# Deterring Capital Flight from Africa through Improvement in Quality of Governance

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*Abstract*

*The need to provide further in-sight on how alternative indicators of quality of governance determine capital flights from African countries serve as impetus for this study which not only investigated the effects of alternative indicators of quality of governance (when they were bundled as done by most previous studies) on capital flight statistics but also examined the effect of each of the indicator individually (which no known study had done). To achieve this, capital flight statistics computed by various methods as presented in Table A1 in the appendix were used as the dependent variables while indicators of quality of governance sourced from the World Bank Governance Indicators (WGI) database of the World Bank served as the independent variables. Also, the investment diversion theory of capital flight was adapted as the theoretical framework upon which the models that were estimated in this study were derived. The findings of the study revealed that five out of the ten governance indicators that were tested has the expected negative effects; two of the remaining five has the unexpected positive effects while each of the remaining three has no effect. Following from this empirical evidence, it is concluded that quality of governance has varying deterring effects on capital flight.*

*Keywords: Capital Flight, Governance Indicators, African Countries*

## Introduction

Available statistics and findings of most of the existing studies have shown that the major factor that differentiates the developed countries from the developing and under-developed countries is the amount of capital that is available to each of them for investment. The developed countries have been known to have near sufficient capital for investment and provision of core infrastructures to guarantee a better quality of life for her citizens while the under-developed and developing countries are usually capital-deficient with low investment, poor infrastructure and low quality of life for their citizens. This outright lack or inadequacy of capital in African countries and all other developing countries is further compounded with a phenomenon known as capital flight (which is the outward movement of capital from the capital-deficient countries). Furthermore, the findings of the studies conducted by Kar and Spangers, (2015); Kiss and Isaac,

(2018); Ndikumana and Boyce,(2019) and Evelyn *et al* (2020) had revealed that efforts made by governments of these capital-deficient countries (especially African countries) to reverse this trend has not been successful as seen in the rise in the magnitude of capital flight from Africa from one trillion dollars in 2012 to about 1.4 trillion dollars in 2021. Similarly, researchers attempt at providing more insights into what should be done by policy makers to invert the trend of upward movement of capital from African countries has also failed. This is due to the fact that most of these existing studies are still afflicted with a number of challenges, such as the failure to capture all the capital flight`s causal factors (such as a deep investigation of the role of governance institutions on capital flight from Africa continent).

Also, since the few studies that are available on the effects of governance indicators on capital flight merely bundled the six primary governance indicators into economic, institutional and political governances before investigating their effects on capital flight, without testing for the effects of the individual components of the bundles on capital flight, there is therefore the need for a more in-depth analysis of the effects of each of the six primary governance indicators and their various combinations or bundles on capital flight.

The need to fill these identified gaps is what therefore motivates the present study, which identifies and investigates the alternative indicators of quality of governance that causes capital flights from African countries individually and collectively.

The rest of the paper is organized as follows: the review of the relevant literature is done in the second section while the third section deals with the methodology. The presentation and discussion of the results obtained from data analysis is considered in the fourth section while the conclusion and recommendations of the paper is discussed in the fifth section.

## 2.0 Literature Review

## 2.1 Conceptual Literature Review

Various economic concepts such as capital, capital export, capital flight, governance indicators are reviewed here.

Capital is referred to as the funds, sources of or flows of finance that can be used to acquire other capital or inputs and not capital or goods that already constitute a factor of production or an input that is used in the production process.

Also, in one hand, Capital Export can be referred to as the normal flow of capital that does not pose any danger to the domestic economy because it conforms with the laid down rules and regulations of which capital flight tend to violate and thereby imposing danger on the domestic economy, while on the other hand, Capital Flight can be said to occur when the outflows or leakages of capital from an economy (because of perceived risk and return differentials in one destination when compared to another one that is risk-free and/or can offer higher returns) negatively impacts that economy. These leakages can be legal or illegal and it will impact the domestic economy negatively because of loss of investment that would have brought the much needed economic growth.

The residents of capital-sufficient developed countries embark on capital export in search of higher yields or returns while residents of capital-deficient developing nations also search for higher returns by engaging in capital flights (by movement of capital from already capital deficient-poor-developing countries to capital sufficient countries) and this further aggravates the already dire social economic situation of the place. Furthermore, the worrisome thing about this capital outflow is not when capital flows or leaves capital-abundant economy to capital-deficient economy because this will not impact the economy negatively but when the reverse occurs, as the economy of the capital-deficient countries will be in great danger.

The six basic governance indicators are: political stability, voice and accountability, government effectiveness, regulatory quality, control of corruption and the rule of law. In addition, following Asongu and Nwachukwu (2016), these six governance indicators are variously combined to form four composite components which are political governance (which is made up of political stability and voice and accountability), economic governance (which consists of government effectiveness and regulatory quality), institutional governance (which is made up of control of corruption and the rule of law) and the overall or combined governance (which consist of all the six primary governance indicators). This means that there are ten alternative indicators of quality of governance altogether (six primary ones and four composite ones).

