of poverty at the forefront of economic policy, the need for inclusive growth and sustainable development, inter alia, brings forward the inevitable question of the monetary policy responsibility.
- Accordingly, at the contrary of the Keynesian theory, the monetarist theory that focuses on price stability inherently neglects the demand stimulation aspect of economic prosperity.
- To this effect, while good results in terms of inflation targeting has been achieved in many African countries; performances in terms of wealth improvement and inequality reduction are low.

MOTIVATION

Figure 2: Sub Saharan Africa's inflation rate and economic growth evolution.



Source : Author calculation based on World Bank data base (2008) and International Monetary Fund data base (2010 estimation).

MOTIVATION

LOW AFRICAN PERFORMANCE IN TERMS OF WEALTH & INEQUALITY

→ Growth lower than its potential;
Poverty and inequality remain a big concern.

GOOD RESULTS IN TERMS OF PRICE STABILITY

→ Inflation maintained at a stable and low level for almost all SSA

MONETARY POLICY RESPONSIBILITY IN AFRICA

→ Price stability
Low demand stimulation

CONTEXT & PROBLEMATICS

Problem

Observation

Low wealth & inequality performances+ Good performance of CMP in terms of price stability

Solution

Potential macroeconomic solutions

(Men, Money, Material, Management, Machine … etc.)

Proposed solution

Monetary policy solution

Promote pro growth monetary policy in Africa

Research question

What is the effect of CMP on Wealth and income inequality in Africa?

Assess & quantify the effect on wealth

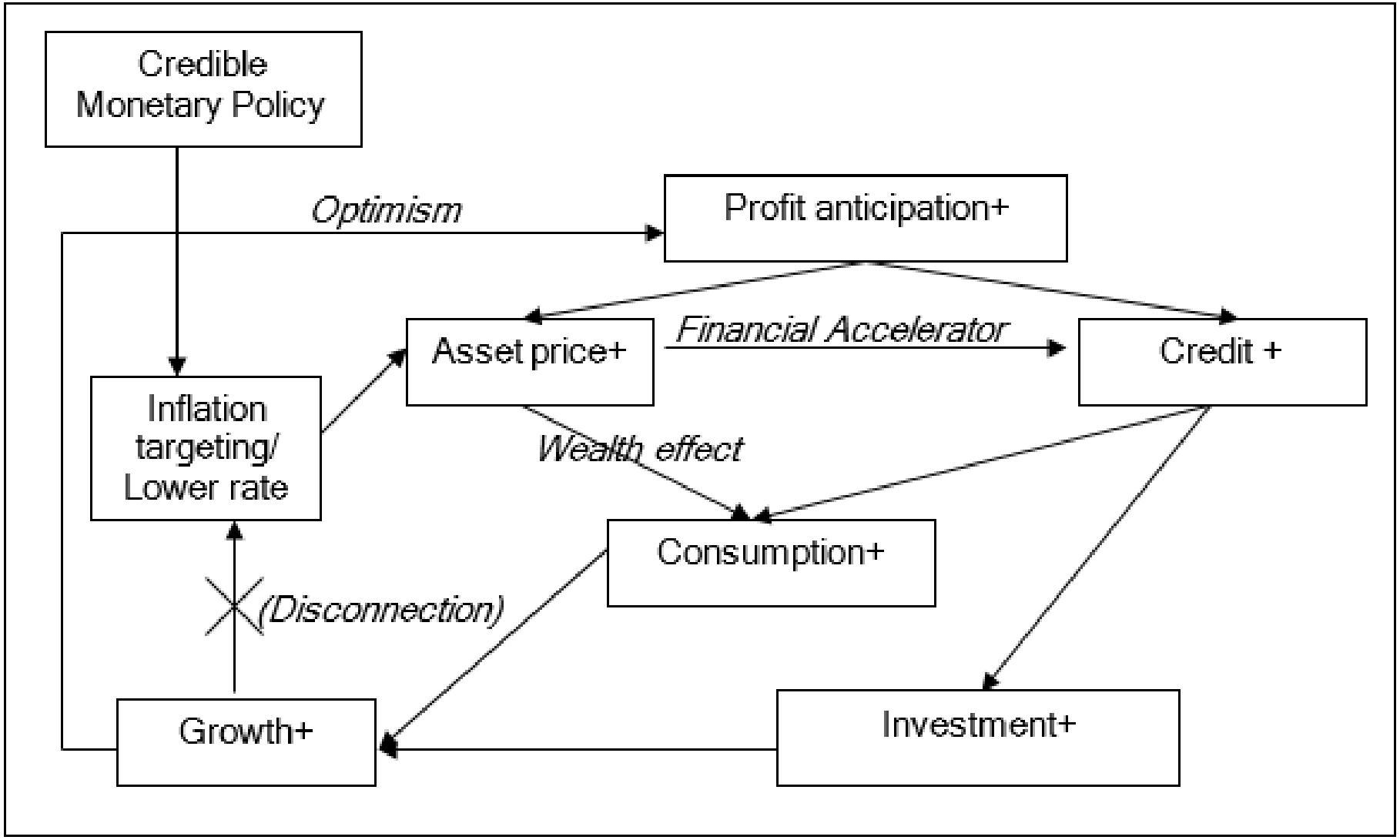
Assess & quantify the effect on income inequality

