

Illicit Financial Flows and Political Institutions in Kenya

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Abstract

The conventional Neoclassical literature views illicit financial flows (capital flight) to be a result of portfolio choice decisions by utility optimizing agents. These flows are seen as a response to changes in an individual's portfolio bundle arising from the standard risk diversification motive by economic agents due to relative risk incentives and return differentials. This paper explores a political economy perspective as an alternative explanation to the illicit financial outflows for one African country, Kenya. We ask two specific questions: Why has Kenya continued to be characterized by corruption and debt fueled capital outflows, although these

stifled its economic development. Are these outflows a result of weaknesses in political institutions that do not constrain the powers of the Executive? Using unique institutional indices on Kenya, we find evidence that increased arbitrary executive powers are positively associated with illicit financial outflows. That is, in the Kenyan context, prevailing weaknesses in the political institutions do matter for illicit financial flows (rent extraction). This finding is robust to the constraints on the executive from Polity IV Indicators as an alternative indicator of institutions.

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“Corrupt political elites in the developing world, working hand-in-hand with greedy business people and unscrupulous investors, are putting private gain before the welfare of citizens and the economic development of their countries.”—Peter Eigen (2002)

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1 Introduction

Many African economies face tremendous development challenges, which are often aggravated by illicit financial outflows (Cerra, Rishi, and Saxena 2008; Kar and Cartwright-Smith 2008; Reuter 2012; Ndikumana and Boyce 2012b).² The drivers of these outflows have been intensely debated in the literature. The typical explanation from the neoclassical economics tradition (henceforth, the conventional economic wisdom) equates these flows to capital flight. It purports that they result from rational reallocation of capital from developing countries in response to the favorable risk–return investment opportunities in the developed world and investors’ desire for portfolio diversification (Sheets 1996; Collier, Hoeffler, and Pattillo 2001; Le and Zak 2006). In this context, the risk-adjusted returns on assets abroad are believed to be higher than those in developing countries. The level of investment risk is believed to be high in developing countries, in part, because of macroeconomic policy distortions, such as overvalued exchange rates, huge fiscal deficits, unfair taxation of capital gains, and interest rate controls under financially repressed markets (Ajayi 1995; Lensink, Hermes, and Murinde 1998).

However, recent developments in this field have questioned the conventional wisdom that portfolio motives are the primary drivers of capital flight from developing countries (Ndikumana and Boyce 2011; Blankenburg and Khan 2012). The political economy literature and the new institutional economics literature suggest that the problem may result from corruption and rent seeking from unconstrained leaders and officials, in a context of extractive political institutions (Sachs and Warner 1995; Clague et al. 1996; Rodrik, Subramanian, and Trebbi 2002; Acemoglu et al. 2003; Acemoglu, Verdier, and Robinson 2004).³

This paper explores the political economy view as an alternative explanation to the illicit financial outflows for one African country, Kenya. It aims to specifically answer two related questions: Why has Kenya continued to be characterized by corruption and debt-fueled capital outflows, even though these conditions stifle its economic development? Are these outflows a result of weaknesses in political institutions that leave the Executive unchecked? These questions remain very pertinent not only for Kenya but for other developing countries that are faced with the

² In this paper, the phrases “illicit financial flows” and “capital flight” are used interchangeably.

³ These claims are supported by ample evidence that shows that weak institutions have stifled investment and development in developing countries (see, for example, Everhart and Sumlinski [2001]; Saleh [2004]; and Loayza et al. [2007]).

development challenge of debt-fueled, illicit capital outflows. To this end, this study assesses empirically the role of *arbitrary* powers of the Executive as a proxy for the influence of weak political institutions on illicit financial outflows. The evidence from this exercise supports the view that the extent of *arbitrary* executive powers is positively associated with illicit financial outflows.⁴ Thus weaknesses in political institutions matter for illicit financial flows (rent extraction) from Kenya. As robustness checks, this research uses constraints on the Executive from Polity IV Indicators as an alternative indicator of institutions. Using these alternative indicators, the study finds a strong support that constraining the Executive's powers is likely to reduce the magnitude of illicit financial flows from Kenya.

Kenya becomes a particularly interesting ground on which to test the influence of political institutions on illicit capital outflows for a number of reasons. First, for the past four decades of the post-independence period, the country has faced high corruption levels and rent seeking sustained by an entrenched system of political patronage.⁵ There is also evidence of several incidences of reported grand corruption scandals involving the transfer of illicit money by the ruling political elites from the late 1970s to the early 21st century. Second, corruption and the illicit capital outflows from Kenya have been a cause for a concern for a number of ordinary Kenyans who remain poor, despite increasing debt acquired in their names by the ruling political elites. Illicit capital outflows and corruption are claimed to have depleted the already meager public resources, led to suboptimal investment and rising debt levels, and undermined tax moral accountability between citizens and the State. They have also added to the growing horizontal inequality within the country. Finally, testing the political economy channel for illicit financial flows is particularly suited for Kenya because of the existence of a unique and novel data set on institutional indices constructed by Letete (2015). A similar data set is currently being developed for Nigeria. This implies that, in a future companion and comparative study, we will be able to test the political economy hypothesis for Africa's major oil producer and major culprit for illicit financial flows. Given that illicit financial flows in Africa have been more pronounced in resource-rich countries (Ndikumana and Sarr 2016), such a study would allow us to analyze whether the

⁴ It is important to note that the institutional measure used here is the extent of *arbitrary* executive powers. It is the arbitrary nature of executive powers that undermines political institutions.

⁵ In 2012, the KPMG report shows that Kenya remains among the top four countries in Africa which have the highest corruption levels

role of institutions are different in a resource-rich country compared to a resource-poor country. The present paper is therefore a first step towards this comparative study. In this regard, Kenya is interesting because it is the resource-poor (minerals and fuels) African country that exhibits the largest stock of capital flight. During the past four decades, it is estimated that the country lost over US\$10.6 billion in accumulated illicit financial flows, a figure that exceeds the country's stock of debt, which amounts to US\$8.4 billion (Ndikumana and Boyce 2012b).

This paper does not aim to provide a comprehensive view of the determinants of illicit financial flows from Kenya or a review of the political economy of Kenya. Thus, the discussions provided in this paper are meant to complement, rather than be an alternative to, the general economic explanations provided elsewhere (see Cuddington [1986]; Dornbusch [1990]; and Collier, Hoeffler, and Pattillo [2001], for competing explanations).

The study fills the existing gap in the literature on the relationship between political institutions, rent seeking, and illicit capital outflows from developing countries using Kenya as a case study. To the best of our knowledge, no study has attempted to demonstrate the influence of arbitrary executive powers on illicit capital flows from Kenya. The only study that has attempted to examine the factors that influence illicit financial outflows from Kenya is that by Ng'eno (2000). However, that study used the neoclassical framework and equated illicit capital flows to capital flight. It largely ignored the political economy and institutional explanations of such flows. It further ignored the changing political context within which capital flight has occurred in Kenya. This paper therefore fills the research gap.

This paper is closely related to the papers that attempt to understand capital flight and corruption from Africa. These include papers by Ajayi (1995); Lensink, Hermes, and Murinde (1998); Boyce and Ndikumana (2001); Ndikumana and Boyce (2003); Cerra, Rishi, and Saxena (2008); Ndikumana and Boyce (2008); Fofack and Ndikumana (2010); Ali and Walters (2011); Ndikumana and Boyce (2011); and Yalta and Yalta (2012). This paper is also related to the papers on the political economy of corruption and the new institutional economics, such as Alesina and Tabellini (1989); Acemoglu et al. (2003); and Acemoglu, Verdier, and Robinson (2004). The rest of the paper is organized as follows: Section 2 provides historical context and the stylized facts on illicit financial flows and the state of institutions in Kenya. Section 3 presents a review of the related literature on illicit financial flows. Section 4 provides an econometric estimation