**Empirical Literature Review**

The continent of Africa is home to some of the poorest countries in the world, where corruption along with domestic conflicts have long been afflicting the continent. It is therefore the most focused in the recent academic literature on capital flight, and this is hardly surprising if one takes into consideration the magnitudes of capital flight from the continent as earlier discussed.

Starting with the study of Ali and Walters (2010) who investigated the determinants of capital flight from selected 37 African countries for the period between 1985 to 2005 by using portfolio capital flight theory as its theoretical framework and the World Bank`s residual method as capital flight estimation method, while the data on other explanatory variables were sourced from the WDI. The results obtained from the estimation of the model with autoregressive distributed lag (ARDL) method revealed that economic factors are largely responsible for capital flight from the 37 African nations.

Also, Ndikumana and Boyce (2011) sought to identify the relationship between external debt and capital flight from 1970 to 2008 for twenty four Sub Saharan African countries. Generalised method of moment, fixed effect and random effect methods were used to analyse the data that were sourced from the WDI. Their findings revealed that external debt is one of the drivers of capital flight from the region and reduction in external debt acquisition was therefore recommended by the authors as a way of curtailing capital flights.

Similar to the above, Haregewoin (2012) carried out a study on the determinants of capital flight from thirteen Eastern and Southern African countries between 1990 and 2000. Generalised method of moment (GMM) was employed as the analytical technique while the data were sourced from

the WDI. The findings of the study showed that the coefficients of budget deficit, interest rate, economic growth rates and previous capital flight are significant and therefore have effects on capital flight.

Unlike the above studies which failed to examine the effect of political factors on capital flight, Le and Zak (2006) examined the relationship between political risk and capital flight in a panel of 45 developing countries over a period of 16 years, by relating capital flight to return differentials, risk aversion, economic risk, political instability, and policy variability. Techniques such as the sensitivity analyses and the Feasible Generalized Least Squares (FGLS) are used to analyse the data that are sourced from the WDI. The results reveal that political instability is the most important factor influencing capital flight, and the coefficients of the three types of risk are statistically significant in the capital flight models.

In the same manner, Domfeh (2015) investigated the roles of corruption on capital flight and institutional governance with a panel data set of thirty two countries in Sub-Saharan Africa over the period 2000-2012. The study was based on the portfolio choice framework while three different estimation techniques, viz: Generalised Method of Moments (GMM), Fixed Effects Regression and the Pooled-OLS regression models, were employed as the estimation techniques. The result of the empirical estimation established that corruption has a positive effect on capital flight in SSA in all the specifications. Similarly, the empirical evidence indicated that macroeconomic uncertainty, political and institutional instability, less developed financial system, and higher rate of return differentials abroad induced capital flight from Sub-Saharan Africa.

Also, Asongu and Nwachukwu (2016) conducted a study on the effect of governance on capital flight from selected 37 African countries for the period between 1996 and 2010 by bundling and unbundling governance. The GMM was employed as the estimation technique while governance is bundled by principal component analysis into: political governance (which is made up of political stability and voice and accountability); economic governance (comprising of government effectiveness and regulation quality) and institutional governance (consisting of corruption-control and the rule of law). The results obtained showed that political stability and 'voice and accountability' reduce capital flight while the collective effect of political governance is not significant. Economic governance was found to increase capital flight whereas the individual effects of regulation quality and government effectiveness were not found to exist. Corruption-control and institutional governance negatively affected capital flight whereas there was no impact of the rule of law on capital flight. The authors therefore recommended institutional control as the most effective governance weapon in the fight against capital flight.

In the same vein, Assibey, Domfeh and Danquah (2017) investigated the effect of corruption and other institutional governance indicators on capital flight in thirty two countries in Sub-Saharan Africa (SSA) over the period 2000-2012. While the Portfolio Choice Framework was used as the theoretical basis for the econometric model that was used to analyse the panel data sets, Generalized Method of Moment (GMM) and Fixed Effects Regression were employed as the estimation techniques. The results revealed that the coefficient of the variable of interest,

corruption, retain its expected positive sign that was statistically significant across all the estimations. The relationship remained very strong even when other equally important institutional variables such as regime durability, rule of law and independence of the executive were taken into account. This suggests that a higher degree of corruption among public authorities facilitated capital outflow from SSA. The findings further indicated that regime durability and rule of law were important institutional variables that also influenced capital flights in the SSA.

