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Fighting African capital flight: timelines for the adoption of common policies

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Fighting African capital flight: timelines for the adoption of common policies

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Abstract

This paper provides an exhaustive assessment of feasible horizons for policy harmonization against African capital flight. The empirical evidence is based on a methodological innovation on common policy initiatives and the results are premised on 15 fundamental characteristics of African capital flight based on income-levels, legal origins, natural resources, political stability and religious domination. Based on the findings, a genuine standard-setting timeframe is in the horizon of 6-13 years. Within the timeframe, common policies are feasible and could be enforced without distinction of nationality or locality in identified fundamental characteristics with full convergence.

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1. Introduction

The status of Africa as a net creditor to the rest of the world is certainly one of the most heartbreaking and earthshaking paradoxes in contemporary development economics. The continent is facing substantial challenges in terms of: among others, hindering public investment, growing financing gaps and poor social delivery. Accordingly, a crucial constraint to African development is the lack of financing (Boyce & Ndikumana, 2012). But paradoxically, it is the source of exponential capital flight that has considerably escalated over the last decade. Borrowing from Boyce & Ndikumana, 33 sub-Saharan African (SSA) countries lost a total of 814 billion (constant 2010 US$) from 1970 to 2010. This far surpasses the amount of official development aid ($659 billion) and foreign direct investment ($306 billion) received by these countries. Put at best, this amount of capital flight stood at $ 1.06 trillion in 2010, ultimately outweighing the $189 billion of external liabilities in that same year if the United State Treasury Bill rate was to be applied.

In light of the above, this paper provides an African picture on feasible timelines for policy harmonization against capital flight based on recent methodological innovations on the adoption of common policies (Asongu, 2012a). The empirical evidence is based on 37 countries and the richness of our dataset provides us with the degrees of freedom necessary to disaggregate countries into fundamental characteristics of capital flight based on income-levels, legal origins, natural resources, political stability and religious domination. The intuition motivating the study is that, upholding blanket policies in the battle against capital flight may not be effective unless they are contingent on the fundamental characteristics and prevailing trajectories, dynamics and tendencies of capital flight within identified fundamental characteristics. The theoretical and empirical underpinnings on which the study is built are twofold: convergence in capital flight within a fundamental characteristic will mean the adoption of common policies is feasible and; full convergence implies the enforcement of the

common policies without distinction of nationality or locality within each fundamental characteristic (Asongu, 2012a).

The rest of the paper is organized as follows. Data and methodology are discussed and outlined respectively in Section 2. The empirical analysis is covered in Section 3. Section 4 concludes.

2. Data and Methodology

2.1 Data

We investigate a sample of 37 African countries with data from African Development Indicators (ADI) and the Financial Development and Structure Database (FDSD) of the World Bank (WB) for the period 1980-2010. The analysis is limited to only 37 African countries because the data on capital flight from Boyce & Ndikumana (2012) is only available for these countries. Fundamental characteristics[2] of petroleum-exporting and conflict-affected countries are consistent with Weeks (2012). To these we add, legal origins (La Porta et al., 1998; Asongu, 2012b), income-levels (Boyce & Ndikumana, 2003; Narayan et al., 2011; Asongu, 2012c) and religious dominations (Asongu, 2012d) consistent with recent convergence literature. The choice of the control variables is in line with theoretical underpinnings of conditional convergence which state that, if countries differ in macroeconomic and institutional characteristics on which software piracy is endogenous then, it is possible for conditional convergence to take place. The eight control variables employed include: per capita economic prosperity, public investment, trade, private capital flows, rule of law, financial development, inflation and foreign aid[3]. From the summary statistics it could be noticed that, there is quite a degree of variation in the data utilized so that one should be comfortable and confident that reasonable estimated relationships would emerge. An initial

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[2] Government quality (transparency, corruption, regulation quality …etc) and macroeconomic fundamental characteristics have the limitation of being time-dynamic.
[3] Please see Appendix 1 for definitions and sources of the variables.

correlation analysis which has served to mitigate issues of overparametization and multicolinearity shows that, there are no issues in terms of the relationships to be estimated[4].

We devote space to laying emphasize on the *comparability and compatibility* dimensions of the capital flight measurement. This capital flight indicator has two main drawbacks: it is neither compatible with the underpinnings of the convergence theory nor comparable with other variables. The capital flight indicator in the Boyce & Ndikumana (2012) database is in constant $ 2010 million terms. Hence, it is neither compatible with GDP-based underpinnings of the convergence literature nor comparable with other control variables. To tackle the two issues, we: first convert current GDP to constant 2010 terms; then we divide the corresponding values by 1 000 000 to obtain a 'GDP constant of 2010 USD (in millions) and; finally we divide the capital flight data by the 'GDP constant of 2010 USD (in millions). Hence, we have a capital measurement that is in GDP ratio (see Appendix 1).

2.2 Methodology

The estimation procedure is typically in line with evidence from recent convergence literature (Asongu, 2012a). The choice of the β-convergence modeling strategy is due to constraints in the data set; which is panel. The dynamic panel system GMM estimation technique employed is as follows:

$$\ln(Y_{i,t}) - \ln(Y_{i,t-\tau}) = \beta \ln(Y_{i,t-\tau}) + \delta W_{i,t-\tau} + \eta_i + \xi_t + \varepsilon_{i,t} \tag{1}$$

$$\ln(Y_{i,t}) = \sigma \ln(Y_{i,t-\tau}) + \delta W_{i,t-\tau} + \eta_i + \xi_t + \varepsilon_{i,t} \tag{2}$$

$$\ln(Y_{i,t}) - \ln(Y_{i,t-\tau}) = \sigma \ln(Y_{i,t-\tau} - Y_{i,t-2\tau}) + \delta(W_{i,t-\tau} - W_{i,t-2\tau}) + (\varepsilon_{i,t} - \varepsilon_{i,t-\tau}) \tag{3}$$

