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Addressing a Root Cause of Sub Saharan Africa's Poverty Tragedy: Horizons for post-2015 Common Capital Flight Policies

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Addressing a Root Cause of Sub Saharan Africa's Poverty Tragedy: Horizons for post-2015 Common Capital Flight Policies

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Abstract

An April 2015 World Bank report on attainment of the Millennium Development Goal (MDG) extreme poverty target has revealed that extreme poverty has been decreasing in all regions of the world with the exception of sub-Saharan Africa (SSA), in spite of the sub-region enjoying more than two decades of growth resurgence. This study builds on a critic of Piketty's '*capital in the 21st century*' and recent methodological innovations on reverse Solow-Swan to review empirics on the adoption of common policy initiatives against a cause of extreme poverty in SSA: capital flight. The richness of the dataset enables the derivation of 14 fundamental characteristics of African capital flight based on income-levels, legal origins, natural resources, political stability, regional proximity and religious domination. The main finding reveals that regardless of fundamental characteristic, from a projection date of 2010, a genuine timeframe for harmonizing policies is between 2016 and 2023. In other words, the beginning of the psot-2015 agenda on sustainable development goals coincides with the timeframe for common capital flight policies.

JEL Classification: C50; E62; F34; O19; O55
Keywords: Econometric modeling; Capital flight; Poverty; Africa

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1. Introduction

There are at least four reasons for reviewing Asongu (2014) on '*Fighting African Capital Flight: Empirics on Benchmarking Policy Harmonization'*: (i) recent disturbing extreme poverty trends in Sub-Saharan Africa (SSA); (ii) a critic of Piketty's 'capital in the 21st century' that builds on capital flight to elucidate the sub-region's extreme poverty tragedy; (iii) a recent methodological innovation for common policy initiatives based on negative macroeconomic and institutional signals (reverse Solow-Swan) and (iv) the imperative to account for more fundamental characteristics of the sub-region's development in order to avail room for robustness and more policy implications.

First, an April 2015 World Bank report on attainment of the Millennium Development Goal (MDG) extreme poverty target has revealed that extreme poverty has been decreasing in all regions of the world, with the exception of Africa, where 45% of countries in SSA are substantially off-track from achieving the MDG extreme poverty target (World Bank, 2015). As shown in Figure 1 below, whereas extreme poverty has been declining in all regions of the world, it has unfortunately been increasing in SSA. This is despite over two decades of growth resurgence that began in the mid 1990s.

Second, building on the increasing poverty levels in SSA, Asongu (2016) has presented a critic of Piketty's (2013) 'capital in the 21st century'. Building on: (i) responses from Kenneth Rogoff and Joseph Stiglitz; (ii) post Washington Consensus paradigms and (iii) underpinnings from Boyce-Fofack-Ndikumana and Solow-Swan, the study concludes that extreme poverty in SSA would increase as long as the return on political economy (or illicit capital flight) is higher than the growth rate in the sub-region.

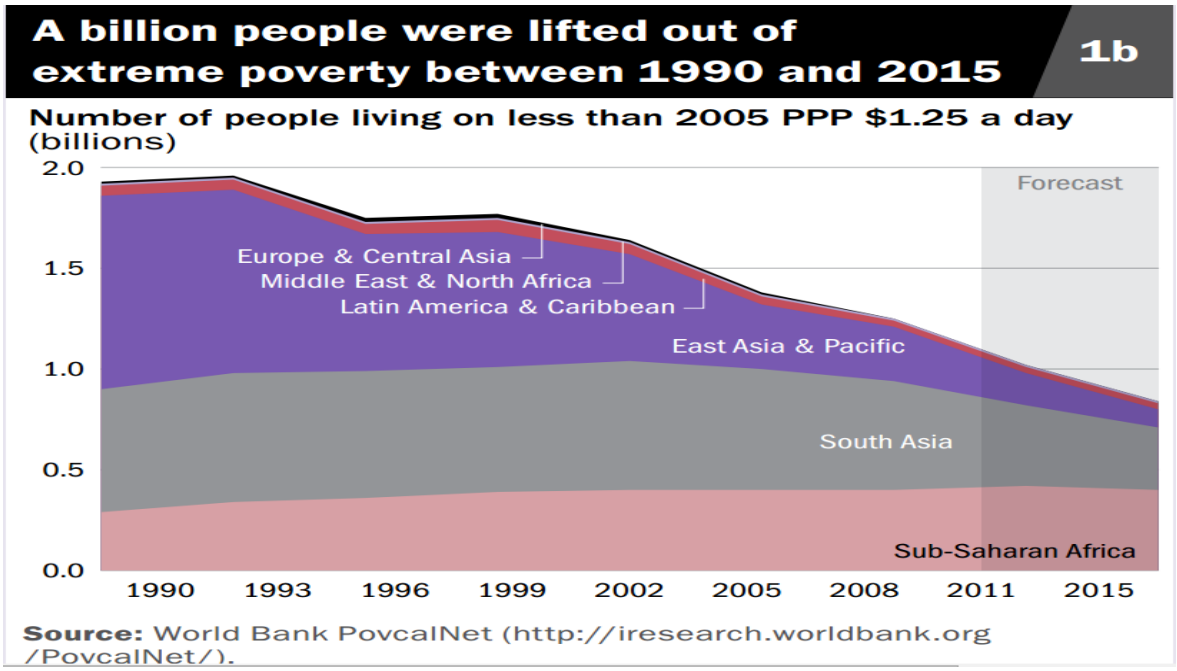
Third, a recent stream of literature is building on theoretical underpinnings of neoclassical growth models to propose the need for common policies based on negative macroeconomic and institutional signals. In essence, whereas the theoretical underpinnings of income convergence have exclusively been limited to catch-up in positive signals, a new stream of literature is evolving on catch-up in negative signals. According to this stream, it is more relevant to initiate common policies based on negative signals because these are policy syndromes by conception and definition. The three studies in this stream of literature are to the best of our knowledge: (i) Asongu (2013) on harmonizing policies against software piracy; (ii) Asongu and Nwachukwu (2015) who have predicted the 2011 Spring using negative signals in