Lastly, Asongu and Nnanna (2020) examined the use of governance tools to fight capital flight from a panel of thirty-seven African countries from 1996 to 2010. Capital flight data were sourced from Boyce and Ndikumana (2012), data on governance variables were obtained from the World Bank Governance Indicators and data on macroeconomic control variables were sourced from the African Development Indicators of the World Bank. The Principal Component analysis (PCA) was employed to bundle six governance indicators into economic, institutional and political governances before employing GMM as the estimation technique. The findings of the study revealed that there is evidence of a capital flight trap because past values of capital flight have a positive effect on the current values of capital flight. It was also revealed that the net effects from interactions of the capital flight trap with political stability, regulation quality, economic governance and corruption control on capital flight are positive.

The findings of the group of studies on the determinants of capital flight from Africa that are discussed above showed that while there are many studies that have investigated the effects of governance indicators on capital flight, majority of them failed to investigate each of the primary governance indicators and their various combinations as done in this study.

**Methodology**

The method used to carry out this study is discussed here. Portfolio Choice theory of capital flight (also known as Investment Diversion theory) was adapted as the theoretical framework for this study. This is because the theory has been found to be the most suitable to explain the causes of capital flight and, hence, its adaptation for the study.

Basically, portfolio choice theory explains the causes of capital flight by suggesting that potential investors will want to maximise the utility of their capital by investing it in an environment that is less risky and capable of giving higher returns, and thereby explains the common phenomenon of the flight of capital from developing countries to developed countries. The choice of foreign portfolio over the domestic one is the same thing as the preference for foreign investment climate to domestic investment climate and this ultimately implies the flight of capital from risky and low-yield domestic investment climate to risk-free and high-yield foreign investment climate.

The functional form of portfolio choice theory can therefore be expressed thus, following Le and Zak (2008) and Ali and Walters, (2010), among others.

$$K = f(DIC, FIC) \tag{1}$$

where:

K = Capital flight; DIC = unfavourable domestic investment climate in terms of economic factors and non-economic factors and the associated low return or yield of investment therein; and FIC = favourable foreign investment climate and the associated high return or yield of investment therein. Since the Portfolio Choice theory emphasises unfavourable domestic investment climate (DIC) as the major causal factor of flight of both legally and illegally acquired capital, Equation 1 can therefore be modified to become Equation 2 as follows:

$$K = f(DIC) \tag{2}$$

where:

DIC= Unfavourable domestic investment climate (which can be represented by indicators of quality of governance in the domestic economy (GOV)). That the DIC as a vector of the GOV can be described mathematically thus:

$$DIC = (GOV) \tag{3}$$

Substituting Equation 3 into Equation 2 gives:

$$K = f(GOV) \tag{4}$$

The six basic indicators of governance included in the models and the four composites formed by their various combinations through simple averaging to make a total of ten governance indicators are: regulatory quality, the rule of law, government effectiveness; political stability and absence of violence, control of corruption, voice and accountability, political governance, economic governance, institutional governance and combined overall governance.

The econometric model to be estimated is derived from the functional forms of the Portfolio Choice theory in Equation 4. Starting with this functional form and taking note of the fact that the study makes use of panel data, after linearising the Equation 4 and adding the intercept and the error terms $\beta_O$ and $\varepsilon$ respectively, the equation is transformed into Equation 5 thus:

$$K_{it} = \beta_O + \beta_1 GOV_{it} + \varepsilon_{it} \tag{5}$$

where,

$K_{it}$ = capital flight statistics computed with different methods as shown in Table A1 in the Appendix

$GOV_{it}$ = each of the ten governance indicators;

i,t = country and year subscripts respectively;

$\beta_O$ is the intercept, while $\beta_1$, are the slope parameters for each of the governance indicators and $\varepsilon$ is the disturbance term.

The justification for inclusion of each of the governance indicators in the model and the expected direction of their effects on capital flight are as discussed in (i) to (x) below.

**i. Regulatory Quality (RQ):** Quality institutions are generally believed to be a crucial catalyst for domestic investment climate because good governance discourages capital flight while bad governance encourages it. A negative effect of regulatory quality on capital flight is predicted.

**ii. Rule of Law (ROL):** Obedience of court orders and rule of law promotes businesses and deter capital flight. Hence, a negative effect of rule of law is postulated.

**iii. Government Effectiveness (GE):** North, (1990) established that taking a decision to invest in the domestic economy depends on whether property rights and other investment-promoting institutions are in place and that well developed institutions indirectly increase the potential for higher rates of return within the domestic economy by lowering transaction costs. Government effectiveness as an indicator of quality of governance is therefore predicted to have negative effect on capital flight.

**iv. Political Stability and Absence of Violence (PS):** Empirical literature has shown that political stability and absence of violence has a negative effect on capital flight (Acemoglu, 2003). Hence, political stability and absence of violence is postulated to have a negative effect on capital flight.

**v. Control on Corruption (CC):** Similarly, the findings of a study conducted by Asongu and Nwachukwu (2016) revealed that corruption has a positive effect on capital flight. It is therefore postulated that control on corruption should have a negative effect on capital flight.