CONCEPTS & THEORETICAL LINK

- **CMP** = monetary policy is credible when it guarantees the continuity of Central Bank action in pursuing its objective of price stability, and managed to stop monetary funding of budget deficits;
- **Demand stimulation** = providing means to economic agent to act in the market and thus permit to move to an equilibrium close to the highest production level;
- **Income inequality** = Extreme cncentration of wealth /income in the hands of small percentage of a population; gap between the richest and the poor;
- **Wealth= at a country level means** stock of asset held by a country at a single point of time;
- **Economic growth**= Increase in the production of economic goods and services, compared from one period of time to another.

CONCEPTS & THEORETICAL LINK

"Le paradoxe de la crédibilité" [Mésonnier (2004)] with author modification



LITTERATURE REVIEW

- **CONFRONTATION OF THEORETICAL EVOLUTION TO PRACTICAL RESULTS IN THE CONTEXT OF APPLICATION**:

1. **Monetarist versus Keynesian Approach: the old-new debate in the African context** ;
   - ✓ The neoclassical orthodoxy argues in favor of money neutrality in the short and long term. This consensus based on life cycles theory orients the role of the monetary authority to the absolute pursuit of price stability over the medium and long term;
   - ✓ The New Keynesian Economics, with the assumption of sticky prices and wages, price rigidity is the cause of distortions in consumption that cause the economy to not realize its growth potential.

LITTERATURE REVIEW

- **CONFRONTATION OF THEORETICAL EVOLUTION TO PRACTICAL RESULTS IN THE CONTEXT OF APPLICATION**:

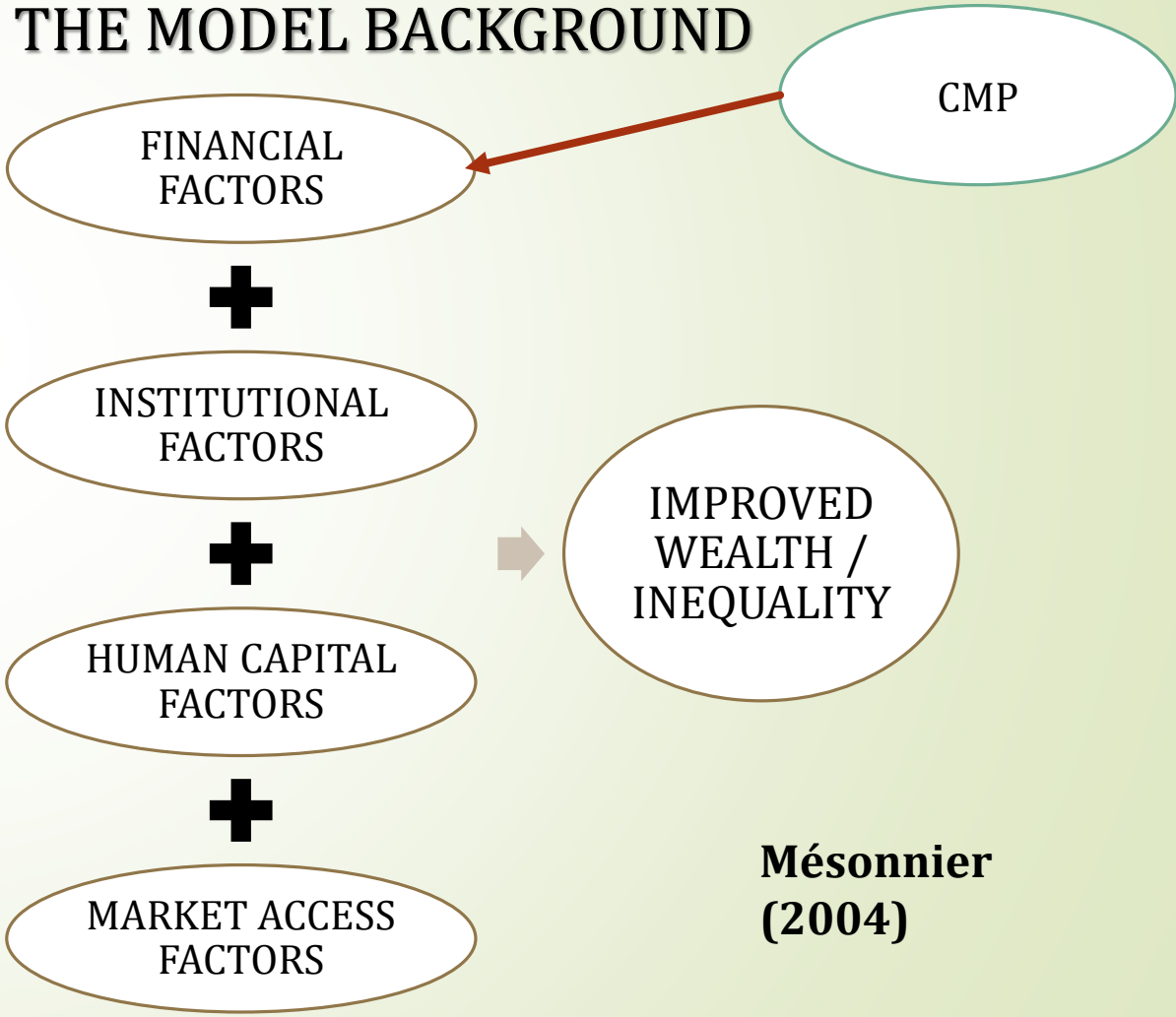
2. **Which real goal for pro-growth monetary policy in Africa?**
   - ✓ Price stability is very important to maintain a good economic environment and thus unleash activities and economic development;
   - ✓ The theory of divine coincidence which argues that by only stabilizing inflation as an objective, the monetary authority also stabilizes the economy does not seem to be applicable in practice.

METHOD AND DATA

GENERAL INFORMATION

- SAMPLE: 46 AFRICAN COUNTRIES
- PERIOD: 1990 - 2014
- INSTRUMENTS:
  - Graphical & statistical analysis
  - Econometric analysis
- **DATA source**: World Development Indicator database;
- **METHODOLOGY**: PCM; GMM; Dummy variable technics … etc.

THE MODEL BACKGROUND



Mésonnier (2004)

METHOD AND DATA

Variable definition and data source

VARIABLES	SIGNS	VARIABLE DEFINITIONS	SOURCES
Financial deepening	NOCASH	Nominal cash rate per capita (annual %)	World Bank (WDI)
Wealth growth	GDPG	GDP growth rate (annual%)	World Bank (WDI)
Income inequality	INEQ	Gini index	World Bank (WDI)
Work force productivity	GDPPC	GDP per capita	World Bank (WDI)
Trade openness	TROPEN	Imports plus Exports in commodities (% of GDP)	World Bank (WDI)
Investment rate	TIV	Investment rate (%)	World Bank (WDI)
Population 15-64	POP	Population 15-64	World Bank (WDI)
Economic Prosperity	GDPG	GDP Growth (annual %)	World Bank (WDI)
Human capital	HUCAP	Ratio of girls to boys in secondary education (annual %)	World Bank (WDI)
Population	POP	Population ages 15-64 (% of total)	World Bank (WDI)
Wealth_*dummuy*	WEALTH	Dummy variable based on the decomposition of (lower=0, lower middle=1, upper=2) wealth level	Author compute

WDI: World Bank Development Indicators. FDSD: Financial Development and Structure Database.