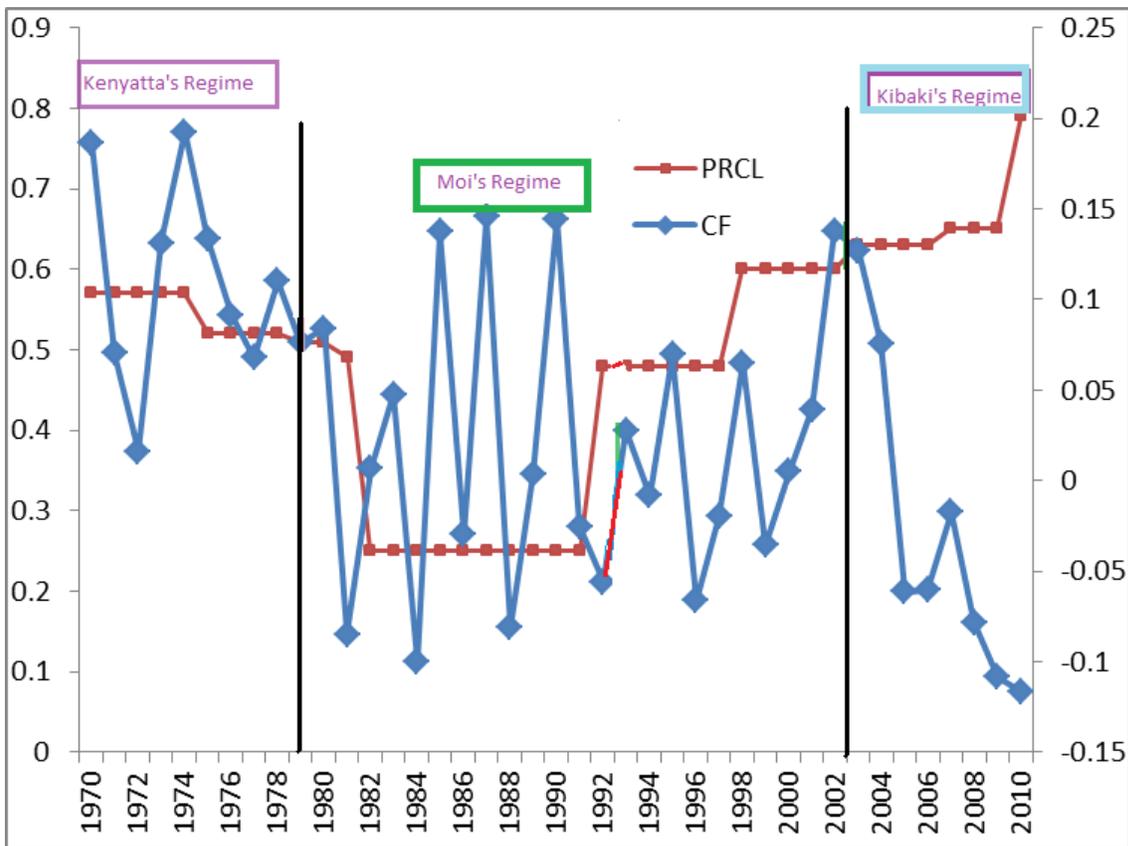
framework, and Section 5 presents the results and discussion. The final section provides concluding remarks and policy implications.

2 Illicit Financial Flows and Institutions in Kenya

Kenya continues to lose millions of dollars annually as officials, individuals, and corporations stash illegally acquired funds in highly secretive foreign banks abroad. This has resulted in over US\$10.6 billion accumulated illicit financial flows since 1970, making Kenya one of the worst, if not the worst offender among Africa's non-resource endowed countries.

Figure 1 plots illicit financial flows and political rights and civil liberties during the three political regimes in Kenya: the Kenyatta, Moi and Kibaki regimes. Political rights and civil liberties are used here as a measure of political institutions and commitment to enforcement of the rule of law. The two vertical solid lines represent political transitions in the economy. The first line (1978) represents the transition from Kenyatta to Moi, while the second line (in 2002) represents the transition to the Kibaki administration. During the first regime, although illicit financial flows started to decline, corruption was increasing. It was during this period that civil liberties and political rights were grossly undermined, and citizens could not hold the state accountable. At the same time the Executive vested itself with overwhelming powers. Many checks and balances were dismantled. The transition from the first to the second regime under Moi's presidency did not bring positive change in the state of institutions of accountability. The country became autocratic, with further dismantling of checks and balances and an increase in the powers of the president.

Figure 1: Real Illicit Financial Flows in Constant 2010 Prices and Institutions in Kenya (1970–2010)



Source: Author's computation

Figure 1 shows that, between 1984 and 1990, illicit financial flows were highest, and during that period, political institutions were weak, as reflected by low levels of civil liberties and political rights protection. During the same period, other organs of government lost their independence, and the state took control of the media, further sacrificing government accountability. The year 1992 marks the country's return to a multiparty system of governance and the introduction of a number of macroeconomic reforms. However, this did not slow the pace of corruption and illicit financial flows, as epitomized by the Goldenberg scandal.⁶ During Kibaki's regime, the improvement in political rights and media freedom, as well as the declining arbitrary powers of the Executive, have

⁶ This was a political scandal where the Kenyan government was found to have allegedly subsidized exports of gold far beyond standard arrangements during the 1990s, by paying the Goldenberg International company 35% more (in Kenyan shillings) than their foreign currency earnings. Although it appears that the scheme was intended to earn hard currency for the country, it is estimated to have cost Kenya the equivalent of more than 10% of the country's annual Gross Domestic Product and that no or minimal amounts of gold were actually exported.

been associated with declines in the level of illicit financial flows (see Figure 1), although the phenomenon has remained a challenge for the country.

3 Review of Related Literature

3.1 The Neoclassical View of Capital Flight

The neoclassical literature views illicit financial flows (capital flight) to be a result of portfolio choice decisions by utility optimizing agents. From this free market-based premise, capital flight is seen as a response to changes in an individual's portfolio bundle, arising from the standard risk diversification motive of domestic investors or economic agents. Two other important incentives are included as explanations: Relative risk incentives and return differentials (Sheets 1995; Collier et al. 2001).

Relative risk incentive involves counterfactual comparison of the after-tax domestic and foreign returns and is adjusted for factors such as expected depreciation, volatility of returns, liquidity premiums, potentially higher taxes or perceived lower returns at home, and other indicators of investment risk. From this comparison, the net returns are usually claimed to be higher abroad because of the differences between domestic taxes and taxes abroad—that is, expected currency depreciation at home, which affects returns, and the higher economic risk. The latter results from the greater volatility of returns in developing countries. This conventional wisdom further claims that capital flight is caused by the existence of market distortions and asymmetric risks in developing countries, relative to advanced countries.

Domestic market distortions embraced in this market-based theory include features of the economy that disrupt prices as the mechanism for resource allocation. These disruptions reduce expected returns to assets. They include: the exchange rate misalignment (both an overvaluation or an undervaluation), government fiscal deficits, and high debt levels. Other features of the economy that can affect returns to assets include high inflation levels, government policy intervention in markets through price controls and rent seeking, and politically motivated expropriation of assets and confiscatory taxation.

According to the neoclassical model, if currency depreciation is expected, domestic wealth owners will shift their wealth out of domestic assets holdings into foreign assets holdings. Using the Interest Parity Condition (IPC), this model shows that depreciation of local currency makes foreign assets more attractive, while domestic assets are expected to decline in value.

Alternatively, an appreciation of foreign currency also makes foreign assets more attractive and results in loss of value for domestic assets. This thereby motivates investors to hold foreign assets. At the same time, if domestic currency is overvalued, economic agents will expect the currency to be devalued in the future. Holding firm to this expectation, economic agents will attempt to avoid potential capital loss by converting their assets into foreign claims. This could then increase capital flight (Khan and Haque 1985; Alesina and Tabellini 1989; Ajayi and Khan 2000).

Similarly, high inflation rates, which sometimes result from fiscal deficit financing through seignorage, will lead to capital flight. Under the circumstances of high inflation pressures, domestic agents engage in capital flight to avoid erosion of the value of their monetary balances by inflation. Even when fiscal deficits are financed through bond sales, domestic residents may still expect that, at some future date, their tax liabilities may increase as the government attempts to coerce them to pay for the national debt. This will encourage domestic investors to move their assets to foreign countries to again avoid potential tax liabilities again (Ajayi 1995). Ize and Ortiz (1987) formalized the link between deficit financing and capital flight. These authors showed that capital flight is related to the overall financial solvency of a government, and that insolvency and default risks created by fiscal deficit appear to be explicit determinants of capital flight.

Therefore, the standard economic development models that analyze capital flight based on the neoclassical portfolio choice theory assume that: (1) economic behavior relevant to capital flight is correctly described by the expected utility maximization; (2) markets exist and are distorted; (3) individual agents possess the ability to compute the probabilities of investment risk globally and on the basis of counterfactual investment models; and (4) computable probabilities can be attached to all events (Blankenburg and Khan 2012). The first policy implications from the analysis of capital flight, using these models, suggests that movement of capital seeking highest risk adjusted returns should not be a concern for policymakers in developing countries, if risks is to be hedged. The second policy implication is that domestic market-friendly reforms that correct for any market disequilibrating distortions, stabilize currencies, promote investment opportunities, and reduce asymmetric investment risks should also reduce capital flight. Thus, capital flight should actually not exist if “rational” economic policies are implemented by the government (Jain 1988).