**vi. Voice and Accountability (VAC):** Freedom of press which usually makes government to be more accountable is logically expected to discourage capital flight. A negative effect of voice and accountability on capital flight is therefore predicted.

**vii. Political Governance (PG):** Political governance is made up of political stability and voice and accountability. Weak institutions, including weak democracy and political freedom, aggravate capital flight. Empirical literature has shown a positive relationship between poor governance and capital flight (Asongu and Nwachukwu, 2016). Hence, a negative effect of political governance on capital flight is postulated in this study.

**viii. Economic Governance (EG):** Economic governance comprising of government effectiveness and regulatory quality and a sound and virile economy, is not unlikely to discourage capital flight while a weak one encourages it. It is therefore postulated that economic governance should have a negative effect on capital flight.

**ix. Institutional Governance (IG):** Institutional governance is made up of control of corruption and the rule of law. Acemoglu (2003) posited that institutions directly influence whether economic agents engage in productive investments or not. Similarly, strong institutions enhance the domestic investment climate and discourage capital flight while weak institutions encourage capital flight. Also, Hermes and Lensink (2002) acknowledged that perceived inappropriateness of institutional variables in any economy, may give rise to capital flight because citizens lose confidence in the

domestic economy thereby transferring or holding their funds abroad. Hence, this study postulates a negative effect of institutional governance on capital.

**x. Overall Governance (GOV):** Lastly, **t**his study posits a negative effect on capital flight of the overall or combined governance indicator that is derived from simple averaging of the six **g)**

**Sources and Measurement of Variables**

The variants of capital flight statistics computed with different capital flight estimation methods as shown in Table A1 were adopted and used as the dependent variables in this study.

As regard the explanatory variables included in the model for this study and their sources, the World Bank's rankings of regulatory quality index, rule of law index, government effectiveness index; political stability index and absence of terrorism, control of corruption; and the voice and accountability index are the six basic governance indicators that were used as the explanatory variables. According to the data source, each of the six indicators is measured in rank, with -2.5 standing for the weak and +2.5 for the strong. They are all sourced from the World Bank Governance Indicators (WGI) database of the World Bank. The definition of each of them is further discussed in Paragraphs (i) to (x) below.

i. Regulatory Quality (RQ): According to the data source, it measures perceptions on the ability of the government to formulate and implement policies and regulations that permit and promote private sector development. This is because quality of regulation is generally believed to be a crucial catalyst for good governance.

ii. Rule of Law (ROL): According to the data source, this 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, and the courts, as well as the likelihood of crime and violence.

iii. Government Effectiveness (GE): According to the data source, it captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

iv. Political Stability and Absence of Violence (PS): According to the data source, this also measures perceptions of the likelihood that the government will be destabilised or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism

v. Control of Corruption (CC): Similarly, according to the data source, this also captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption.

vi. Voice and Accountability (VAC): According to the data source, it measures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

vii. Political Governance (PG): Political governance is made up of, and is a simple average of the indexes for, political stability and voice and accountability.

viii. Economic Governance (EG): Economic governance comprises of, and is a simple average of the indexes for, government effectiveness and regulatory quality and a sound and virile economy, is not unlikely to discourage capital flight while a weak one encourages it.

ix. Institutional Governance (IG): Institutional governance is made up of, and a simple average of the indexes for, control of corruption and the rule of law.

x. GOV: It is made up of, and a simple average of the indexes for, the six primary governance indicators listed above in Paragraphs (i) to (vi).

**Results and Discussion**

Concerning the methodology that was adopted in this study to achieve the above mentioned specific objective, the Portfolio Choice theory was used as the theoretical framework to serve as the basis for which the models specified in this study were derived. The variants of capital flight statistics computed with different capital flight estimation methods as shown in TableA1 served as the dependent variables, while the ten governance indicators, which are: the simple average of the six primary governance indicators (GOV), Institutional Governance (IG), Control of Corruption (CC), Economic Governance (EG), Political Stability and Absence of Terrorism (PS), Voice and Accountability (VAC), Regulatory Quality (RQ), Government Effectiveness (GE) and Political Governance (PG) served as the explanatory variables and it covers 1996-2020 period because data on them are available post 1995.

The major findings are presented in Table 1 and 2 below and discussed in paragraph (a) to (j)