institutional and macroeconomic variables and (iii) Asongu (2014) on benchmarking policy harmonization against capital flight in SSA.

Fourth, Asongu (2014) has used two fundamental characteristics to project horizons for common policies against capital flight in SSA. We extend the underlying study by accounting for income levels, legal origins, regional proximity and religious domination. In essence, accounting for more fundamental characteristics of the sub-region's development is essential in order to avail room for robustness and more policy implications. Accordingly, upholding blanket policies in the battle against capital fight may not be effective unless they are contingent on fundamental characteristics and prevailing trajectories of capital flight in SSA. Hence, 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 SSA? (2) If so, what is the degree and timing of the convergence process? (3) For which relevant 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 determine an optimal timeframe for the blanket policies. But ultimately, the answer to the third (given that the first and second questions 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 underlines the need 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.

For the purpose of the study, we assess a sample of 37 African countries with data from: (i) African Development Indicators (ADI) and the Financial Development and Structure Database (FDSD) of the World Bank (WB) and (ii) Boyce and Ndikumana (2012) for the period 1980-2010. For brevity and lack of space, the interested reader can refer to further details on the theoretical underpinnings, control variables and methodology in the underlying study we are reviewing. The selection criteria for additional fundamental characteristics are from recent African development literature (Asongu, 2015). The rest of the paper is organized in the following manner. The empirical analysis and discussion of results are covered in Section 2 while Section 3 concludes.

Figure 1: Comparative regional poverty levels



2. Empirical Analysis

2.1 Presentation of results

This section looks at three principal concerns: (i) investigation of the presence of convergence; (ii) computation of the speed of convergence and (iii) determination of the time needed for full (100%) convergence. The summary of overall findings is presented in Table 1 in which the three concerns are addressed. Findings for absolute (unconditional) and conditional convergence are presented in Table 2 and Tables 3-4 respectively.

Absolute convergence is estimated with only the lagged difference of the endogenous variable as independent variable whereas conditional convergence is in the presence of the conditioning information set (control variables). Hence, unconditional convergence is estimated without $W_{i,t}$: vector of determinants (government expenditure, trade, FDI, GDP growth, regulation quality, financial depth, development assistance and inflation) of capital flight[2]. Accordingly, in order to assess the validity of the model and indeed the convergence hypothesis, we perform two tests, notably: (i) the Sargan-test which assesses the over-identification

[2] Note should be taken of the fact that, the second vector of determinants entails the second set of control variables as presented in Table 4 (public investment, trade, private capital flows, GDP per capita growth, rule of law, liquid liabilities, development aid from DAC countries and inflation).

restrictions and (ii) the Arellano and Bond test for autocorrelation which examines the null hypothesis of no autocorrelation. The Sargan-test investigates if the instruments are uncorrelated with the error term in the equation of interest. The null hypothesis is the stance that the instruments as a group are strictly exogenous (do not suffer from endogeneity), which is necessary for the validity of the Generalized Method of Moments (GMM) estimates. The p-values of estimated coefficients are disclosed in brackets in the line following the reported values of the estimated coefficients. We broadly observe that the null hypothesis of the Sargan test is not rejected in all the regressions. Priority is given to the second order autocorrelation: AR(2) test in first difference because it is more relevant than AR(1) as it detects autocorrelation in difference. For almost every model, we are unable to reject the AR(2) null hypothesis for the absence of autocorrelation, especially for conditional convergence specifications. Therefore, there is robust evidence that most of the models are free from autocorrelation at the 1% significance level.