3.2 Capital Flight and Social Controls

Empirical evidence from African countries seems to contradict the main predictions of the standard portfolio choice theory. For instance, Ndikumana and Boyce (2011) empirically found no statistically significant effect of the interest rate differential on capital flight from Africa. These authors concluded that capital flight from African countries cannot be adequately explained by conventional portfolio choice theory, and there is a need for more nuanced explanations. Blankenburg and Khan (2012) saw capital flight as a result of the social controls in developing countries. That is, capital flight is a result of an agent's motive to escape social controls of government. The social controls approach rests on the premise that individual control over capital is rarely absolute or uncontested, but rather subject to social constraints—the character and extent of which vary through time. The approach identifies governments as key players in social control, and the underlying developmental model based on the social control approach is that of a mixed economy or a welfare/developmental state with social interventions outside the market sphere.

The central policy implication from the social control theory with regard to control of capital flight is not simply the promotion of markets. Rather it advocates the strengthening of existing social controls or the introduction of alternative, more effective administrative measures to control private capital movements. The social control theory, in principle, builds on the portfolio choice theory. However, it does not provide any evidence on the effectiveness of each government control. Nor does it provide solutions in cases the government itself, through political elites, is the one involved in looting money out of the economy. Social control theory comes closer to the portfolio choice approach, although it recognizes capital flight as an “inherently political phenomenon” and a prerogative of those who are wealthy with access to foreign exchange (Epstein 2005, 4). The social control theory and the portfolio choice theory only point towards causes of capital flight. They fail to show why policy distortions and social controls are weak in developing countries in general.

3.3 The Political Economy View of Illicit Financial Flows and Corruption

According to the political economy literature, illicit financial flows are the result of rent extraction by unconstrained corrupt practices of political rulers and their elite groups. These rulers and elites know that even if they accumulate foreign debt, they will not inherit this burden, which will be placed on future (possibly rival) regimes (see, for example, Alesina and Tabellini [1989]). The

literature makes this argument, because under an environment characterized by weak political institutions, political actors have discretionary political powers. These discretionary powers give them authority to design and administer regulations and policies in a discretionary manner. The central argument raised by this literature is the exploitation of discretionary power is enabled by weak political, administrative, and legal institutions (Bardhan 1997; Andvig et al. 2001; Aidt 2003).

This literature argues capital flight arises through the desire to hide illegally accumulated wealth abroad and not necessarily due to interest rate differentials between countries or macroeconomic policy distortions, as postulated under the neoclassical approach (Kar and Cartwright-Smith 2008, 2010; Heggstad and Fjeldstad 2010). This literature explains the revolving door hypothesis (the situation in which foreign debt and capital flight are highly correlated) as the result of extraction of resources by elite groups, who loot their countries and conceal the proceeds abroad.⁷ Thus, capital flight from African countries can be understood to be a result of corruption by African leaders and the politically connected elites.

However, the claims made above do not provide explanations as to why political leaders who extract resources from their economies continue to command significant support from their citizens. Why are such leaders not accountable to their electorate? The models of electoral accountability take into account the financial rent-seeking motives of political actors. These models predict that political elites may extract rents up to a level just acceptable to a simple majority. This prediction implies that a majority of voters in countries with high corruption levels and capital flight find them acceptable, despite the huge welfare losses that such corruption imposes. If they were not acceptable, the majority vote would punish such political actors by not voting them into power during elections under democratic governments. The continued reign of corrupt political leaders for decades without any challenge from the populace implies that, indeed, corruption in the form of looting is acceptable to the majority.

An alternative explanation for the simultaneous existence of corruption, capital flight, and continued political power is that these political leaders do not come to power through legitimate

⁷ It is on the basis of this literature that the view of a large portion of foreign debt (public loans) from Africa being used to finance capital flight out of the continent as private wealth by ruling elite groups finds support. In many empirical studies, these funds have been shown to escape from the public purse through looting and have been found to be as high as 80 percent of public loans in some countries (Ajayi and Khan 2000; Cerra, Rishi, and Saxena 2008; Ndikumana and Boyce 2008, 2010).

means. That is, they dismantle electoral processes and all other checks and balances. Thus, they are able to loot country resources, which often escape jurisdiction as capital flight. Political actors often hide money in secret jurisdictions, because their opponents may expropriate their assets if the opponents come to power. This is made possible because a large amount of the resource accumulation may have been illegally acquired. In other words, such accumulation might have violated the structure of formal laws. Under such circumstances, the legality of resource acquisition can be questioned by incoming rulers for various motives, including expedient political reasons—for instance, to undermine the ability of previous ruling factions to return to power.

The political economy view of corruption and capital flight is in line with the general thesis advanced by the new institutional economic literature regarding the lack of economic development in developing countries in general (North, 1987, 1990; Sachs and Warner 1995; Acemoglu, Johnson, and Robinson 2001; Rodrik, Subramanian, and Trebbi 2002; Acemoglu et al. 2003). This thesis ascribes bad economic outcomes, and lack of economic development thereof to the extractive political institutions. In this context, extractive political institutions refer to those institutions that do not constrain political leaders and their elite groups; that concentrate power in the hands of a few, and that do not provide checks and balances or the “rule of law.” These institutions are claimed to have led to pervasive rent seeking to the detriment of economic development (Sachs and Warner 1995; Clague et al. 1996; Rodrik, Subramanian, and Trebbi 2002; Acemoglu et al. 2003; Acemoglu, Verdier, and Robinson 2004). This thesis is backed up by evidence that shows that weaknesses in institutions have stifled investment and development in developing countries (Everhart and Sumlinski 2001; Saleh 2004; Loayza et al. 2007).

The institutional economics strand of literature finds support from Ali and Walters (2011) who showed that capital flight from sub-Saharan Africa is explained by institutional factors. In particular, these authors showed that once they controlled for structural features, private capital outflows from sub-Saharan Africa was explained by factors beyond macroeconomic policy distortions. Thus, they ruled out, as sole causes, institutional features of the individual economies and poor profitability of investment. In a study examining selected developing countries, Cerra, Rishi, and Saxena (2008) also provided empirical evidence to corroborate the notion that indeed macroeconomic policy distortions alone cannot fully explain capital flight from developing countries. For instance, Cerra, Rishi, and Saxena (2008) showed that countries with a poor track record of macroeconomic fundamentals may also have weak institutions. Therefore, capital flight

from these countries may be a by-product of redistributive policy tools, designed by greedy and weakly constrained Executives. These arguments were supported by Cheung and Qian (2010), who showed that China's capital flight is explained, in principle, by the history of the economy.

The latter two strands of literature conclude that explanations for capital flight provided by the conventional economic literature make no systematic distinction between the drivers of asymmetric investment risks in developing countries. Second, it conflates short-term utility maximization with structural, political, and economic uncertainties in these countries. This results from focusing on a single motive for capital flight, namely the investor's utility maximization in the presence of differential policy regimes and investment risks. Thus, the failure of conventional wisdom to explain such flows weakens the effectiveness of the policy advice to deal with capital flight from the developing world (Blankenburg and Khan 2012).

The policy implication, advanced by these latter contributions in literature, is that to reduce such flows one should focus on mechanisms to address the underlying problems. These problems include corruption and tax evasion, and capital flight is only a manifestation of these problems. The creation of the right economic environment includes strengthening the rule of law, electoral accountability, contract enforcement, and property rights protection for agents in the economy. These actions are seen as a solution to retain capital domestically and achieve development (Khan and Haque 1985; Kant 1996; Acemoglu, Johnson, and Robinson Acemoglu et al., 2001; Alfaro, Kalemli-Ozcan, and Volosovych 2007; Shirley, 2008). Further implications are that macroeconomic policy distortions, seen as drivers of capital flight, are themselves the result of bad policies chosen by the ruling elites, for their own benefit, under weakly institutionalized polities. Thus, bad policies are only a symptom of weaknesses in institutions (Acemoglu et al. 2003; Fatás and Mihov 2005; Loayza et al. 2007).