**Table1: Effects of Governance indicators  on Capital Flight**

| VARIABLES | HOT | WB | MISINV |
|---|---|---|---|
| GE | -1.529 | -0.546 | 1.328 |
|  | (-1.46) | (-0.36) | (0.66) |
|  | [0.14] | [0.71] | [0.50] |
| ROL | 7.118 | -0.543 | -3.297 |
|  | (5.81) | (-0.31) | (-1.41) |
|  | [0.11] | [0.75] | [0.15] |
| PG | -0.284 | 0.213 | 0.614 |
|  | (-0.42) | (0.22) | (0.47) |
|  | [0.67] | [0.82] | [0.63] |
| CC | 1.575 | -2.587 | -1.562 |
|  | (1.33) | (-1.53) | (-0.70) |
|  | [0.18] | [0.12] | [0.48] |
| EG | -2.288 | 2.309 | -0.563 |
|  | (-2.23) | (1.58) | (-0.29) |
|  | [0.02] | [0.11] | [0.77] |
| PS | 1.068 | -0.067 | 0.006 |
|  | (1.35) | (0.06) | (0.01) |
|  | [0.17] | [0.00] | [0.99] |
| GOV | -2.425 | -0.101 | -0.487 |
|  | (-8.60) | (-0.25) | (-0.91) |
|  | [0.00] | [0.80] | [0.36] |
| RQ | -0.093 | 0.0002 | -1.458 |
|  | (-0.12) | (0.01) | (-1.02) |
|  | [0.90] | [0.99] | [0.30] |
| VAC | 0.697 | 3.053 | 1.802 |
|  | (0.67) | (2.04) | (0.90) |
|  | [0.50] | [0.05] | [0.36] |
| IG | 3.919 | -2.542 | -1.582 |
|  | (4.26) | (-1.93) | (-0.90) |
|  | [0.00] | [0.05] | [0.36] |
| Constant | -0.567 | 0.588 | 0.137 |
|  | (-2.31) | (1.59) | (0.28) |
|  | [0.02] | [0.11] | [0.77] |
| R-squared | 0.969 | 0.030 | 0.387 |
| F-Statistic and its | - | - | - |
| p-value | - | - | - |
| Wald $\chi^2$ Statistic | 137.95 | 4.77 | 51.94 |
| and its p-value | (0.00) | (0.78) | (0.00) |

**Source: Author's computation. Explanatory Notes: The acronyms HOT, WB and MISINV respectively stand for capital flight computed with Hot-money method, World Bank method**

and Trade-Mis-invoicing method, GOV = simple average of GE, RQ, PS, VAC, CC and ROL, **IG = Institutional governance, RQ = Regulatory Quality, VAC = Voice and Accountability, GE= Government Effectiveness, PS = Political Stability, CC = Control of Corruption, ROL = Rule of Law. The z-statistics or t-statistics are reported in parentheses immediately beneath the parameter estimates while it is the corresponding p-values that are reported in parenthesis beneath the z-statistics or t- statistics. A parameter estimate is adjudged to be statistically significant if its p-value is not greater than 10%.**

**a) Voice and Accountability (VAC):** The results in Table 1 indicate that the seven VAC reported are 0.697, 3.053, 1.802, 5.444, 5.505,2.848, and 2.565, with the corresponding p-values of 0.50, 0.05, 0.36, 0.00, 0.00, 0.03 and 0.22 respectively. It is the coefficients in the models for the HOT, MISINV and MW variants of capital flight that are not statistically significant. Thus, all the seven coefficients are positive, with four being statistically significant and three being statistically insignificant at 10% level. This thus constitutes a fairly strong evidence that VAC has a positive effect on capital flight, contrary to the negative effect that is earlier postulated. But it is to be noted that its effect on the HOT, MISINV and MW are not discernable due to the statistical insignificance of the coefficients in their equations and this limits the definitiveness of the evidence. This evidence suggests that freedoms of expression, freedom of association and access to media are likely to promote rather than discourage capital flight, contrary to what is earlier postulated.

**b) Regulatory Quality (RQ):** The seven coefficients of coefficients of Regulatory Quality (RQ), as recorded in Table 4.9, are -0.093, 0.0002, -1.458, -0.669, 0.110, 0.281 and 0.263 and the associated p-values are 0.90, 0.99, 0.30, 0.61, 0.93, 0.77 and 0.83 respectively. It is seen that four of the seven coefficients are positive while three are negative with none of them being statistically significant. This implies that there is no reliable evidence to suggest that RQ has an effect on capital flight which is contrary to the negative effect that is earlier postulated in this study.
One of the possible explanations for this might be because regulatory quality might actually have an effect on capital flight but because data on all the governance indicators (including regulatory quality) are merely measures of perception and such a perception might not truly capture or be a good proxy for the actual situations. In other words, the conclusion could have been different had it been that the actual, as opposed to the perceived, regulatory quality is the one employed.

**c) Government Effectiveness (GE):** The seven coefficients of GE in Table 4.9a are -1.529, -0.546, 1.328, 1.218, 2.749, -1.539 and 0.455, with corresponding p-values of 0.14, 0.71, 0.50, 0.51, 0.14, 0.26 and 0.83. This indicates that while none of the seven coefficients is statistically significant at 10%, four are positive and three are negative. Thus, on the whole, there is no reliable evidence to suggest that GE has an effect on capital flight contrary to what is postulated in Chapter three. This may be because government effectiveness cannot curtail capital flight through any of the channels by which capital flight is being perpetrated as discussed earlier in this study. Another possible explanation is that the perceived GE, which is the data employed, might not have adequately captured or be a good proxy for the actual GE, in respect of which data do not exist.