Source: Authors construction. WDI: World Bank Development Indicators.

METHOD AND DATA

BASIC MODEL

$$\ln\left(y_{i,t}\right)-\ln\left(y_{i,t-1}\right)=\alpha X_{i,t}+\omega_i+\xi_{i,t}$$

$y_{i,t}$ being the explained variable for each country and year (economic growth/wealth dummy or income inequality);

$X_{i,t}$ the matrix of explanatory variables (credible monetary policy, nominal cash rates per capita, human capital, openness rate and investment rate along with interactions variables);

ω_i the specific effect of controlling unobservable differences between statistical units; and random disturbances.

Therefore, the basic dynamic panel regression model is expressed as follows:

$$\ln(y)_{i,t}=\sigma_0+\sigma_1\ln(y)_{i,t-1}+\sigma_2\ln(CMP)_{i,t}+\sigma_3\ln(TXO)_{i,t}+\sigma_4\ln(CAH)_{i,t}+\sigma_5\ln(OUV)_{i,t}$$
$$+\sigma_6\ln(TIV)_{i,t}+\sigma_y W_{i,t}+\eta_i+\xi_t+\varepsilon_{i,t}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

METHOD AND DATA

CMP index construction

Laxton and N'Diaye (2002) proposed in their work a simple measure of CMP in the light of a transformation of long-term interest rates that compares the current rate ($R_{i,t}$) with its higher ($R_{i,max}$) and lower ($R_{i,min}$) historical levels over the selected period. It is formalized as follows:

$$Cr_{i,t} = \frac{\left(R_{i,t} - R_{i,\max}\right)^2}{\left(R_{i,t} - R_{i,\max}\right)^2 + \left(R_{i,t} - R_{i,\min}\right)^2}$$

Eyal Argov et al. (2007) will rewrite this formulation by replacing the long-term nominal interest rate with the inflation rate. Thus, we have:

$$Cr_{i,t} = \frac{\left(\pi_{i,\max} - \pi_{i,t}\right)^2}{\left(\pi_{i,\max} - \pi_{i,t}\right)^2 + \left(\pi_{i,\min} - \pi_{i,t}\right)^2}$$

This calculation made it possible to have PMC values between 0 and 1 (corresponding to absence and perfect credibility thresholds) by country and by year.

RESULTS

RESULTS

IMPACT OF CMP ON WEALTH (WEALTH DUMMY & GDP GROWTH)

CMP ⇨ NEGATIVE EFFECT

POPULATION; INVESTMENT; HUMAN CAPITAL; TRADE OPENNESS ⇨ POSITIVE EFFECT

NOMINAL CASH RATE; CMP*Trade; CMP*Investment; CMP*Human ⇨ NO EFFECT

RESULTS

IMPACT OF CMP ON INCOME INEQUALITY (GINI INDEX)

CMP ⇨ POSITIVE EFFECT

INVESTMENT; CMP*Trade; CMP*GDPCapita ⇨ NEGATIVE EFFECT

CMP*Interest ⇨ POSITIVE EFFECT

GDP PER CAPITA; TRADE OPENNESS ; INTEREST RATE; CMP*Investment ⇨ NO EFFECT

CONCLUSION AND RECOMMENDATIONS

- **THEORETICALLY**, CMP as it is implemented is not usefull in terms of economic deelopment objectives.
- **PRACTICALY**, African present good performance for CMP in terms of price stability and less performance in terms of wealth creation and inequality reduction due to inssuficient demand.
- **EMPIRICALY**, our results show that the paradox of CMP is traceable in Africa with a bad performance in terms of wealth creation and income inequality reduction.
  - The implementation of CMP is to be reviewed;
  - Price stability does not absolutelly matter
  - **Wealth creation** and **income inequality reduction** should be the main pet subjects

With a promising economic environment mainly characterized by a low inflation, we recommend the promotion of a monetary policy oriented toward primarily improving wealth creation and inequality reduction under the constraint of price stability in Africa.

THANK YOU