4 Econometric Framework

4.1 The Baseline Empirical Model

The key testable hypothesis from our theoretical discussions in the foregoing section is that the amount of capital flight depends on the state of institutions in the economy. To test this hypothesis, we estimate the following baseline Autoregressive Distributed Lag (ARDL) econometric specification:

$$K_t = \alpha + \sum_i^p \beta_i K_{t-i} + \sum_i^q \theta_i Institutions_{t-i} + \varepsilon_t \quad (1)$$

where K_t is the stock of the illicit financial flows, expressed as a ratio of GDP in constant prices; K_{t-i} is the past stocks of the illicit financial flows, scaled by GDP, and measures the persistence of such flows; $Institutions_{t-i}$ is the measure of the state of institutions proxied by the “extent of the *arbitrary* executive powers” (Marshall, Jagers and Gurr 2012) Equation (1) in essence captures the causal effect of arbitrary executive powers on capital flight. The coefficient, θ_i , gives the change in capital flight, resulting from a unit change in the extent of the *arbitrary* executive powers. The choice of this model is based on the desire to capture the persistence of capital flight, as argued in the development literature (see, also, Cuddington 1986; Ndikumana and Boyce 2003; Fofack and Ndikumana 2010; Brada, Kutan, and Vukšić’ 2013). This is captured by the lagged values of the illicit financial flows K_{t-i} variable on the right hand side of Equation (1). The “the persistence of the illicit financial flows” in this context implies that the past levels of such flows have effect on the current levels (see Cheung and Qian, 2010; Lan, Wu, and Zhang 2010). Brada, Kutan, and Vukšić’ (2013) argued the inclusion of the lagged illicit capital variable in a dynamic model could also be interpreted as capturing the sunk costs of developing ways of moving capital offshore. Once these costs are paid, it makes sense to take advantage of the resulting conduits for capital flight on an ongoing basis.

Although the empirical strategy used in this research is similar to that used by Cheung and Qian (2010) and Lan, Wu, and Zhang (2010), it differs because it is based on the political economy theory of capital flight, discussed in the previous sections. Those authors’ approach was based purely on the portfolio choice theory. Intuitively, in their model an economy tends to experience capital flight due to a persistent return differential net of transaction costs, which is possible in the presence of capital controls. Here, however, capital flight is modeled as a function of political factors over and above the simple interest rate differential in the absence of capital control.

In order to obtain the net effect of the impact of political institutions on illicit financial flows, the study controls for other factors, including those suggested by the neoclassical economic theory, as determinants of developing countries’ capital outflows. Lan, Wu, and Zhang (2010) noted that although Equation (1) represents a simplistic way of modeling capital flight, the absence of other variables to explain this phenomenon could bias the results obtained from such an equation. Standard practice from the economic literature of adding these variables one at a time is

adopted, following Cheung and Qian (2010); and Lan, Wu, and Zhang (2010). These additional variables serve both as control variables and robustness checks of the baseline results. These control variables are divided into three categories: (1) the variables that are related to the portfolio motive; (2) those that are related to macroeconomic policy management; and (3) those that are related to the financial development of the country. Some explanation is required as to what exactly these variables are meant to control for in the standard regression model. First, real GDP growth is meant to capture the availability of domestic investment opportunities in the economy. As discussed in the literature, outflows of capital from developing countries could be a result of the absence of investment opportunities in the domestic economy (Brada, Kutan, and Vukšić 2013). This variable also measures the prospects for growth in the economy, as well as for income levels, which induce demand for goods and, therefore, investment. If GDP growth is sluggish, then capital is expected to leave the economy for higher investment opportunities elsewhere (Ndikumana and Boyce 2003; Lan, Wu, and Zhang 2010). This variable, therefore, is related directly to the portfolio motive of capital outflows. The other variables that are meant to capture the portfolio motive are the real interest rate differential and real exchange rates, which both measure the benefits of higher returns abroad.

For macroeconomic policy management, we use the inflation rate and current account deficit (Hermes and Lensink 2001; Harrigan, Mavrotas, and Yusop 2002). The inflation rate is expected to reduce future returns and, therefore, must be positively related to capital flight, while the current account deficit may reflect sustainability of the exchange rates and captures macroeconomic imbalances. The deficit could fuel capital flight, and it would be expected to be positively related to capital flight (Hermes and Lensink 2001). The size of government might signal the possibility that government taxation could be increased in future and cause capital flight. This is, therefore, used as a macroeconomic management variable, since we do not have data on fiscal deficit (see, also, Ali and Walters 2011).

Short-term debt is used to capture sources of capital flight and to control for the phenomenon known as the revolving door hypothesis or debt-fueled capital flight. This is a situation under which an increase in foreign debt, particularly public sector debt, is accompanied by a corresponding increase in capital flight. This is well documented in Ndikumana and Boyce (2003) for a sample of 30 sub-Saharan African countries.

Finally, we control for financial development by using a financial deepening indicator, measured by broad money supply as a ratio of gross domestic product, the amount of the domestic credit extended by the banking sector to the private sector, and the financial liberalization index proposed by Abiad et al. (2009).⁸ These variables are expected to reduce capital flight since in a more developed financial sector, the neoclassical presumption is that more investment opportunities would arise and reduce capital flight. Finally, the level of international reserves scaled by GDP is used, which serves as an early warning signal for currency crises—hence, capital flight.

With these additional control variables at hand, the extended regression equation that accommodates them is specified in Equation (2):

$$K_t = \alpha + \sum_i^p \beta_i K_{t-i} + \sum_i^q \theta_i Institutions_{t-i} + \sum_i^q \vartheta_i Cld_i + \delta' X_t + \psi' Z_t + \varepsilon_t \quad (2)$$

where K_t , K_{t-i} and $Institutions_{t-i}$ are defined earlier. Cld_i is a vector that contains variables that capture the portfolio motive of capital flight, such as the interest rate differential, X_t , a vector that contains macroeconomic policy management variables (inflation, government size, and debt), and Z_t , a vector that contains financial development variables (M2/GDP, credit extended to the private sector), and the early warning currency crises signal variable (the level of foreign reserves).

4.2 Data, Time Series Properties of Data and Stylized Facts

Time series data from 1970 to 2010 is used to test the hypothesis that illicit financial outflows are a result of weaknesses in political institutions. The date range was chosen because data on illicit capital flows is only available from 1970. Illicit financial flows, as ratio of GDP, is used as a dependent variable. Data on this variable is obtained from the database of Ndikumana and Boyce (2012b). The calculation of illicit flows is based on a methodology that has widely been used and accepted in the macroeconomic literature since the 1980s, in the wake of the Third World Debt crisis (see Cuddington [1986]; Eaton [1987]; Kant [1996]; Khan and Ajayi [2000]; Boyce and Ndikumana [2001]; Ndikumana and Boyce [2003]; Brada, Kutan, and Vukšić [2008]; Kar and Cartwright-Smith [2008]; Fofack and Ndikumana [2010]; Kar and Cartwright-Smith (2010);

⁸ See Yalta and Yalta (2012); Brada, Kutan, and Vukšić (2013).

Ndikumana and Boyce (2011); AfDB and GFI [2013]). We now provide the methodology for computation of this data set in Appendix D1 to this paper. We also use the data from Letete, Mare, and Fedderke (2011). The data set provides data on the *de jure* index of the quality of institutions measured by “*arbitrary executive power*” compiled from laws in Kenya. Details on the computation of this data set can be found in the appendix of the paper by Letete, Mare, and Fedderke (2011). For control variables, we use a set of data from the World Development Indicators and IMF International Finance Statistics. Details on sources of data are provided in Table 4.

Time series data is often subject to varying means and covariances over time (non-stationarity). All the variables used in this paper are therefore tested for stationarity, employing the commonly used Augmented Dickey Fuller Generalized Least Squares (ADF-GLS) unit root test before the model given in Equation (1) is estimated. The advantage of this test over other tests is that it has the highest power and exhibits robustness to all but the most extreme breaks in variance. This is in contrast to the original Dickey-Fuller test, which has been shown to suffer severe distortion in such circumstances. The ADF-GLS is used with and without a trend. The lag structure is determined by the use of the Bayesian Information Criterion.⁹ The need to test for stationarity is grounded in the fact that the use of time series variables that are non-stationary could result in spurious regression, that is, a regression in which the OLS estimates are statistically significant and seem to indicate that a relationship exists between variable of interest when, in reality, there is no such relationship (Granger 1969).

The results from the unit root test are presented in Table 1. These results confirm that the dependent variable, which is the amount of capital flight expressed as a ratio of GDP, is stationary at level—hence, it is integrated of order zero. It is also noted in the Table that the following are all difference stationary: interest rate differential; the amount of credit extended to the private sector; short-term debt; financial deepening measured by the amount of broad money to GDP; government size measured by total final government expenditure in GDP; real effective exchange rates; capital controls; and foreign official development aid. This implies that these variables are integrated of the first order, $I(1)$. The other control variables, including, inflation, real growth rate of GDP, political instability, and trade openness are all stationary at level, $I(0)$. They are integrated of order zero and need not be differenced when running the regression.

⁹ See Elliott, Gothenberg, and Stock (1996).

5 Estimation Results and Discussions

This section presents the results from the estimation of the baseline regression given in Equation (1). The aim is to explore whether the extent of the arbitrary powers of the Executive is a significant determinant of capital flight and rent extraction from Kenya for the period 1970–2010. As highlighted earlier in the discussion, Kenya suffered huge episodes of capital flight during the period when the Executive had arbitrary power. However, this seemingly positive relationship has not been statistically tested.