**d) Rule of Law (ROL):** The seven coefficients of rule of law (ROL) reported in Table 4.9a are 7.118,-0.543, -3.297,-1.400, -2.887, -0.023 and-4.577, with the respective p-values of 0.11, 0.75, 0.15, 0.52, 0.118, 0.98 and 0.06. This indicates that all the seven coefficients are negative, with only one (in the equation with MW variant of capital flight as the dependent variable) being statistically significant at the chosen level of significance. There is thus no reliable evidence that ROL has an effect on capital flight, which is contrary to the a priori expectation. This suggests on one hand, that a perceived high quality of rule of laws generally is not capable of discouraging capital flight. Again, as in the previous cases of RQ and GE in Paragraphs (b) and (c) above respectively, a failure of the perceived ROL to adequately capture and proxy the actual ROL could have been responsible here also for the non-detection of a negative effect of it on capital flight.

**e) Political Stability and Absence of Terrorism (PS):** The results in Table 4.9a show that the coefficients of PS are 1.068, -0.067, 0.006, -0.760, -0.187, 0.785 and 1.382, with corresponding p-values of 0.17, 0.00, 0.99, 0.05, 0.10, 0.44 and 0.38 respectively. This means that PS has four positive coefficients (which are all insignificant) and three negative coefficients that are all statistically significant at 10%.There is therefore a reliable evidence, albeit not a robust one, to conclude that PS has a negative effect on capital flight in agreement with what is earlier postulated in this study and the findings of previous studies reviewed (Ahmad and Sahto (2015) and Nwagi, (2019), among others).

**f) Control of Corruption (CC):** In Table 4.9a, the seven coefficients of control of corruption (CC)are 1.575, -2.587, -1.562, -4.426, -4.217, -2.217 and -3.669, with the corresponding p-values of 0.18, 0.12, 0.48, 0.03, 0.04, 0.10 and 0.12 respectively. This means that there are six negative coefficients (with three being statistically significant) and only one positive coefficient which is not statistically significant. It can thus be concluded that there is a reliable evidence to suggest that CC has a negative effect on capital flight in conformity with (Asongu and Nwachukwu, 2016; and Assibey, Domfeh and Danquah, 2017; among others).

**g) Political Governance (PG):** The results in the Table 4.9a reveal that -0.284, 0.213, 0.614, 0.387, 0.952, 0.687 and 1.813 are the seven coefficients of political governance (which is the combination of political stability and voice and accountability). The corresponding p-values of these are 0.67, 0.82, 0.63, 0.75, 0.43, 0.44 and 0.19 respectively. This implies that none of the coefficients of PG is statistically significant at 10% level of significance; two have the expected negative signs while the remaining five have the unexpected positive signs. It can be concluded that there is no reliable evidence to conclude that PG has an effect on capital flight, which is contrary to the a priori expectation of a negative effect as earlier expressed in this study. One of the reasons that can be alluded for this still centre on the possible failure of the perception on this factor to adequately capture the true situation about this same factor, i.e. PG

**h) Economic Governance (EG):** In the same manner, the seven coefficients of EG (comprising of government effectiveness and regulatory quality) in Table 4.9a are -2.288, 2.309, -0.563, -4.325,

-4.724, 1.758 and 0.886, with corresponding p-values of 0.02, 0.11, 0.77, 0.01, 0.00, 0.19 and 0.66respectively. Thus, EG has four negative coefficients (with three being statistically significant) and three positive coefficients, none of which is significant at 10% level. The preponderance of evidence is therefore that EG has a negative effect on capital flight, in line with the expectation that has earlier been put forward in this study.

**i) Institutional Governance (IG):** The seven coefficients of IG (which is the combination of control of corruption and the rule of law) involved, as reported in Table 4.9, are 3.919, -2.542, -1.582, -4.808, -4.407, -1.868 and  -3.084, with the corresponding p-values of  0.00, 0.05, 0.36, 0.00, 0.00, 0.12 and 0.09. This implies that there are six coefficients that are negative, with three being statistically significant at 10% level (and, in fact, at 5% level also), while the seventh coefficient (in the equation for the HOT variant of capital flight) is positive and statistically significant. This thus provides some evidence (that is however not uniform across all the variants of capital flight equations with the HOT capital flight category being the notable exception) that IG has a negative effect on capital flight in line with what is earlier postulated in this study.

**j)  Overall Governance indicator (GOV):** The seven coefficients of GOV (which is the simple average of all the six governance indicators) are reported in Table 4.9 as -2.425, -0.101, -0.487, -0.634, -0.006, 0.301 and -0.326, with respective p-values of 0.00, 0.80, 0.36, 0.20, 0.99, 0.41 and 0.56. It can be seen from this result that all the seven coefficients of GOV are negative, although only the one in the model for the HOT variant of capital flight is statistically significant at 10% level. This therefore provides some evidence, albeit a weak one, of a negative effect of GOV on capital flight as earlier theorised in this study, with the negative effect on the HOT variant of capital flight being the most glaring.