Table 1 presents a summary of the findings from Tables 2-4. This entails results for Absolute Convergence (AC), Conditional Convergence (CC), the Speed of Absolute Convergence (SAC), the Speed of Conditional Convergence (SCC) and the rate required to achieve full (100%) convergence in both types of convergences.

From a general perspective, the following conclusions could be drawn. (i) Conditional convergence findings based on the second specification (Table 4) are substantially more significant than those based on the first specification (Table 3). Therefore, conditional convergence is based on the variables we observe and empirically test (or model), which may not reflect all determinants of capital flight that facilitate the convergence process. Hence, the discussion of findings will be based only on the second specification for conditional convergence. (ii) Based on continental results, findings on 'Petroleum exporting', 'North Africa' 'French civil-law', 'Middle-income' and 'Upper-middle-income' countries significantly affect the absolute convergence process. In other words, these fundamental characteristics have rates of convergence that significantly differ from the 33.05% per annum observed for the African continent. Their respective degrees of convergence are much lower, implying a corresponding lengthier period required for full convergence: with the disparity most pronounced in 'Middle-income' and 'Upper-middle-income' countries which both have a 2% per annum convergence rate and a time needed for full convergence of 100 years. (iii) Within the perspective of CC, but

for the ‘Conflict-affected’ and ‘Low-income’ countries results, African findings are broadly consistent across other fundamental characteristics. (iv) Regardless of fundamental characteristic, from a projection date of 2010, a genuine timeframe for harmonizing policies is between 2016 and 2023.

Table 1: Summary of results on Absolute and Conditional Convergences

	Income Levels				Legal Origins		Religious Dom.		Regions		Resources		Stability		Africa
	UMI	LMI	MI	LI	English	French	Christ.	Islam	SSA	NA	Oil	Non-oil	Conflict	Non-co.	
Panel A: Absolute Convergence with Specifications in Table 2															
Absolute C (AC)	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
% of A.C	2%	n.a	2%	33.10%	33.05%	12.50%	33.05%	n.a	33.05%	17.70%	15.55%	33.05%	33.11%	n.a	33.05%
Years to A.C	100Yrs	n.a	100Yrs	6.04Yrs	6.05Yrs	16Yrs	6.05Yrs	n.a	6.05Yrs	11.2Yrs	12.8Yrs	6.05Yrs	6.04Yrs	n.a	6.05Yrs
Panel B: Conditional Convergence with Specifications in Table 3															
Conditional C (CC)	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	No	No
% of C.C	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	11.10%	n.a	n.a	11.25%	n.a	n.a	n.a
Years to C.C	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	18.1Yr	n.a	n.a	17.7Yrs	n.a	n.a	n.a
Panel C: Conditional Convergence with Specifications in Table 4															
Conditional C (CC)	Yes	No	No	Yes	No	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes
% of C.C	16.6%	n.a	n.a	20.05%	n.a	16.40%	16.40%	n.a	16.55%	n.a	15.65%	n.a	29.75%	16.88%	16.50%
Years to C.C	12Yrs	n.a	n.a	9.97Yrs	n.a	12.1Yrs	12.1Yrs	n.a	12Yrs	n.a	12.7Yrs	n.a	6.72Yrs	11.8Yrs	12.1Yrs

AC: Absolute Convergence. CC: Conditional Convergence. Yrs: Years. UMI: Upper Middle Income. LMI: Lower Middle Income. MI: Middle Income. LI: Low Income. English: English Common-law. French: French Civil-law. Christ: Christianity dominated countries. Islam: Islam dominated countries. SSA: Sub-Saharan Africa. NA: North Africa. Oil: Petroleum exporting countries. Non-oil: Countries with no significant exports in petroleum. Conflict: Countries with significant political instability. Non-co: Countries without significant political instability. Dom: Domination.