The combination of the $I(1)$ and $I(0)$ variables, employed in this paper to assess the foregoing relationship, requires taking the first difference of those variables that are found to be non-stationary at level. In the next stage, an ARDL model specified in Equation (1) is estimated. This estimation gives the baseline regression results that show the relationship between capital flight and the extent of the arbitrary powers of the Executive. These baseline results are shown in Table 2, column 1. The results show that increased arbitrary powers of the Executive is a significant factor in determining capital flight to GDP in a regression, without controlling for other determinants of capital flight. This significant positive association between capital and arbitrary executive powers indicates that executive powers may be used by corrupt officials to transfer resources to themselves and other elites in weakly institutionalized polities. Such resources are often transferred abroad to hide them, since they were acquired through illegal means (Blankenburg and Khan 2012).

Table 1. Unit Root results

| Variables | ADF Unit Root Test | | | | | | | | Inference |
|---------------------------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------|
| | X | | | | ΔX | | | | |
| | τ_{μ} | τ_{c+t} | τ_{μ} | τ_{c+t} | τ_{μ} | τ_{c+t} | τ_{μ} | τ_{c+t} | |
| <i>Capital flight/GDP</i> | -5.53*** | -1.73* | ... | ... | -4.79*** | -5.81*** | ... | ... | I(0) |
| <i>Arbitrary executive power</i> | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <i>Interest rate differential</i> | -2.42 | -3.05* | -6.03*** | -4.97*** | -2.63 | -2.97 | -4.92*** | -4.87*** | I(1) |
| <i>Inflation</i> | -3.09*** | -3.52** | ... | ... | -3.68*** | -3.61** | ... | ... | I(0) |
| <i>Credit to private sector/GDP</i> | -0.35 | -2.29 | -6.91*** | -6.57*** | -0.86 | -2.35 | -6.97*** | -6.87*** | I(1) |
| <i>Fhpri</i> | -0.56 | -1.63 | -2.67** | -2.81** | -0.69 | -1.57 | -2.97** | -2.81** | I(1) |
| <i>Financial liberalization Index</i> | -0.38 | -1.41 | -4.96*** | -5.06*** | -0.35 | -1.53 | -5.02*** | -4.95*** | I(1) |
| <i>Trade openness</i> | -3.24*** | -3.25** | -7.17*** | -7.64*** | -3.13 | -3.20** | 7.64*** | -7.57*** | I(0) |
| <i>Short-term debt</i> | -1.64 | -2.15 | -5.64*** | -5.94*** | -2.72 | -3.12 | -6.07*** | -4.11*** | I(I) |
| <i>M2/GDP</i> | -0.03 | -2.12 | -6.81*** | -7.04*** | -0.06 | -2.21 | -3.06*** | -3.26** | I(1) |
| <i>Government size/GDP</i> | -2.16* | -2.37 | -3.99*** | -5.54*** | -2.28 | -2.55 | -6.32*** | -6.18*** | I(1) |
| <i>Real growth</i> | -4.96*** | -5.74*** | ... | ... | -3.30*** | -4.37*** | ... | ... | I(0) |
| <i>Real effective exchange rate</i> | -0.89 | -1.66 | -5.34*** | -5.59*** | -0.21 | -0.28 | -5.52*** | -5.44*** | I(1) |
| <i>Capital controls</i> | -0.94 | -2.10 | -6.24*** | -6.28*** | -1.049 | -2.18 | -6.17*** | -6.11*** | I(1) |
| <i>Aid/GDP</i> | -0.44 | -1.85 | -8.51*** | -8.91*** | -1.86 | -1.84 | -6.63** | -6.59*** | I(1) |
| <i>Political instability</i> | -5.25*** | -5.74*** | ... | ... | -5.69 | -5.64*** | ... | ... | I(0) |

*** $p < 1\%$, ** $p < 5\%$ and * $p < 10\%$.

However, as highlighted earlier, the estimation of the baseline model is likely to result in biased estimates due to omitted variables (Lan, Wu, and Zhang 2010). To circumvent this problem, we introduce a set of control variables, one at a time, as noted in the preceding section. Introducing the set of control variables one at a time is also meant to avoid the likely problem of colinearity among the explanatory variables that is possible. The problem of multicollinearity is the usual increase in the standard errors of the coefficients. These increased standard errors, in turn, means that coefficients for some independent variables may be found not to be significantly different from zero; yet, without multicollinearity and with lower standard errors, these same coefficients might have been found to be significant, and the researchers may not have come to null findings in the first place.

Based on these considerations, we re-estimate the baseline model with additional control variables. This estimation is performed on the model specified in Equation (2). We estimate 10 specifications of the model to mitigate the problems of colinearity. The results from these estimations, which control for the additional variables that are claimed to determine capital flight from economic theory, are shown in column 2 to column 11 of Table 2.

In all the estimations presented in column 2 through column 11 of Table 2, The LM-test of serial autocorrelation is performed in the residuals from the regression model proposed by Breusch (1978) and Godfrey (1978). The problem of autocorrelation in a regression model is that it causes ordinary least squares to underestimate the standard errors of the coefficients. This means that the t-statistics will usually be bigger than they should be. Consequently, this problem could lead one to mistakenly claim that some coefficients are statistically significant when they are not. In all the estimations here, the null hypothesis of “no autocorrelation” could not be rejected. This suggests that these estimations were not affected by serial autocorrelation and, therefore, could be relied upon.

In all the estimations, the extent of the arbitrary powers of the Executive consistently remained positively associated with capital flight from Kenya. This statistically significant (significant at least at the 5 percent level of significance) association between capital flight and arbitrary executive powers further indicates that unconstrained powers of the Executive remain a robust determinant of capital flight and rent extraction in Kenya. This association holds even if one controls for other variables, which could determine capital flight. These results suggest that in weakly institutionalized environments, executive powers are used unduly to extract resources from the economy for personal gain. The results cement the argument in the political economy literature, discussed earlier, that in an environment characterized by weak political institutions, the political actors have discretionary political powers that allow them to design or administer regulations and policies in a discretionary manner. The exercise of such powers enables them to steal resources from the state. The central argument is thus that exploitation of the discretionary power is enabled by weak political, administrative, and legal institutions (Bardhan 1997; Andvig et al. 2001; Aidt 2003).

Although the results of the three specifications reflected in columns 2 through 5 indicate that the interest rate differential is also important in determining capital flight, it loses significance when more controls are added to the regression. This further suggests that risk–return measures and portfolio diversification motives are not the main drivers of capital flight and rent extraction in Kenya. The history of corruption reflected in the earlier sections of this paper further strengthen the evidence that it is neither macroeconomic factors nor portfolio motives that explain capital flight from Kenya. The cause is mostly corruption by leaders who extract the country’s resources in a seemingly unconstrained manner. Such unconstrained leaders dismantle checks and balances

intentionally to enable themselves to extract the resources of the economy. The historical context provided earlier shows clearly that indeed Kenyatta and Moi dismantled checks and balances. This resulted in grand corruption in Kenya, which had the adverse consequence of capital flight from the economy.

Indeed, the results show debt-fueled capital flight as indicated in column 11 of Table 2, and that a one percentage change in short-term debt to GDP increases capital flight by about 0.7%. This result strengthens the arguments raised by Ndikumana and Boyce (2003, 2011) that contend that capital flight from Africa is explained by debt accumulation, a situation they refer to as the revolving door hypothesis.

Interestingly, the results show that capital flight from Kenya is also related to the size of government. Columns 8 through 10 in Table 2 show that the size of government, measured by the amount of final government consumption of goods and services, is positively related to capital flight. This result is intuitive, given the history of Kenya in which public servants supplied the government with goods and services, often at inflated prices. The result strengthens the argument that state resources were often used for personal gain during both the Kenyatta and Moi regimes (Hornsby 2013). One of the channels through which capital flight was financed was government purchase of goods and services.

Hornsby (2013) supports this result in his claim that as the number of scandals in Kenya began to be revealed, it became apparent that contracts between the government and several companies, in which government officials and ministers were shareholders, were designed to steal taxpayers' money. It was noted earlier that foreign donors were infuriated to discover the Kenyan government was stealing sums of similar size to the entire aid budget.

To check the robustness of the results, we use an alternative data set on the constraints on the Executives from the Polity IV indicators. The results from usage of this variable show that, indeed, constraining the powers of the Executive is negatively related to capital flight. This implies that strengthening institutions of accountability will result in reduction of capital flight. The variable remains consistently significant across all model specifications. The results are shown in Table 3. From column 1 through column 11, constraints on the powers of the Executive remain a robust determinant of capital flight from Kenya.