The overall implication of the above findings is that, since there is robust evidence that seven out of ten governance indicators that are included in the models have the expected negative effects on the capital flight, it can be concluded that the state of governance in general has negative effects on capital flight. The finding is therefore in agreement with the findings of the studies conducted by Le and Zak (2006), Asongu and Nwachukwu (2016), Assibey, Domfeh and Danquah (2017), Asongu and Nnanna (2020), among others, whose findings reveal that governance has negative effects on capital flight.

## Conclusion and Recommendations

Empirical evidence on the effects of the ten governance indicators shows that each of the five out of the ten governance indicators (viz: PCA-derived governance indicator, GOV; Institutional Governance, IG; Control of Corruption, CC; Economic Governance, EG; and Political Stability and Absence of Terrorism, PS) has the expected negative effects on a number of the seven variants of capital flight while Voice and Accountability (VAC) has the unexpected positive effects. Each of the remaining three - viz; Regulatory Quality (RQ), Government Effectiveness (GE) and Political Governance (PG) – has no effect on any of the seven variants of capital flight.

Following from the above major findings and the specific conclusions drawn from them, it can be broadly concluded that quality of governance (as represented by the ten governance indicators) has varying deterring effects on capital flight.

Accordingly, promotion of good governance (including upholding rule of law, eschewing corruption and reducing internal conflict and terrorism) is therefore recommended.

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**APPENDIX**

**Table A1: Capital Flight by Countries: 1985-2020 mean Values in 2020 constant US$ Billions, Computed**

**under the Seven Methods of HOT, WB, MISINV, HWM, HM, HW and MW**

|  | Countries | HOT | WB | MISINV | HWM | HM | HW | MW |
|---|---|---|---|---|---|---|---|---|
| 1 | **Algeria** | -9.75 | 1.52 | 4.72 | 2.82 | 2.28 | 2.00 | 4.95 |
| 2 | **Angola** | -7.58 | 9.61 | 12.6 | 8.59 | 3.83 | 6.36 | 15.19 |
| 3 | **Benin** | -6.31 | 0.11 | 0.15 | 0.22 | 0.19 | 0.19 | 0.18 |
| 4 | **Botswana** | -6.23 | 0.27 | -1.1 | -1.11 | -1.46 | -0.94 | -0.93 |
| 5 | **Burkina Faso** | -5.98 | 0.11 | -0.59 | -4.99 | -5.98 | -5.01 | -0.51 |
| 6 | **Burundi** | -1.28 | 0.12 | 0.32 | 0.53 | 0.54 | 0.48 | 0.34 |
| 7 | **Cameroon** | -0.82 | 0.09 | 0.92 | 1.13 | 1.26 | 0.99 | 0.89 |
| 8 | **Cape Verde** | -0.34 | 0.01 | 0.38 | 0.15 | 0.16 | 0.08 | 0.36 |
| 9 | **Central African Republic** | -0.3 | 0.07 | 0.19 | 0.08 | 0.05 | 0.05 | 0.2 |
| 10 | **Chad** | - | 1.66 | 0.23 | 1.54 | 0.77 | 1.51 | 0.81 |
| 11 | **Comoros** | - | - | 0.04 | 0.08 | 0.1 | 0.08 | 0.04 |
| 12 | **Congo,  Dem.Rep.** | - | -1.19 | 0.78 | 0.26 | 1.04 | 0.14 | 0.31 |
| 13 | **Congo, Rep.** | - | 3.88 | 1.37 | 5.17 | 3.65 | 4.98 | 2.66 |
| 14 | **Cote d'Ivoire** | - | 0.55 | -2.59 | 4.85 | 5.46 | 5.43 | -2.23 |
| 15 | **Djibouti** | - | 0.53 | 1.84 | 1.91 | 1.89 | 1.61 | 1.91 |
| 16 | **Egypt** | - | 2.8 | 0.42 | 4.74 | 3.85 | 4.74 | 1.39 |
| 17 | **Equatorial Guinea** | 0.01 | - | 2.32 | 0.41 | 0.44 | - | 2.17 |
| 18 | **Eritrea** | 0.02 | - | - | - | - | - | - |
| 19 | **Eswatini** | 0.8 | 0.43 | 0.64 | 1.06 | 0.88 | 0.23 | 0.49 |
| 20 | **Ethiopia** | 0.04 | - | 8.18 | 5.39 | 6.21 | 4.02 | 7.65 |
| 21 | **Gabon** | 0.04 | 0.39 | 0.94 | 0.09 | -0.16 | -0.08 | 1.02 |
| 22 | **Gambia** | 0.06 | 0.08 | 0.19 | 0.18 | 0.16 | 0.15 | 0.21 |
| 23 | **Ghana** | 0.09 | -0.6 | 8.98 | 5.4 | 6.59 | 3.9 | 8.18 |
| 24 | **Guinea** | 0.09 | -0.44 | 4.05 | 1.39 | 1.83 | 0.69 | 3.63 |
| 25 | **Guinea-Bissau** | 0.13 | 0.41 | -0.13 | 5.14 | 5.85 | 5.28 | 0.02 |
| 26 | **Kenya** | 0.16 | -1.77 | 1.11 | 1.47 | 2.84 | 1.33 | 0.41 |
| 27 | **Lesotho** | 0.21 | -0.29 | 0.43 | 0.1 | 0.29 | 0.02 | 0.3 |
| 28 | **Liberia** | 0.32 | -0.92 | 1.97 | -0.11 | 0.41 | -0.45 | 1.51 |
| 29 | **Libya** | 0.36 | -0.85 | 5.61 | -7.52 | -8.52 | -8.71 | 4.94 |
| 30 | **Madagascar** | 0.49 | -0.06 | 3.98 | 0.68 | 0.75 | -0.03 | 3.7 |
| 31 | **Malawi** | 0.55 | -3.26 | 4.24 | 3.82 | 6.5 | 3.18 | 2.8 |
| 32 | **Mali** | 0.66 | 0.03 | 0.91 | 0.63 | 0.71 | 0.48 | 0.85 |
| 33 | **Mauritania** | 0.84 | -0.19 | 1.75 | 1.12 | 1.41 | 0.83 | 1.57 |
| 34 | **Mauritius** | 0.74 | -1.51 | 2.91 | -0.27 | 0.57 | -0.79 | 2.18 |

