Capital Flight and Economic Growth: The Case of ECCAS, ECOWAS and SADC Countries

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Abstract

The aim of this study is to make a comparative analysis of the effects of capital flight on economic growth in ECCAS, ECOWAS and SADC countries over the 1984-2015 period. The pooled mean groups (PMG) regression results show that the effect of capital flight on economic growth is negative and significant in SADC, unlike ECOWAS and ECCAS, where it is either positive or negative depending on whether or not the interaction between capital flight and private investment is taken into account. The main recommendation is to make the investment climate more attractive and promote the development of technological research, which could help minimize the outflow of capital in the long run.

1. Introduction

Capital flight remains a concept that has been long discussed in the literature. It is defined as a phenomenon that originates from corrupt leaders who, take advantage of their privileged positions to build personal fortunes held abroad such as foreign savings that are beyond the reach of local investors and national governments and seeking foreign protection against sociopolitical instability and bad governance, or against deterrent economic measures (Ndikumana, 2012).

The movement of capital from developed to developing countries has been continuous up to the early 1970s. During this period, capital inflows have been favorable to investment in many sectors of the economy. This favoured the achievement of high growth rates in most countries in sub-Saharan Africa (SSA). However, this movement changed in the early 1980s, leading to capital outflow from developing countries (DCs) to developed countries in the form of capital flight.
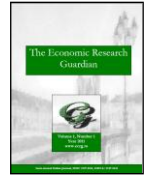
All sub-Saharan African countries (SSA)[1] accumulated more than US $ 14 trillion in capital flight over the 1970-2015 period. Recent studies by Ndikumana and Boyce (2018) reveal that oil-rich countries are the most exposed to this phenomenon. For example, Nigeria (an ECOWAS country) lost 340 billion US dollars, followed by Angola (an SADC country) with 61 billion dollars and Cameroon (an ECCAS country) with 43 billion US dollars.

Estimates over the 1984-2015 period show that 20 SSA[2] countries collectively reported massive capital outflows of US $ 730 billion cumulatively (PERI, 2018). When classified according to the communities, ECOWAS[3] comes first with 293 billion US dollars, followed by SADC[4] which lost 260 billion US dollars and ECCAS[5] (177 billion US dollars). However, over the same period, the ECOWAS and SADC achieved the same performance in terms of average growth rate as a percentage of GDP of 1.3%. Despite this, ECCAS still occupies the last place with 0.34% (World Bank, 2018). These statistics show that the phenomenon is gaudy in these Communities and that macroeconomic performance is deteriorating with the advent of capital flight. This leads to inequality in the distribution of wealth, unemployment, an increase in poverty and has consequences on economic growth.

Concerning economic growth, we observe that objective 8 of the MDGs has not been achieved. This is a very serious problem in most countries that make up these economic communities. There is a very controversial debate about the effects of capital flight on growth. On the one hand, authors like Egbuwalo and Abere (2018), Isola et al. (2017) and Geda and Yimer (2017) show that capital flight negatively affects economic growth in SSA. On the other hand, Adams and Klobodu (2018) and Wujung and Mbella (2016) find that capital flight does not affect economic growth. While, Owosu (2016), Adesoye et al. (2012), and Collier et al. (2004) find that capital flight positively affects economic growth.

To our knowledge, the main shortcomings in the study of this relationship in SSA countries are based partly on estimation methods that do not take into account certain long-run specificities and the ignorance of certain institutional variables that better explain the capital flight in economic communities. Also, the role played by capital flight on growth has not been examined by comparing the specificities of communities, and the interaction between these specificities and private investment which is a main economic growth channel has not been highlighted. Taking into account all these shortcomings enables us to fill this gap observed at the level of SSA's economic communities.

The main contribution of this study in terms of literature is that it offers new grids for understanding the phenomenon of capital flight in sub-Saharan Africa and more particularly in the Regional Economic Communities. Which has not yet been done to our knowledge. Previous studies have tried to make comparisons between countries but not in terms of communities. In addition, this study participates in the accumulation of knowledge by taking into account other variables that previous studies have neglected (the index of government quality, the total rent of

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[1] Algeria, Angola, Botswana, Burkina Faso, Burundi, Cameroon, DRC, Congo, Cote d'Ivoire, Egypt, Ethiopia, Gabon, Ghana, Kenya, Madagascar, Malawi, Mauritania, Morocco, Mozambique, Nigeria, Rwanda, Seychelles, Sierra Leone, South Africa, Sudan, Tanzania, Tunisia, Uganda, Zambia, Zimbabwe.