Table 2: Results for the test of the effects of Political Institutions on the Illicit Financial Flows from Kenya

| Variables | Dependent Variable: Stock of the Illicit Financial Flows as Ratio of GDP (CF/GDP) | | | | | | | | | | |
|--|---|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| <i>Baseline Variables</i> | | | | | | | | | | | |
| <i>Constant</i> | -3.067 | -3.1087 | -3.1468 | -2.7300 | -3.016 | -4.96 | -4.8356 | -3.3214 | -3.3597 | -3.1719 | -3.04 |
| <i>Capital flight</i> | 0.1592 (0.1585) | 0.1985 (0.1631) | 0.1993 (0.1681) | 0.2170 (0.1690) | 0.206 (0.1756) | 0.2729 (0.1729) | 0.2630 (0.1766) | 0.2343 (0.1706) | 0.1326 (0.1574) | 0.1512 (0.1688) | 0.305 (0.189) |
| <i>Arbitrary Executive powers</i> | 0.8642* (0.4532) | 0.8444* (0.4535) | 0.8437* (0.4607) | 0.8346* (0.4607) | 0.8861* (0.5009) | 0.9636** (0.4843) | 0.9941** (0.4953) | 0.9115* (0.4954) | 0.9124* (0.4309) | 0.8570* (0.4717) | 1.04** (0.5901) |
| <i>Control Variables</i> | | | | | | | | | | | |
| <i>Δinterest rate differential</i> | | 0.2618 (0.2579) | 0.2627 (0.2636) | 0.2622 (0.2635) | 0.2588 (0.2674) | 0.2817 (0.2579) | 0.2911 (0.2620) | 0.1597 (0.2614) | 0.1336 (0.2516) | 0.2612 (0.2640) | 0.2353 (0.197) |
| <i>Inflation</i> | | | 0.003 (0.1140) | 0.0036 (0.1142) | 0.0009* (0.1161) | 0.1618 (0.1412) | 0.1349 (0.1553) | - | - | - | - |
| <i>Credit to private sector</i> | | | | -0.809 (0.8057) | -0.816 (0.8172) | -0.4785 (0.8073) | -0.4177 (0.8289) | - | - | - | - |
| <i>ΔFreehold property rights</i> | | | | | 0.0947 (0.3331) | 0.2932 (0.3376) | 0.2820 (0.3428) | - | - | - | - |
| <i>ΔFinancial liberalization Index</i> | | | | | | - | -0.7204* (0.3989) | - | - | - | -0.4478 (0.3200) |
| <i>ΔOpenness</i> | | | | | | | 0.0704 (0.1585) | 0.0713 (0.1479) | - | - | 0.1309 (0.126) |
| <i>Δshort term debt</i> | | | | | | | | | | | 0.755* (0.385) |
| <i>Δ(M2/GDP)</i> | | | | | | | | -0.7110 (0.4999) | - | - | -0.1079 (0.3562) |
| <i>Δgovernment size</i> | | | | | | | | | 2.2587* (1.0031) | - | 1.865 (0.8976) |
| <i>GDP growth</i> | | | | | | | | | | -0.036 (0.153) | -0.149 (0.211) |
| <i>Real effective exchange rate</i> | | | | | | | | | | | -0.004 (0.031) |
| <i>Diagnostic Checks</i> | | | | | | | | | | | |
| <i>Adjusted R²</i> | 0.15 | 0.17 | 0.18 | 0.19 | 0.20 | 0.28 | 0.29 | 0.28 | 0.27 | 0.15 | 0.4561 |
| <i>Observations</i> | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 |
| <i>LM-test-Statistic</i> | 1.1394 | 0.6732 | 0.6806 | 0.7607 | 0.7239 | 1.8513 | 1.3675 | 0.7212 | 1.599 | 1.3578 | 2.275 |
| <i>P-value-(χ²)</i> | 0.5667 | 0.7142 | 0.7116 | 0.6836 | 0.6963 | 0.3963 | 0.5047 | 0.6972 | 0.449 | 0.5072 | 0.1314 |

Notes: *** $p < 1\%$, ** $p < 5\%$ and * $p < 10\%$., Period of estimation:1970-2010, LM-test tests the null hypothesis of no serial autocorrelation in the residuals. Numbers in parenthesis are the robust standard error

6. Conclusion

This paper has argued that an increase in arbitrary executive powers is the main factor driving illicit financial flows from Kenya. This finding is fairly robust to alternative measures of institutional quality and additional control variables. This study has also demonstrated that macroeconomic variables and portfolio motives are by no means the only causes of illicit outflows from the country. We also provide evidence of the revolving door relationship between external debt and capital flight. This means that part of Kenya's debt was used to finance illicit financial outflows by the ruling elites. Debt fueled illicit capital outflows, and government spending fueled illicit capital outflows. This empirical evidence lends strong support to the theoretical models that purport that looting may arise from the incentives for rent extraction under an environment characterized by weak institutions (Sarr et al. 2011). The evidence here has policy implications: achieving and maintaining strong institutions that constrain the Executive is likely to reduce rent extraction and illicit capital outflows. These implications may be relevant to other countries that are faced with a similar problem. This does not mean, however, that favorable macroeconomic conditions do not matter. It means that mere emphasis on achievement of macroeconomic stability and favorable returns adjusted for risk might not be the sole strategy to reduce illicit capital outflows. The control of the Executive through a system of check and balances, parliament, and an independent judiciary could also contribute to reducing capital flight from these countries.

Table 3: Effects of Political Institutions on the Illicit Financial Flows from Kenya: Robustness Check using Alternative Institutional Measures

| Dependent Variable: Stock of Capital Flight as Ratio of GDP | | | | | | | | | | | |
|---|---------|---------|---------|----------|---------|----------|----------|---------|---------|----------|----------|
| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| <i>Baseline Regression</i> | | | | | | | | | | | |
| <i>Constant</i> | 7.109 | 6.798 | 7.030 | 7.145 | 6.737 | 8.207 | 8.440 | 8.773 | 9.504 | 8.470 | 8.289 |
| <i>Capital flight</i> | 0.173 | 0.211 | 0.207 | 0.225 | 0.205 | 0.243 | 0.248 | 0.179 | 0.224 | 0.333 | 0.307 |
| | (1.158) | (0.163) | (0.172) | (0.170) | (0.162) | (0.169) | (0.176) | (0.177) | (0.193) | (0.064) | (1.59) |
| <i>Constraints on the Executive powers</i> | - | - | - | - | - | -1.709** | -1.779** | - | - | - | -1.356** |
| | (0.659) | (0.675) | (0.698) | (0.678) | (0.696) | (0.696) | (0.716) | (0.674) | (0.668) | (0.623) | (0.723) |
| <i>Control Variables</i> | | | | | | | | | | | |
| <i>Δinterest rate differential</i> | | 0.246 | 0.242 | 0.243 | 0.245 | 0.230 | 0.260 | 0.145 | 0.161 | 0.208 | 0.1956 |
| | | (0.180) | (0.189) | (0.191) | (0.182) | (0.179) | (0.176) | (0.164) | (0.172) | (0.175) | (0.179) |
| <i>Inflation</i> | | | | -0.019 | | 0.0009* | 0.1618 | 0.1349 | - | - | |
| | | | | (0.0862) | - | - | - | - | - | - | |
| <i>Credit to private sector</i> | | | | -0.711 | - | - | - | - | - | - | |
| | | | | (0.679) | - | - | - | - | - | - | |
| <i>Δ(M2/GDP)</i> | | | | | -0.0904 | -0.0067 | -0.0039 | -0.0167 | -0.0328 | -0.0731 | -0.0874 |
| | | | | | (0.441) | (0.384) | (0.338) | (0.350) | (0.358) | (0.3675) | (0.3641) |
| <i>ΔFinancial liberalization Index</i> | | | | | | -0.589* | -0.609* | -0.508* | -0.570* | -0.527* | -0.489 |
| | | | | | | (0.290) | (0.269) | (0.280) | (0.293) | (0.303) | (0.317) |
| <i>ΔOpenness</i> | | | | | | | 0.135 | 0.151 | 0.149 | 0.125 | 0.126 |
| | | | | | | | (0.131) | (0.124) | (0.124) | (0.130) | (0.121) |
| <i>Δgovernment size</i> | | | | | | | | 2.117** | 2.267** | 1.920** | 2.01** |
| | | | | | | | | (0.927) | (0.945) | (0.834) | (0.860) |
| <i>GDP growth</i> | | | | | | | | | -0.172 | -0.086 | -0.138 |
| | | | | | | | | | (0.170) | (0.208) | (0.204) |
| <i>Short term debt</i> | | | | | | | | | | 0.7563** | 0.7449** |
| | | | | | | | | | | (0.3731) | (0.379) |
| <i>Real effective exchange rate</i> | | | | | | | | | | | -0.016 |
| | | | | | | | | | | | (0.0289) |
| <i>Diagnostic Checks</i> | | | | | | | | | | | |
| <i>Adjusted R²</i> | 0.168 | 0.1897 | 0.189 | 0.1889 | 0.2073 | 0.1899 | 0.2703 | 0.2915 | 0.381 | 0.457 | 0.463 |
| <i>Prob (F-statistics)</i> | 0.0061 | 0.0082 | 0.0082 | 0.021 | 0.0092 | 0.0165 | 0.0050 | 0.0039 | 0.0006 | 0.0002 | 0.000 |
| <i>Observations</i> | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 |
| <i>LM-test-Statistic</i> | 1.592 | 0.478 | 0.538 | 0.801 | 0.220 | 0.364 | 1.945 | 2.712 | 3.146 | 1.699 | 2.676 |
| <i>P-value-(χ^2)</i> | 0.2070 | 0.4894 | 0.4632 | 0.3709 | 0.6389 | 0.5462 | 0.1631 | 0.0996 | 0.0761 | 0.449 | 0.1019 |