Table 2: Absolute Convergence

	Income Levels				Legal Origins		Religious Dom.		Regions		Resources		Stability		Africa
	UMI	LMI	MI	LI	English	French	Christ.	Islam	SSA	NA	Oil	Non-oil	Conflict	Non-co.	
Initial	**0.04*** **	0.092	**0.04*** **	**0.662*** **	**0.661*** **	**-0.25*** **	**0.661*** **	0.167	**0.661*** **	**0.354** **	**-0.31*** **	**0.661*** **	**0.662*** **	-0.077	**0.661*** **
	(0.000)	(0.813)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	(0.421)	**(0.000)**	**(0.030)**	**(0.000)**	**(0.000)**	**(0.000)**	(0.484)	**(0.000)**
AR(1)	**0.994**	**-1.381**	**0.939**	**-1.051**	**-1.005**	**-1.078**	**-1.056**	-1.647*	**-1.057**	**-1.398**	**-1.000**	**-1.009**	**-1.001**	**-0.773**	**-1.057**
	(0.320)	**(0.167)**	**(0.347)**	**(0.293)**	**(0.314)**	**(0.280)**	**(0.290)**	(0.099)	**(0.290)**	**(0.162)**	**(0.317)**	**(0.312)**	**(0.316)**	**(0.439)**	**(0.290)**
AR(2)	**-0.999**	**0.676**	**-0.998**	**-0.991**	**-1.010**	**-0.921**	**-1.002**	**0.525**	**-1.002**	**-1.244**	**-1.038**	**-1.009**	**-0.999**	**-0.727**	**-1.002**
	(0.317)	**(0.499)**	**(0.318)**	**(0.321)**	**(0.312)**	**(0.357)**	**(0.316)**	**(0.598)**	**(0.316)**	**(0.213)**	**(0.299)**	**(0.312)**	**(0.317)**	**(0.467)**	**(0.316)**
Sargan OIR	**4.854**	**10.928**	**14.590**	**7.313**	**2.567**	**18.113**	**11.487**	**8.424**	**14.870**	**3.207**	**6.594**	**7.191**	**6.012**	**21.551**	**15.022**
	(1.000)	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**	**(1.000)**
Wald	**674*** **	0.055	**938*** **	**8e+5*** **	**2e+6*** **	**25*** **	**4e+5*** **	**0.645**	**4e+5*** **	**4.69** **	**2087*** **	**2e+6*** **	**7e+7*** **	**0.488**	**442672*** **
	(0.000)	(0.813)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.421)**	**(0.000)**	**(0.030)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.484)**	**(0.000)**
Countries	5	11	16	19	15	20	25	10	31	4	8	27	11	24	35
Observations	70	158	233	271	219	285	359	145	444	60	115	389	161	343	504

***, **,*: significance levels of 1%, 5% and 10% respectively. AR(2): Second Order Autocorrelation test. OIR: Over-identifying Restrictions test. Initial: lagged endogenous estimated coefficient. Wald: test for the joint significance of estimated coefficients. AC: Absolute Convergence. CC: Conditional Convergence. Yrs: Years. UMI: Upper Middle Income. LMI: Lower Middle Income. MI: Middle Income. LI: Low Income. English: English Common-law. French: French Civil-law. Christ: Christianity dominated countries. Islam: Islam dominated countries. SSA: Sub-Saharan Africa. NA: North Africa. Oil: Petroleum exporting countries. Non-oil: Countries with no significant exports in petroleum. Conflict: Countries with significant political instability. Non-co: Countries without significant political instability. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Wald statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

Table 3: Conditional Convergence (First Specification)