| 35 | Morocco | 0.91 | 0.01 | 6.67 | 1.89 | 2.08 | 0.72 | 6.24 |
|----|---------|------|------|------|------|------|------|------|
| 36 | Mozambique | 1.09 | 0.18 | 1.38 | 2.93 | 3.33 | 2.75 | 1.35 |
| 37 | Namibia | 1.10 | -1.72 | 0.45 | -1.08 | -0.21 | -1.17 | -0.19 |
| 38 | Niger | 1.11 | -0.05 | 1.02 | 0.42 | 0.51 | 0.24 | 0.94 |
| 39 | Nigeria | 1.34 | 11.29 | 2.74 | 14.52 | 10.03 | 14.21 | 6.57 |
| 40 | Rwanda | 1.41 | -5.32 | 0.55 | -9.01 | -7.34 | -9.25 | -1.38 |
| 41 | Sao Tome and Principe | 1.48 | - | 0.19 | 0.08 | 0.09 | 0.05 | 0.18 |
| 42 | Senegal | 1.57 | 0.22 | 0.02 | 0.42 | 0.36 | 0.42 | 0.1 |
| 43 | Seychelles | 1.63 | -0.01 | 0.51 | 0.09 | 0.1 | -0.01 | 0.47 |
| 44 | Sierra Leone | 2.68 | -1.36 | 1.36 | 3.92 | 5.48 | 3.79 | 0.79 |
| 45 | Somalia | 3.13 | - | 0.35 | 0.06 | 0.07 | - | 0.33 |
| 46 | South Africa | 3.84 | - | -1.87 | -1.01 | -1.16 | -0.69 | -1.75 |
| 47 | South Sudan | 3.45 | - | - | - | - | - | - |
| 48 | Sudan | 4.75 | -6.57 | 6.77 | -7.51 | -4.92 | -8.84 | 3.99 |
| 49 | Tanzania | 4.98 | 0.01 | 0.25 | 1.16 | 1.36 | 1.14 | 0.24 |
| 50 | Togo | 5.32 | -0.06 | 1.94 | 0.35 | 0.41 | 0 | 1.79 |
| 51 | Tunisia | 5.98 | -0.13 | 9.24 | 2.93 | 3.34 | 1.31 | 8.59 |
| 52 | Uganda | 6.06 | 0.99 | 10.18 | 2.89 | 2.57 | 1.09 | 9.87 |
| 53 | Zambia | 7.02 | 5.11 | 0.75 | -2.3 | -5.98 | -2.56 | 2.52 |
| 54 | Zimbabwe | 9.69 | 7.28 | 0.09 | 9.7 | 6.91 | 9.81 | 2.67 |
| | Average | 0.75 | 0.39 | 2.12 | 1.21 | 1.14 | 0.84 | 2.11 |

**Source: Author`s Computation, 2022. Explanatory Notes: The acronyms HOT, WB, MISINV, HWM, HM, HW and MW respectively stand for the average values of capital flight computed with Hot-Money method, World Bank method, Trade Mis-invoicing method, HWM method, HM method, HW method and MW method respectively.**