Notes: *** $p < 1\%$, ** $p < 5\%$ and * $p < 10\%$., Period of estimation:1970-2010, LM-test tests the null hypothesis of no serial autocorrelation in the residuals

Numbers in parenthesis are the robust standard errors

References

- Abiad, A., E. Detragiache, and T. Tresselt. 2009. "A New Database of Financial Reforms." *IMF Staff Papers* 57 (2): 281–302.
- Acemoglu, D., S. Johnson, and J. A. Robinson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 91 (5): 1369–401.
- Acemoglu, D., S. Johnson, J. A. Robinson, and Y. Thaicharoen. 2003. "Institutional Causes, Macroeconomic Symptoms: Volatility, Crises and Growth." *Journal of Monetary Economics* 50 (1): 49–123.
- Acemoglu, D., T. Verdier, and J. A. Robinson. 2004. "Kleptocracy and Divide- and- Rule: A Model of Personal Rule." *Journal of the European Economic Association* 2 (2–3): 162–92.
- AfDB (African Development Bank), and GFI (Global Financial Integrity). 2013. "Illicit Financial Flows and the Problem of Net Resource Transfers from Africa: 1980–2009." Joint Report, May, AfDB and GFI, Tunis-Belvedere, Tunisia, and Washington, DC.
- Aidt, T. S. 2003. "Economic Analysis of Corruption: A Survey." *The Economic Journal* 113 (491): F632–F652.
- Ajayi, S. I. 1995. "Capital Flight and External Debt in Nigeria." AERC Research Paper 35, African Economic Research Consortium, Nairobi.
- Ajayi, S. I., and M. S. Khan. 2000. *External Debt and Capital Flight in Sub-Saharan Africa*. Washington, DC: International Monetary Fund.
- Alesina, A., and G. Tabellini. 1989. "External Debt, Capital Flight and Political Risk." *Journal of International Economics* 27 (3): 199–220.
- Alfaro, L., S. Kalemli-Ozcan, and V. Volosovych. 2007. "Capital Flows in a Globalized World: The Role of Policies and Institutions." In *Capital Controls and Capital Flows in Emerging Economies: Policies, Practices, and Consequences*, edited by S. Edwards, 19–71. Chicago: University of Chicago Press for National Bureau of Economics.
- Ali, A., and B. Walters. 2011. "On the Causes of Capital Flight from Sub-Saharan Africa." Center for the Study of African Economies, Conference Papers, University of Oxford. <https://www.csae.ox.ac.uk/conferences/2011-EdiA/papers/679-Ali.pdf>
- Andvig, J. C., O.-H. Fjeldstad, I. Amundsen, T. Sissener, and T. Søreide. 2001. "Corruption. A Review of Contemporary Research." Report R 2001:7, Chr. Michelsen Institute, Bergen, Norway.
- Bardhan, P. 1997. "Corruption and Development: A Review of Issues." *Journal of Economic Literature* 35 (3): 1320–46.

- Blankenburg, S., and M. Khan. 2012. "Governance and Illicit Flows." In *Draining Development? Controlling Flows of Illicit Funds from Developing Countries*, edited by P. Reuter, P., 21–68, Washington, DC: International Bank for Reconstruction and Development, The World Bank.
- Boyce, J. K., and L. Ndikumana. 2001. "Is Africa a Net Creditor? New Estimates of Capital Flight from Severely Indebted Sub-Saharan African Countries, 1970–1996." *Journal of Development Studies* 38 (2): 27–56.
- Brada, J. C., A. M. Kutan, and G. Vukšić. 2008. "Capital Flight from Central and East European Countries: Estimates and Causes." EMG Working Paper Series, WP-EMG-04-2008, Emerging Markets Group, Cass Business School, London.
- Brada, J. C., A. M. Kutan, and G. Vukšić. 2013. "Capital Flight in the Presence of Domestic Borrowing: Evidence from Eastern European Economies." *World Development* 51: 32–46.
- Breusch, T.S., 1978. Testing for autocorrelation in dynamic linear models. *Australian Economic Papers*, 17(31): 334–355.
- Cerra, V., M. Rishi, and S. Saxena. 2008. "Robbing the Riches: Capital Flight, Institutions and Debt." *Journal of Development Studies* 44 (8): 1190–213.
- Cheung, Y.-W., and X. Qian. 2010. "Capital Flight: China's Experience." *Review of Development Economics* 14 (2): 227–47.
- Clague, C., P. Keefer, S. Knack, and M. Olson. 1996. "Property and Contract Rights in Autocracies and Democracies." *Journal of Economic Growth* 1 (2), 243–76.
- Collier, P., A. Hoeffler, and C. Pattillo. 2001. "Flight Capital as a Portfolio Choice." *World Bank Economic Review* 15 (1): 55–80.
- Cuddington, J. T. 1986. "Capital Flight: Estimates, Issues, and Explanations." *Princeton Studies in Economics*, No., 58, International Finance Section, Department of Economics, Princeton University Princeton, NJ.
- Dornbusch, R. 1990. *Capital Flight: Theory, Measurement, and Policy Issues*. Washington, DC: Inter-American Development Bank.
- Eaton, J. 1987. "Public Debt Guarantees and Private Capital Flight." *World Bank Economic Review* 1 (3): 377–95.
- Elliott, G., T. J. Rothenberg, and J. H. Stock. 1996. "Efficient Tests for an Autoregressive Unit Root." *Econometrica* 64 (4): 813–36.
- Epstein, G., 2005. *Capital Flight and Capital Controls in Developing Countries*. Cheltenham: Edward Elgar Publishing.

Eigen, P. 2002. "Corruption is Unsustainable." Statement by Peter Eigen, Chairman of Transparency International, on the launch of the Corruption Perceptions Index, http://www.revistainterforum.com/english/articles/090202pol_transint.html

Everhart, S. S., and M. A. Sumlinski. 2001. "Trends in Private Investment in Developing Countries: Statistics for 1970–2000 and the Impact on Private Investment of Corruption and the Quality of Public Investment." Discussion Paper No. 44, International Finance Corporation, World Bank, Washington, DC.

Fatás, A., and I. Mihov. 2005. "Policy Volatility, Institutions, and Economic Growth." *Review of Economics and Statistics* 95 (2): 362–76.

Fofack, H., and L. Ndikumana. 2010. "Capital Flight Repatriation: Investigation of Its Potential Gains for Sub-Saharan African Countries." *African Development Review* 22 (1): 4–22.

Godfrey, L.G., 1978. Testing against general autoregressive and moving average error models when the regressors include lagged dependent variables. *Econometrica*, 46(6): 1293–1301.

Granger, C. W. J. 1969. "Investigating Causal Relations by Econometric Models and Cross-spectral Methods." *Econometrica* 37 (3): 424–38.

Harrigan, J., G. Mavrotas, and Z. Yusop. 2002. "On the Determinants of Capital Flight: A New Approach." *Journal of the Asia Pacific Economy* 7 (2): 203–41.

Heggstad, K., and O.-H. Fjeldstad. 2010. "How Banks Assist Capital Flight from Africa: A Literature Review." CMI Report R 2010: 6, Chr. Michelsen Institute, Bergen, Norway. Commissioned by Norad's Anti-Corruption Project (ANKOR).

Hermes, N., and R. Lensink. 2001. "Capital Flight and the Uncertainty of Government Policies." *Economics Letters* 71 (3): 377–81.

Hornsby, C. 2013. *Kenya: A History Since Independence*. London: IB Tauris Publishers.

Ize, A., and G. Ortiz. 1987. "Fiscal Rigidities, Public Debt, and Capital Flight." *Staff Papers (International Monetary Fund)* 34 (2): 311–32.

Jain, A. K., 1988. "An Agency Theoretic Explanation of Capital Flight." *Economics Letters* 28 (1): 41–5.