[2] Angola, Botswana, Burkina Faso, Burundi, Cameroon, DRC, Congo, Ivory Coast, Gabon, Ghana, Madagascar, Malawi, Mozambique, Nigeria, Seychelles, Sierra Leone, South Africa, Tanzania, Zambia, Zimbabwe.

[3] Ghana, Ivory Coast, Nigeria, Sierra Leone, Burkina Faso.

[4] Botswana, Madagascar, Malawi, Mozambique, Seychelles, South Africa, Zimbabwe, Tanzania, Zambia.

[5] Angola, Burundi, Cameroon, Congo, DRC, Gabon.
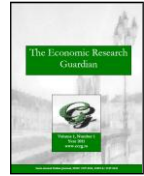
natural resources and the interaction between them). And finally, it bridges the gap on the comparison between capital flight and economic growth in the Regional Economic Communities of Sub-Saharan Africa.

This great disparity in the literature opens a research avenue in these communities which are generally characterized by a high level of capital flight and disparities in the macroeconomic sphere. We thus seek to answer the question: What is the effect of capital flight on economic growth on the Regional Economic Communities of Sub-Saharan Africa?

The aim of this study is to comparatively assess the effects of capital flight on economic growth in the ECCAS, ECOWAS and SADC communities. Sections II and III present the literature review and methodology while sections IV and V present the main findings and conclusion.

2. Theoretical and empirical review of the capital flight-economic growth relationship

The origins of growth are both exogenous and endogenous. However, in the theory of exogenous growth there is a lack of determinants that can explain capital flight. Despite the taking into account of three main factors (human, physical and financial capital) by endogenous growth theory, capital flight has not been taken into account in the financial aspects. With the advent of the new institutional economics (North, 1990, 1994, Kaufmann et al., 1999), financial aspects are taken into account and capital flight emerges with the crisis of the 1980s and 1990s.

Several authors have found mixed results. Egbuwalo and Abere (2018) and Isola et al. (2017) using an ARDL model, conclude that capital flight inhibits long-run economic growth in Nigeria. A similar result is obtained by Zobeiri et al. (2016) in Iran and by Geda and Yimer (2017) in Ethiopia using the ICOR method. Using the generalized method of moment, Ndiaye (2014) and Fofack and Ndikumana (2010) find that capital flight negatively affects economic growth in SSA.

However, Adams and Klobodu (2018) find that capital flight does not affect economic growth in 6 SSA countries. This is also the case for Wujung and Mbella (2016) in Cameroon. Usman and Arene (2014), by empirically examining the impact of capital flight and its macroeconomic determinants on agricultural growth in Nigeria from 1970 to 2013 find an insignificant relationship between total capital flight and agricultural growth.

On the other hand, Owosu (2016), Adesoye et al. (2012) and Collier et al. (2004) find that capital flight positively affects economic growth in Nigeria. Using oil-producing countries, Weeks (2015) find that capital flight positively affects the level of economic growth. Similarly, Leff (1964) and Huntington (1968) show that capital flight through corruption promotes the achievement of the best economic performance. In addition, Minoiu and Reddy (2010) find that development aid and capital formation increase economic growth in developing countries. Zakaree and Ayodeji (2012) using the OLS method find that capital flight positively affects Nigeria's economic growth.

Given this literature and mixed results, it is important to perform an empirical investigation to better understand the situation in the ECCAS, ECOWAS and SADC communities.
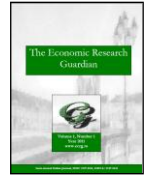
3. Research methodology

Our sample consists of the ECCAS (Cameroon, Angola, Congo, DRC and Gabon), ECOWAS (Ghana, Ivory Coast, Sierra Leone, Nigeria and Burkina Faso) and SADC (Botswana, Madagascar, Malawi, Mozambique, South Africa, Zimbabwe and Tanzania) communities. The data is of a quantitative nature and from secondary sources. They cover the 1984-2015 period and come from the Political Economic Research Institute database (PERI, 2018), the Gothenburg database (2018), the IMF's World Economic Outlook (2018) and the World Bank (WDI, 2018).