	Income Levels				Legal Origins		Religious Dom.		Regions		Resources		Stability		Africa
	UMI	LMI	MI	LI	English	French	Christ.	Islam	SSA	NA	Oil	Non-oil	Conflict	Non-co.	
Initial	-0.011	-0.130	-0.003	-0.318	-0.015	-0.297	-0.219	0.566	**-0.222***	1.247	0.002	**-0.22****	-0.060	0.005	-0.215
	(0.932)	(0.813)	(0.976)	(0.398)	(0.897)	(0.187)	(0.158)	(0.667)	**(0.086)**	(0.451)	(0.996)	**(0.044)**	(0.940)	(0.949)	(0.104)
Constant	0.051	0.013	0.145	-0.072	-0.136	-0.247	-0.0002	-0.073	-0.068	-0.002	-0.043	**-0.193***	-0.064	0.011	-0.044
	(0.480)	(0.693)	(0.618)	(0.644)	(0.346)	(0.430)	(0.997)	(0.404)	(0.620)	(0.976)	(0.632)	**(0.097)**	(0.724)	(0.914)	(0.695)
Gov't Expenditure	-0.002	-0.0002	-0.008	0.0002	-0.003	0.002	**-0.002***	0.001	-0.002	-0.0003	0.0001	-0.0007	-0.0009	-0.004	-0.001
	(0.897)	(0.709)	(0.184)	(0.939)	(0.276)	(0.722)	**(0.074)**	(0.590)	(0.399)	(0.441)	(0.983)	(0.806)	(0.735)	(0.128)	(0.483)
Trade	-0.0004	0.000	-0.0003	0.0003	0.0001	0.001	0.000	0.0003	0.0001	---	0.001	0.0004	0.002	0.0001	0.000
	(0.776)	(0.933)	(0.549)	(0.875)	(0.775)	(0.491)	(0.805)	(0.804)	(0.735)		(0.505)	(0.422)	(0.585)	(0.746)	(0.937)
Foreign Direct Ivt.	---	-0.002	-0.0005	-0.004	0.0002	-0.006	-0.001	-0.005	-0.0001	---	---	-0.0002	---	-0.001	0.001
		(0.152)	(0.838)	(0.768)	(0.942)	(0.715)	(0.560)	(0.765)	(0.970)			(0.929)		(0.755)	(0.676)
GDP Growth	---	0.007	0.013	0.008	0.017	0.025	0.013	0.015	0.021	---	---	**0.033***	---	0.017	0.019
		(0.361)	(0.631)	(0.308)	(0.501)	(0.270)	(0.270)	(0.461)	(0.304)			**(0.055)**		(0.401)	(0.274)
Regulation Quality	---	---	-0.020	-0.149	**-0.054***	-0.090	-0.009	---	-0.041	---	---	-0.019	---	0.007	**-0.04****
			(0.533)	(0.367)	**(0.078)**	(0.545)	(0.751)		(0.210)			(0.663)		(0.868)	**(0.043)**
Financial Depth	---	---	-0.094	---	0.186	0.155	0.095	---	0.070	---	---	**0.143***	---	0.009	0.048
			(0.628)		(0.240)	(0.620)	(0.299)		(0.636)			**(0.071)**		(0.896)	(0.621)
Foreign Aid	---	---	0.0004	---	-0.002	-0.000	0.002	---	-0.000	---	---	0.0005	---	0.001	-0.0003
			(0.900)		(0.638)	(0.988)	(0.256)		(0.989)			(0.875)		(0.664)	(0.852)
Inflation	---	---	-0.003	---	---	---	**-0.004***	---	-0.001	---	---	-0.001	---	-0.005	-0.001
			(0.213)				**(0.053)**		(0.581)			(0.711)		(0.145)	(0.421)
AR(1)	**0.967**	**-0.745**	**-1.364**	**-0.859**	**-1.380**	**-0.935**	**-1.108**	**-0.740**	**-1.247**	**-0.708**	**-0.721**	**-1.285**	**-0.793**	**-1.361**	**-1.242**
	(0.333)	**(0.455)**	**(0.172)**	**(0.390)**	**(0.167)**	**(0.349)**	**(0.267)**	**([0.459)**	**(0.212)**	**(0.478)**	**(0.470)**	**(0.198)**	**(0.427)**	**(0.173)**	**(0.213)**
AR(2)	**-0.885**	**-0.153**	**-1.097**	**0.120**	**-1.021**	**-0.088**	**-0.687**	**0.543**	**-0.587**	**-1.250**	**0.403**	**-0.796**	**0.550**	**-1.082**	**-0.643**
	(0.375)	**(0.877)**	**(0.272)**	**(0.904)**	**(0.307)**	**(0.929)**	**(0.491)**	**(0.587)**	**(0.556)**	**(0.211)**	**(0.686)**	**(0.426)**	**(0.582)**	**(0.278)**	**(0.519)**
Sargan OIR	**0.996**	**5.102**	**4.923**	**2.594**	**2.764**	**4.918**	**4.256**	**2.918**	**10.621**	**1.637**	**3.887**	**9.110**	**1.981**	**10.095**	**13.395**
Wald	0.207	**23.06*****	**22.55*****	**17.60*****	**18.78****	**41.6*****	**32.89*****	6.620	**40.8*****	**7.910****	1.228	**25.30*****	4.381	**21.01****	**49.72*****
	(0.976)	**(0.000)**	**(0.007)**	**(0.007)**	**(0.016)**	**(0.000)**	**(0.000)**	(0.250)	**(0.000)**	**(0.019)**	(0.746)	**(0.002)**	(0.223)	**(0.012)**	**(0.000)**
Countries	5	9	13	9	11	11	17	7	19	4	5	19	6	17	22
Observations	73	129	95	56	77	72	114	81	125	60	69	129	77	116	149