Kant, C. 1996. "Foreign Direct Investment and Capital Flight." *Princeton Studies in International Finance* No. 80, March, International Finance Section, Department of Economics, Princeton University, Princeton, NJ.

Kar, D., and D. Cartwright-Smith. 2008. "Illicit Financial Flows from Developing Countries: 2002–2006." Technical report, Global Financial Integrity (GFI), Center for International Policy, Washington, DC.

- Kar, D., and D. Cartwright-Smith. 2010. "Illicit Financial Flows from Africa: Hidden Resource for Development." Global Financial Integrity (GFI), Center for International Policy, Washington, DC.
- Khan, M. S., and N. U. Haque. 1985. "Foreign Borrowing and Capital Flight: A Formal Analysis." Staff Papers (International Monetary Fund) 32 (4): 606–28.
- Lan, Y., Y. Wu, and C. Zhang. 2010. "Capital Flight from China: Further Evidence." Journal of International Finance and Economics 10(2): 13–31.
- Le, Q. V., and P. J. Zak. 2006. "Political Risk and Capital Flight." Journal of International Money and Finance 25 (2): 308–29.
- Lensink, R., N. Hermes, and V. Murinde. 1998. "The Effect of Financial Liberalization on Capital Flight in African Economies." World Development 26 (7): 1349–68.
- Letete, E.M., 2015. Essays on institutions and economic development in Kenya (Doctoral dissertation, University of Cape Town).
- Letete, E.M., M. Sarr, and J. Fedderke. 2011. "Evolution and Measurement of Institutions in Kenya, 1880–2010: Is there Evidence of Path Dependence and Interdependence?" AERC Biannual Conference, African Economic Research Consortium, December, Nairobi.
- Loayza, N. V., R. Ranciere, L. Servén, and J. Ventura. 2007. "Macroeconomic Volatility and Welfare in Developing Countries: An Introduction." World Bank Economic Review 21 (3): 343–57.
- Ndikumana, L., and J. K. Boyce. 2003. "Public Debts and Private Assets: Explaining Capital Flight from Sub-Saharan African Countries." World Development 31 (1): 107–30.
- Ndikumana, L., and J. K. Boyce. 2008. "New Estimates of Capital Flight from Sub-Saharan African Countries: Linkages with External Borrowing and Policy Options." PERI Working Paper No. 144, Political Economy Research Institute, University of Massachusetts, Amherst.
- Ndikumana, L., and J. K. Boyce. 2010. "Measurement of Capital Flight: Methodology and Results for Sub-Saharan African Countries." African Development Review 22 (4): 471–81.
- Ndikumana, L., and J. K. Boyce. 2011. "Capital Flight from Sub-Saharan Africa: Linkages with External Borrowing and Policy Options." International Review of Applied Economics 25 (2): 149–70.
- Ndikumana, L., and J. K. Boyce. 2012a. Capital flight from north african countries. PERI Working Papers.
- Ndikumana, L., and J. K. Boyce. 2012b. "Capital Flight from Sub-Saharan African Countries: Updated Estimates, 1970–2010." PERI Research Report, October, Political Economy Research Institute, University of Massachusetts, Amherst.

http://www.peri.umass.edu/fileadmin/pdf/ADP/SSAfrica_capitalflight_Oct23_2012.pdf

Ndikumana, L., and M. Sarr. 2016. "Capital Flight and Foreign Direct Investment in Africa: An Investigation of the Role of Natural Resource Endowment." UNU–WIDER Working Paper 58/2016, United Nations University–World Institute for Development Economics Research, Helsinki.

Ndikumana, L., and J. K. Boyce. 2011. *Africa's Odious Debt: How Foreign Loans and Capital Flight Bled a Continent*. London: ZED Books Limited.

Ng'eno, N. 2000. "Capital Flight in Kenya." In *External Debt and Capital Flight in Sub-Saharan Africa*, edited by S. I. Ajayi, and M. S. Khan, 301–20. Washington, DC: International Monetary Fund..

North, D. C. 1987. "Institutions, Transaction Costs and Economic Growth." *Economic Inquiry* 25 (3): 419–28.

North, D. C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge, MA: Cambridge University Press.

Reuter, P., ed. 2012. *Draining Development?: Controlling Flows of Illicit Funds from Developing Countries*. Washington, DC: World Bank.

Rodrik, D., A. Subramanian, and F. Trebbi. 2002. "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development." NBER Working Paper No. 9305, National Bureau of Economic Research Cambridge, MA.

Sachs, J. D., and A. Warner.. 1995. "Economic Reform and the Process of Global Integration." *Brookings Papers on Economic Activity* 26 (1): 1–118.

Saleh, J. 2004. "Property Rights Institutions and Investment." Policy Research Working Paper No. 3311, World Bank, Washington, DC.

Sarr, M., E. Bulte, C. Meissner, and T. Swanson. 2011. "On the Looting of Nations." *Public Choice* 148 (3–4): 353–80.

Sheets, N. 1995. "Capital Flight from the Countries in Transition: Some Theory and Empirical Evidence." *International Finance Discussion Papers Number 514*, Board of Governors of the Federal Reserve System (US). <https://ideas.repec.org/p/fip/fedgif/514.html>

Sheets, N. 1996. "Capital Flight from the Countries in Transition: Some Empirical Evidence." *Journal of Policy Reform* 1 (3): 259–77.

Shirley, M. M. 2008. "Institutions and Development." In *Handbook of New Institutional Economics*, edited by C. Ménard and M. M. Shirley, 611–638. Berlin: Springer-Verlag.

Yalta, A. Y., and A. T. Yalta. 2012. "Does Financial Liberalization Decrease Capital Flight? A Panel Causality Analysis." *International Review of Economics & Finance* 22 (1): 92–100.

Table 4: Variables Names, Definition and Sources

| Classification of variables | Variables | Definition | Source |
|-------------------------------------|---------------|--|---|
| Dependent Variable | CF | Capital flight expressed as ratio of GDP in constant 2005 prices[footnote: | |
| Control Variables: | | | |
| (1) Risk and Return Factors: | REER | Change in real effective exchange rate | World Development Indicators, 2010 |
| | Intdiff | Interest rate differential between the domestic deposit rate and US treasury bill rate (%) | World Development Indicators, 2010 |
| | GDPg | Annual GDP growth (%) | World Development Indicators, 2010 |
| (2) Institutional Indicators: | Inst | Extent of the arbitrary executive powers | Computed in this Study (see Letete, 2015) |
| | fhpr | Freehold property rights index | Computed in this Study (see Letete, 2015) |
| | Prcl | Political rights and civil liberties index | Computed in this Study (see Letete, 2015) |
| | ConEx | Constraints on the executive from polity IV indicators | Polity IV Database |
| (3) Macroeconomic Policy Indicators | Inflation | Inflation in the domestic economy measured as change in CPI (%) | World Development Indicators, 2010 |
| | gsize | The value of final government consumption expressed as a ratio of GDP (%) | World Development Indicators, 2010 |
| | shorttermdebt | Short term debt expressed as a ratio of GDP (%) | World Development Indicators, 2010 |
| (4) Liberalization Indices | Openness | Exports plus imports expressed as ratio of GDP to measure current account openness (%) | World Development Indicators, 2010 |
| | Cindex | Chin Ito index measures the degree of exchange controls in an economy | World Development Indicators, 2010 |
| | AETindex | Abdul, Enrica and Tressel index of financial liberalization | Abdul A., Enrica D., and Treseel T., (2008) |
| (5) Financial Development Indices | Psc | Domestic credit extended to the private sector by the banking sector expressed as a ratio of GDP (%) | World Development Indicators, 2010 |
| | M2/GDP | Financial deepening index measured as a ratio of broad money (M2) to GDP (%) | World Development Indicators, 2010 |

This study uses the illicit financial flows from Ndikumana and Boyce (2010) as an indicator of illicit capital flows from Kenya. The data is computed following the residual based approach.

Table 5. Some examples of corruption scandals involving capital flight from Kenya

| <i>Name of the Scandal</i> | <i>Amount Involved</i> |
|------------------------------------|---------------------------------|
| Goldenberg Scandal | 10% of the country's annual GDP |
| Helicopter Servicing Contract | Sh360 million |
| Navy Ship Deal | 4.1 billion (ks) |
| Contracting Hallmark International | \$3 million |
| The construction of Nexus | US\$36.9 million) |
| The Passport Equipment System Deal | £20 million |
| Education Scandal | \$1 million |
| Grand Regency Scandal | GBP5billion |
| Moi Scandal | GBP 1 billion |
| 2009 Triton Oil Scandal | US\$98.7 million |

Source: Report on Corruption in Kenya, 2005 by Wikileaks