We use models developed by Fosu (2015) and De Long and Summers (1999). The matrix form of this model is as follows:

$$Growth_{it} = Capitalflight_{it}\alpha + X_{it}\beta + Y_{it}\gamma + \varepsilon_{it} \qquad (1)$$

With $Growth_{it}$ the real GDP growth rate ; $Capitalflight_{it}$ capital flight which is the variable of interest ; X_{it} Represents the vector of macroeconomic control variables (inflation rate, ratio of private investment and ratio of credit to the private sector to the GDP) ; Y_{it} Is the vector of institutional control variables (government quality index (which takes into account corruption, the quality of bureaucracy, law and order) and the stability of the government) and, ε_{it} is the error term.

Using the reduced panel model above, the econometric model to estimate can be written as:

$$Growth_{it} = \alpha_0 + \alpha_1 Growth_{i,t-1} + \alpha_2 Capitalflight_{it} + \alpha_3 Privateinvest_{it} + \\ \alpha_4 Inflation_{it} + \alpha_5 Crediteprivatesecteor_{it} + \alpha_6 GovQuality_{it} + \alpha_6 Democracy_{it} + \\ \phi(Capitalflight_{it} \times Privateinst_{it}) + \varepsilon_{it} \qquad (2)$$

With ϕ being the interaction coefficient between capital flight and private investment.

The estimation method used is the Pool Mean Group developed by Pesaran et al. (1999). According to Hsiao et al. (1999), the PMG estimator has the advantage over the MG estimator of having good properties even when the sample size is small relative to the time dimension. Empirically, Pesaran and Smith (1998) and Blackburne III and Frank (2007) show that PMG estimators produce efficient estimators for both large and small samples. This estimator is applied to the ARDL model (ARDL (p,q_1,…q_k)) formulated by Pesaran et al. (1999). The specification of a dynamic panel under ARDL has the following general form:

$$y_{it} = \sum_{j=1}^{p} \lambda_{ij}\, y_{i,t-j} + \sum_{j=0}^{q} \delta'_{ij}\, X_{i,t-j} + \mu_i + \varepsilon_{it} \qquad (3)$$

Where the number of groups i=1,2,…, N ; the number of period t=1,2,…, T ; X_{it} the vector of the explanatory variables ; δ'_{ij} are the coefficient vectors ; λ_{ij} are the scalars ; μ_i is the specific effect of the group. T must be large enough such that the model can be estimated separately for each group.
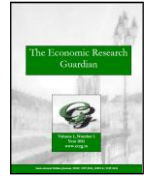
A time trend and other fixed regressors may be included. Thanks to this ARDL formulation, it is possible to jointly estimate the short and long-run parameters.

4. Results

The results of the preliminary tests (unit root test) presented in Table 1 show that all the variables are not stationary, but all integrated of order 0 and 1 (I (0) and I (1)). The variables Domestic credit to the private sector, index of the quality of government and democracy are stationary in the first difference in all the Regional Economic Communities according to the stationarity test of Im Pesaran and Shin (IPS). As for the other variables (growth, capital flight, private investment and inflation), they are stationary at level. IPS tests are more powerful than Levin Lin and Chu (LLC) tests. We can therefore suspect a cointegration relationship between the different variables.

Table 1 - Unit root test (Im-Pesaran-Shin (IPS) and Levin Lin et Chu (LLC))

Variables	Test	ECCAS		SADC		ECOWAS		Cointegration order
		Unit root test at a level	Unit root test in a 1st difference	Unit root test at a level	Unit root test in a 1st difference	Unit root test at a level	Unit root test in a 1st difference	
Growth	IPS	0.0000		0.0000		0.0000		I(0)
	LLC	0.0000		0.0000		0.0111		
Capitalflight	IPS	0.0000		0.0000		0.0000		I(0)
	LLC	0.0002		0.0000		0.0000		
Privateinvestment	IPS	0.0035		0.0058		0.0759		I(0)
	LLC	0.0112		0.0103		0.0949		
Inflation	IPS	0.0000		0.0013		0.0000		I(0)
	LLC	0.0000		0.0046		0.0000		
Privatesectorcredit	IPS	0.7898	0.0000	0.6717	0.0000	0.8874	0.0000	I(1)
	LLC	0.6004	0.0000	0.5760	0.0000	0.6021	0.0000	
Govquality	IPS	0.1645	0.0000	0.3862	0.0000	0.3528	0.0000	I(1)
	LLC	0.0362		0.0170		0.0094		I(0)
Democracy	IPS	0.1288	0.0000	0.2481	0.0000	0.9153	0.0000	I(1)
	LLC	0.0005		0.0165		0.0903		I(0)

Source: Authors.
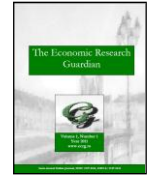
From Table 2 below, it appears that in the long-run, the effect of capital flight on growth varies from one community to another. The sign of the coefficient of the capital flight variable is negative and significant in the SADC. Unlike ECCAS and ECOWAS where, this effect is partly negative and significantly. These results are in line with those of Geda and Yimer (2017) and Egbuwalo and Abere (2018). They can be explained by the fact that funds to finance growth are generally diverted by privileged persons and put into private accounts with impunity and this reduces spending in structures that can add value. However, the positive and significant signs partially observed in ECCAS and ECOWAS are in line with the results of Owosu (2016) and Weeks (2015). They can be justified by the better use of debt in income generating projects.