***, **,*: significance levels of 1%, 5% and 10% respectively. AR(2): Second Order Autocorrelation test. OIR: Over-identifying Restrictions test. Initial: lagged endogenous estimated coefficient. Wald: test for the joint significance of estimated coefficients. AC: Absolute Convergence. CC: Conditional Convergence. Yrs: Years. UMI: Upper Middle Income. LMI: Lower Middle Income. MI: Middle Income. LI: Low Income. English: English Common-law. French: French Civil-law. Christ: Christianity dominated countries. Islam: Islam dominated countries. SSA: Sub-Saharan Africa. NA: North Africa. Oil: Petroleum exporting countries. Non-oil: Countries with no significant exports in petroleum. Conflict: Countries with significant political instability. Non-co: Countries without significant political instability. Gov't: Government. Ivt: Investment. GDP: Gross Domestic Product. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Wald statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

Table 4: Conditional Convergence (Second Specification)

	Income Levels				Legal Origins		Religious Dom.		Regions		Resources		Stability		Africa
	UMI	LMI	MI	LI	English	French	Christ.	Islam	SSA	NA	Oil	Non-oil	Conflict	Non-co.	
Initial	**0.33*** **	0.357	-0.037	**-0.40*** **	-0.092	**-0.32*** **	**-0.32*** **	0.292	**-0.33*** **	0.618	**-0.31*** **	-0.223	**0.59*** **	**-0.33*** **	**-0.33*** **
	(0.000)	(0.750)	(0.654)	**(0.000)**	(0.376)	**(0.000)**	**(0.000)**	(0.269)	**(0.000)**	(0.195)	**(0.000)**	(0.124)	**(0.000)**	**(0.000)**	**(0.000)**
Constant	**0.293***	0.053	0.133	-0.617	-0.012	-0.422	-0.263	-0.002	-0.257	0.027	-0.258	-0.097	5.001	0.102	-0.197
	(0.097)	(0.445)	(0.364)	(0.265)	(0.927)	(0.454)	(0.338)	(0.986)	(0.323)	(0.118)	(0.408)	(0.308)	(0.410)	(0.660)	(0.455)
Public Investment	-0.013	0.002	-0.009	0.032	-0.004	0.003	0.018	0.001	0.024	---	0.009	-0.005	-0.610	0.022	0.024
	(0.442)	(0.590)	(0.246)	(0.473)	(0.518)	(0.901)	(0.422)	(0.784)	(0.453)		(0.444)	(0.456)	(0.334)	(0.516)	(0.474)
Trade	-0.002	-0.0003	0.0001	**0.023****	0.0001	0.009	0.004	0.0001	0.004	---	0.007	0.000	0.038	0.001	0.003
	(0.185)	(0.337)	(0.634)	**(0.012)**	(0.775)	(0.106)	(0.277)	(0.851)	(0.255)		(0.295)	(0.967)	(0.612)	(0.558)	(0.283)
Priv. Capital Flows	---	-0.002	0.003	**-0.09****	0.004	-0.018	-0.013	-0.006	-0.015	---	-0.020	0.003	-0.291	-0.005	-0.014
		(0.412)	(0.472)	**(0.044)**	(0.414)	(0.486)	(0.505)	(0.295)	(0.362)		(0.245)	(0.705)	(0.514)	(0.763)	(0.523)
GDPpc Growth	---	0.009	0.006	0.003	0.015	0.007	0.012	0.002	0.013	---	---	0.018	0.181	0.040	0.011
		(0.308)	(0.601)	(0.795)	(0.501)	(0.768)	(0.393)	(0.842)	(0.359)			(0.289)	(0.387)	(0.284)	(0.480)
Rule of Law	---	-0.009	0.025	-0.415	-0.008	-0.093	-0.200	---	-0.197	---	---	-0.043	---	-0.111	-0.196
		(0.668)	(0.531)	(0.322)	(0.833)	(0.715)	(0.292)		(0.198)			(0.618)		(0.687)	(0.322)
Liquid Liabilities	---	-0.074	-0.137	**-3.65*****	-0.014	-0.120	-0.342	---	-0.450	---	---	0.150	---	-0.460	-0.425
		(0.543)	(0.394)	**(0.004)**	(0.945)	(0.836)	(0.456)		(0.436)			(0.224)		(0.356)	(0.299)
Foreign Aid (DAC)	---	---	0.0003	---	0.002	-0.002	-0.015	---	-0.018	---	---	0.005	---	-0.027	-0.020
			(0.974)		(0.588)	(0.911)	(0.504)		(0.443)			(0.405)		(0.567)	(0.442)
Inflation	---	---	-0.0004	-0.013	0.0001	-0.002	-0.002	---	-0.002	---	---	0.001	---	-0.009	-0.001
			(0.294)	(0.149)	(0.910)	(0.127)	(0.102)		(0.199)			(0.601)		(0.266)	(0.104)
AR(1)	**-1.062**	**-0.816**	**-1.492**	**-1.033**	**-1.224**	**-1.070**	**-1.042**	-1.915*	**-1.034**	**-1.357**	**-1.037**	**-1.327**	**-1.004**	**-1.013**	**-1.034**
	(0.287)	**(0.414)**	**(0.135)**	**(0.301)**	**(0.220)**	**(0.284)**	**(0.297)**	(0.055)	**(0.300)**	**(0.174)**	**(0.299)**	**(0.184)**	**(0.314)**	**(0.310)**	**(0.300)**
AR(2)	**-0.996**	**0.734**	**-0.935**	**-0.937**	**-0.988**	**-0.884**	**-1.099**	**0.304**	**-1.132**	**-1.227**	**-0.789**	**-0.921**	**-1.001**	**-1.092**	**-1.135**
	(0.319)	**(0.462)**	**(0.349)**	**(0.348)**	**(0.322)**	**(0.376)**	**(0.271)**	**(0.760)**	**(0.257)**	**(0.219)**	**(0.430)**	**(0.356)**	**(0.316)**	**(0.274)**	**(0.256)**
Sargan OIR	**1.007**	**3.111**	**6.043**	**5.279**	**4.002**	**4.692**	**10.614**	**3.333**	**15.647**	**2.232**	**1.784**	**17.049**	**8.641**	**10.380**	**24.748**
Wald	**133*** **	**93.38*** **	8.576	**1616*** **	4.629	**2666*** **	**2144*** **	4.684	**3320*** **	1.674	**120.3*** **	**37.12*** **	**8715*** **	**10261*** **	**3333*** **
	(0.000)	**(0.000)**	(0.477)	**(0.000)**	(0.865)	**(0.000)**	**(0.000)**	(0.455)	**(0.000)**	(0.195)	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**	**(0.000)**
Countries	5	10	14	14	13	15	22	9	25	4	7	23	10	19	28
Observations	73	69	98	83	86	95	148	92	161	60	73	146	120	125	181