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[4] Owing space constraints, the correlation analysis and summary statistics have not been presented but can be provided upon request.

where $Y_{i,t}$ is the proxy for capital flight in country i at period t. $\sigma = 1 + \beta$. $W_{i,t}$ is a vector of determinants of capital flight (or control variables), η_i is a country-specific effect, ξ_t is a time-specific constant and, $\varepsilon_{i,t}$ an error term. Absolute convergence is estimated in the absence of $W_{i,t}$. Consistent with Islam (1995, p. 14), yearly time spans are too short to be appropriate for studying convergence, as short-run disturbances may loom substantially in such brief time spans. Therefore, considering the data span of 31 years, we are consistent with Asongu (2012a) in using two-year non-overlapping intervals (NOI). This means in the analysis, τ is set to 2. We also analyze the implied rate of convergence by computing $\sigma/2$. Accordingly, the estimated coefficient of the lagged differenced endogenous variable is divided by 2 because we have used a two year interval to absorb the short-term disturbances. With $0 < |\sigma| < 1$, we conclude the presence of convergence. The broader interpretation suggests, past differences have less proportionate impact on future variations, implying the variation on the left hand side of Eq. (3) is decreasing overtime (Asongu, 2012a).

3. Empirical results

Table 1 presents results that answer three questions motivating paper. In other words, policy makers are most likely to ask the following three questions before considering the harmonization of policies on capital flight. (1) Is capital flight converging within Africa or not? (2) If so, what is the rate and timing of the convergence process? (3) For which identified fundamental characteristics (of capital flight) do answers to the first and second questions apply? While an answer to the first question will guide on the feasibility of harmonizing blanket policies, the answer to the second will guide on an optimal timeline for such blanket policies. Accordingly, the answer to the third (given that the first-two are already answered), will determine the feasibility-of, timeframe-for and exclusiveness (or non arbitrariness) of the common policies. This third question is most relevant because, it underscores the imperative

for common policies to be contingent on the prevailing speeds of and time for full (100%) convergence within each identified fundamental characteristic of capital flight. The results broadly show that, a feasible horizon for the harmonization of blanket policies is between 6 to 13 years.

Table 1: Timelines for policy harmonization against capital flight

		Absolute Convergence (AC)			Conditional Convergence(CC)		
		AC	% of AC	Yrs to AC	CC	% of CC	Yrs to CC
Income Levels	Upper Middle Income	Yes	2%	100Yrs	Yes	16.60%	12Yrs
	Lower Middle Income	No	---	---	No	---	---
	Middle Income	Yes	2%	100Yrs	No	---	---
	Low Income	Yes	33.10%	6.04Yrs	Yes	20.05%	9.97Yrs
Legal Origins	English Common Law	Yes	33.05%	6.05Yrs	No	---	---
	French Civil Law	Yes	12.50%	16Yrs	Yes	16.40%	12.1Yrs
Religion	Christianity	Yes	33.00%	6.05Yrs	Yes	16.40%	12.1Yrs
	Islam	No	---	---	No	---	---
Regions	Sub-Saharan Africa	Yes	33.05%	6.05Yrs	Yes	16.55%	12Yrs
	North Africa	Yes	17.70%	11.2Yrs	No	---	---
Resources	Oil Exporting	Yes	15.50%	12.8Yrs	Yes	15.65%	12.7Yrs
	Non Oil Exporting	Yes	33.05%	6.05Yrs	No	---	---
Stability	Conflict	Yes	33.11%	6.04Yrs	Yes	29.75%	6.72Yrs
	Non-conflict	No	---	---	Yes	16.88%	11.8Yrs
	Africa	Yes	33.05%	6.05Yrs	Yes	16.50%	12.1Yrs

Yrs: Years.

4. Conclusion

This paper has provided an exhaustive assessment of feasible horizons for policy harmonization against African capital flight. The empirical evidence is based on a methodological innovation on common policy initiatives and the results are premised on 15 fundamental characteristics of African capital flight based on income-levels, legal origins, natural resources, political stability and religious domination. Based on the findings, a genuine standard-setting timeframe is in the horizon of 6-13 years. Within the timeframe, common policies are feasible and could be enforced without distinction of nationality or locality in identified fundamental characteristics with full convergence.

Appendix 1: Variable Definitions

Variables	Signs	Variable Definitions(Measurement)	Sources
Public Investment	Pub. Ivt	Gross Public Investment (% of GDP)	World Bank (WDI)
Private Capital Flows	PCF	Private Capital Flows (% of GDP)	World Bank (WDI)
Trade Openness	Trade	Imports plus Exports of Goods and Services (% of GDP)	World Bank (WDI)
Rule of Law	R.L	Rule of Law (estimate): Captures perceptions of the extent to which agents have confidence in and abide by the rules of society and in particular the quality of contract enforcement, property rights, the police, the courts, as well as the likelihood of crime and violence.	World Bank (WDI)
GDP per capita Growth	GDPpcg	Average annual GDP per capita growth rate	World Bank (WDI)
Foreign Aid	DAC Aid	NODA from DAC Countries (% of GDP)	World Bank (WDI)
Liquid Liabilities	LL	Financial System Deposits (% of GDP)	World Bank (FDSD)
Inflation	Inflation	Consumer Price Index (Annual %)	World Bank (WDI)
Capital Flight	Cap. Flight	Capital Flight (constant of 2010 in % of GDP)	Boyce & Ndikumana (2012)

FDSD: Financial Development and Structure Database. WDI: World Bank Development Indicators. NODA: Net Official Development Assistance. DAC: Development Assistance Committee.

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