Private investment discourages growth in ECCAS. This very surprising result can be explained by the discouragement of private investment by taxation, heavy administrative procedures and difficulty in acquiring property rights (African Development Bank Group, 2013). On the other hand, this investment promotes growth in the SADC and ECOWAS. The level of democracy has a positive and significant effect on growth in all communities (ECCAS, CEDEO, SADC). The index of the quality of government has a positive and negative impact on growth in ECCAS and SADC respectively.

The interaction between capital flight and private investment has a positive and significant effect on growth in ECCAS and SADC. This result is in line with those of De Long and Summers (1999). It can be justified by the state's ability to occupy both sectors and promote better investment policies and reduce capital flight. The coefficient of this variable is insignificant in the ECOWAS.
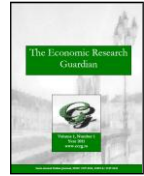
Table 2 - Summary of long-run ARDL panel data results of the effects of capital flight on economic growth

Variables	Growth ECCAS				Growth SADC				Growth ECOWAS			
	1	2	3	4	1	2	3	4	1	2	3	4
Capitalflight	0.06** (0.046)	0.18* (0.087)	0.396** (0.026)	-1.94* (0.062)	-0.048** (0.047)	-0.10*** (0.004)	-0.05* (0.071)	-0.20*** (0.001)	-0.15*** (0.002)	-0.24** (0.046)	0.03** (0.044)	0.11** (0.037)
Privateinvestment		0.07 (0.534)	-0.38** (0.035)	0.3 (0.333)		0.075 (0.126)	0.41*** (0.000)	0.35*** (0.000)		0.24** (0.030)	0.15* (0.070)	0.33*** (0.007)
Inflation			0.001 (0.414)	0.04 (0.392)			- 0.0008** (0.021)	-0.0008* (0.060)			0.005 (0.777)	0.0004 (0.982)
Privatesectorcredit			-0.28** (0.033)	-1.25*** (0.000)			-0.22*** (0.000)	-0.25*** (0.000)			-0.16*** (0.005)	-0.16*** (0.002)
Govquality			-0.20** (0.032)	0.16* (0.064)			-0.45*** (0.006)	0.05*** (0.001)			0.53 (0.139)	0.79** (0.026)
Democracy			0.95*** (0.001)	0.21 (0.143)			0.63*** (0.000)	0.68*** (0.000)			0.98*** (0.000)	1.03*** (0.000)
Capitalflight*Priveinvest		-0.009 (0.199)		0.11** (0.042)		0.01** (0.015)		0.02*** (0.000)		0.01 (0.308)		-0.008 (0.100)
Observations	155				248				155			
Group	5				8				5			

Note: *, **, *** respectively represent significance at the 10%, 5% and 1% levels. The values (…) represent the P-values or probabilities
1: model linking only capital flight with economic growth
2: model linking the interaction between capital flight and private investment
3: model linking capital flight and growth with other control variables taken into account
4: model relating the interaction between the capital flight and the private investment taking into account the other control variables
Source: Authors.

From Table 3, it can be seen that the adjustment term (ECT (-1)) is negative and significant in all communities. This sign shows that there is an adjustment between the short and long-run variables and that the models are globally significant in all communities. Capital flight is insignificant in ECCAS and SADC. This result is in line with those of Adams and Klobodu (2018) and Wujung and Mbella (2016). It has a positive effect on growth in ECOWAS. This result is explained by the judicious use of the debt. In addition, in the short-run, portfolio investments and expectations can reduce capital flight and lead to economic expansion. This positive result is in line with that of Saheed and Ayodeji (2012).