***, **,*: significance levels of 1%, 5% and 10% respectively. AR(2): Second Order Autocorrelation test. OIR: Over-identifying Restrictions test. Initial: lagged endogenous estimated coefficient. Wald: test for the joint significance of estimated coefficients. AC: Absolute Convergence. CC: Conditional Convergence. Yrs: Years. UMI: Upper Middle Income. LMI: Lower Middle Income. MI: Middle Income. LI: Low Income. English: English Common-law. French: French Civil-law. Christ: Christianity dominated countries. Islam: Islam dominated countries. SSA: Sub-Saharan Africa. NA: North Africa. Oil: Petroleum exporting countries. Non-oil: Countries with no significant exports in petroleum. Conflict: Countries with significant political instability. Non-co: Countries without significant political instability. Priv: Private. GDPpc: GDP per capita. DAC: Development Assistance Committee. The significance of bold values is twofold. 1) The significance of estimated coefficients and the Wald statistics. 2) The failure to reject the null hypotheses of: a) no autocorrelation in the AR(1) and AR(2) tests and; b) the validity of the instruments in the Sargan OIR test.

2.2 Discussion of results

Before we dive into the discussing the results, it is important first and foremost to understand the economic intuition motivating absolute and conditional convergence of capital flight in the African continent. Absolute convergence in capital flight occurs when countries share the same fundamental characteristics with regard to bases governing capital flight such that only cross-country variations in initial levels of capital flight exist. Absolute convergence thus, results from factors such as, *inter alia*: significant export of petroleum; political instability due to conflicts; the emphasis legal origin places on property rights, enforcements of the rights and fight against corruption; the manner in which economic prosperity affects the propensity by which the extra-wealth is saved abroad. Absolute convergence also occurs because of adjustments common to fundamental characteristics (conflict-affected, high-income or English common-law countries for example). Hence, based on the above intuition we could expect capital flight to be higher in petroleum and conflict-affected countries. This is a necessary but not a sufficient condition for speedy convergence because of disparities in initial conditions of capital flight. These differences in initial conditions depend on: (i) time-dynamic evidence of significant petroleum exports, either because of recent discovery or substantial decline in productions; (ii) spontaneous reoccurrence of conflicts after relatively stable periods or arbitrary and unilateral violation of peace accords and (iii) the diffusion of legal cultures transmitted by colonial powers over time through regionalization and globalization such that the legal origin fundamental holds less ground.

On the other hand, conditional convergence is that which is contingent on cross-country disparities in structural and institutional characteristics that determine capital flight. In accordance with the economic growth literature (Barro & Sala-i-Martin, 1992, 1995), conditional convergence depicts the kind of convergence whereby, one's own long-term steady state (equilibrium) is contingent on structural characteristics and fundamentals of its institutions in particular and its economy in general. For example, non-petroleum exporting countries may differ significantly in the level of globalization, institutional quality, economic prosperity, financial development, price stability, foreign aid…etc To this end, our model for conditional convergence is contingent on institutional quality (rule of law and regulation quality), globalization (trade, FDI and private capital flows), financial development (at overall economic and financial system levels), economic prosperity (GDP growth at macro and micro levels),

inflation and development assistance (total NODA and NODA from DAC countries)[3]. Due to constraints in degrees of freedom, some models have not been conditional on all the determinants of capital flight outlined above. This is not a major issue because some conditional specifications in mainstream literature are limited to two macroeconomic control variables (Bruno et al., 2012).

We have observed the following from the findings. (i) Based on continental results, findings on 'Petroleum exporting', 'North Africa' 'French civil-law', 'Middle-income' and 'Upper-middle-income' countries significantly affect the absolute convergence process. The corresponding lower (higher) rate (time) of (to full) convergence is the result of differences in initial conditions of capital flight. For instance, the difference in petroleum countries could be explained by significant variations in initial conditions of capital flight discussed above: time-dynamic evidence of significant petroleum exports, either because of recent discovery or substantial decline in productions. (ii) Within the perspective of CC, but for the 'Conflict-affected' and 'Low-income' countries results, African findings are broadly consistent across other fundamental characteristics. 'Conflict-affected' and 'Low-income' countries significantly have a higher (lower) rate (time required) of (for full) conditional converge because of substantially lower cross-country differences in macroeconomic and institutional characteristics determining capital flight. Hence, cross-country differences in factors governing capital flight among "Conflict-affected" and "Low-income" countries are not very substantial. (iii) Regardless of fundamental characteristic, from a projection date of 2010, a genuine timeframe for harmonizing policies is between 2016 and 2023. This empirically indicates that (both in absolute and conditional terms) countries with lower rates of capital flight are catching-up their counterparts with higher rates. Consistent with the intuition motivating this analysis on policy harmonization, two inferences could be drawn: (i) on the one hand, convergence implies that, adopting common policies against the scourge is feasible and (ii) full (100%) convergence within the specified time horizon reflects the implementation (or harmonization) of the feasible policies without distinction of nationality or locality.

3. Concluding implications and future directions

An April 2015 World Bank report on attainment of the Millennium Development Goal (MDG) extreme poverty target has revealed that extreme poverty has been decreasing in all regions of the world with the exception of sub-Saharan Africa (SSA), in spite of the sub-region enjoying

[3] FDI: Foreign Direct Investment. NODA: Net Official Development Assistance. DAC: Development Assistance Committee.

more than two decades of growth resurgence. This study builds on a critic of Piketty's '*capital in the 21st century*' and recent methodological innovations on reverse Solow-Swan to review empirics on the adoption of common policy initiatives against a cause of extreme poverty in SSA: capital flight. The richness of the dataset enables the derivation of 14 fundamental characteristics of African capital flight based on income-levels, legal origins, natural resources, political stability, regional proximity and religious domination. The main finding reveals that regardless of fundamental characteristic, from a projection date of 2010, a genuine timeframe for harmonizing policies is between 2016 and 2023. In other words, the beginning of the psot-2015 agenda on sustainable development goals coincides with the timeframe for common capital flight policies.

Consistent with Asongu (2014), the following four points are relevant concerns that need to be resolved to facilitate this harmonization: improvement of the investment climate and ease of doing business to deter capital fight based on prospects of higher returns; formulation of common policies that would culminate in the repatriation of corruption-related capital flight deposited in Western banks and the improvement of formal institutions that will oversee the recuperation for this stolen capital (as well as deter potentially corrupt officials); involvement of Western banks in particular and the international community in general and; challenging the legitimacy of part of African debts. The purpose of this study has been to project more horizons for common policies against capital flight in Africa using more fundamental characteristics. More insights into policy measures against the underlying capital flight are available in Fofack and Ndikumana (2009), Boyce and Ndikumana (2011) and Asongu (2014).

Future studies devoted to extending extant literature may focus on more contemporary measures that are being tailored towards fighting illicit capital flight in the post-2015 sustainable development agenda.

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