The sign of the coefficient of the index quality government variable is positive and significant in ECCAS. The positive effect of this index on growth testifies the importance of the score of this variable in this community and suggests that in the short-run, measures to fight corruption, bureaucracy and transparency in project management by the government have some efficiency. The non-significance of other variables with changing signs may be justified by the fact that most variables take time to affect growth. The quality of government shows that in a system of good governance, the expected effects are observed in the short-run.
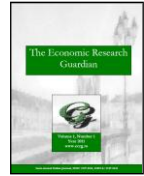
Table 3 - Summary of short-run ARDL panel data results of the effects of capital flight on economic growth

Variables	Growth				Growth				Growth			
	ECCAS				SADC				ECOWAS			
	1	2	3	4	1	2	3	4	1	2	3	4
ECT (-1)	-0.57***	-0.69***	-0.35*	-0.32*	-0.78***	-0.84***	-0.78***	-0.71***	-0.67***	-0.88***	-0.06***	-0.08***
	(0.001)	(0.000)	(0.056)	(0.091)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
D(Growth) (-1)		0.14	-0.018				-0.067	-0.08	-0.099	-0.019	0.10	0.069
		(0.120)	(0.880)				(0.397)	(0.279)	(0.420)	(0.911)	(0.481)	(0.737)
D(Capitalflight)	-0.12	-0.079	-0.16	0.099	-0.02	0.02	0.02	0.11	-0.075	0.12**	-0.15	-0.14
	(0.428)	(0.755)	(0.213)	(0.754)	(0.458)	(0.919)	(0.345)	(0.695)	(0.531)	(0.037)	(0.159)	(0.285)
D (privateinvest)		-0.06	0.13	-.986		0.02	-0.22	-0.14		-0.002	-0.16	-0.27
		(0.275)	(0.350)	(0.330)		(0.918)	(0.141)	(0.337)		(0.979)	(0.464)	(0.281)
D (inflation)			-0.015	-0.0027			0.07	0.08			-0.06	-0.06
			(0.689)	(0.923)			(0.191)	(0.207)			(0.186)	(0.175)
D(Privatesectorcredit)			-0.45	1.61			-0.14	-0.14			0.22	0.071
			(0.153)	(0.393)			(0.402)	(0.446)			(0.360)	(0.542)
D (Govquality)			0.81*	-0.99			0.14	0.13			-0.30	-0.31
			(0.087)	(0.341)			(0.345)	(0.412)			(0.586)	(0.438)
D (Democracy)			-0.56	-1.18			0.97	1.05			0.24	0.29
			(0.362)	(0.317)			(0.226)	(0.187)			(0.514)	(0.430)
D(Capitalflight*Priveinvest)		0.004		0.013		-0.004		-0.008		0.004		0.002
		(0.786)		(0.710)		(0.760)		(0.636)		(0.594)		(0.636)
Cons	-0.85	-0.88	1.27	-5.65	1.35	0.72	1.32	2.45	1.50	-0.01	-5.21	-7.91
	(0.001)	(0.108)	(0.244)	(0.102)	(0.052)	(0.329)	(0.145)	(0.026)	(0.008)	(0.982)	(0.026)	(0.009)
Observation	155				248				155			
Group	5				8				5			

Note: *, **, *** respectively represent the significance at the 10%, 5% and 1% levels. The values (…) represent the P-values or probabilities
1: model linking only capital flight with economic growth
2: model linking the interaction between capital flight and private investment
3: model linking capital flight and growth with other control variables taken into account
4: model relating the interaction between the capital flight and the private investment taking into account the other control variables
Source : Authors.

# 5. Conclusion and recommendations

The aim of this study is to comparatively assess the effects of capital flight on economic growth in ECCAS, ECOWAS and SADC communities. The estimation method used is that of Pool Mean Group. In the long run, capital flight has a negative effect on growth in SADC. Unlike ECCAS and ECOWAS where the positive effect is dominant. The interaction between capital flight and private investment has a positive and significant effect in ECCAS and SADC. It is insignificant in ECOWAS. In the short-run, capital flight has a positive and significant effect on growth only in the ECOWAS. The interaction between flight and private investment remains insignificant in all communities.

Two main policy implications are derived from these results: To improve economic growth in these communities, it is essential to initiate the process of repatriation of capital through the deepening of financial markets, improved governance and higher domestic interest rates. The effectiveness of anti-corruption measures should be ensured the putting in place of strong institutions to guarantee the democratic process. This would create a stable environment capable of counteracting capital flight, thus promoting a better macroeconomic performance.

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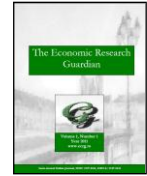
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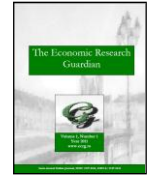
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