

# Fiscal Policy and Capital Flight in Kenya\*

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**Abstract:** Capital flight has been an issue of concern for Africa because it reduces the continent's much needed investible funds. In Kenya, the country lost US\$ 4.9 billion in real terms from 1970 to 2010 through capital flight. This study seeks to provide fiscal evidence of capital flight in Kenya. The results establish that past capital flight, change in debt, and government expenditure have no significant impact on capital flight in Kenya. However, external debt, taxation, and expenditure practices under different political regimes have significant effects on capital flight. The study discusses policy implications emerging from the empirical results.

## 1. Introduction

Since the emergence of the Asian financial crisis of 1997–98, fiscal policy has gained considerable attention in the literature. At the center of this discussion is how fiscal policy influences economic variables, specifically the flow of funds across borders. While tax rates can be used to attract foreign capital and government spending can be used as a stabilizer and booster of economic growth, the extent of fiscal policy's impact on economic variables is still an open empirical question. This paper investigates whether Kenyan fiscal policy has had any consequence on capital flight over time.

Capital flight entails a flow of financial assets resulting from the holder's perception that capital is subjected to an inordinate level of risk if retained at home in domestic currencies (Cooper and Hardt, 2000). Capital flight also occurs when assets rapidly flow out of a country due to an event of economic consequence. The movement of capital is therefore triggered by a search for greater stability and/or increased returns. In other instances, individuals and corporations stash illegally acquired funds in highly secretive foreign bank accounts. This also constitutes a significant proportion of capital flight in Africa as observed by Froberg and Waris (2011).

Cumulatively, Kenya lost US\$4.9 billion in real terms from 1970 to 2010 through capital flight (Boyce and Ndikumana, 2012). Kar and Spanjers (2014) estimated that between the year 2003 and 2012, cumulative illicit capital flow from Kenya was US\$860 million. Ironically, over the same period, the net official development assistance received by Kenya amounted to US\$1106 million (Republic of Kenya, 2008, 2013). The magnitude of the loss of capital, and the uncertainty of economic behavior that might trigger further losses, makes this an important matter of policy.

This study defines fiscal policy as the combined government decisions regarding a country's revenue and spending. Fiscal policy therefore relates to government taxation and expenditure decisions that lead to budget deficits or surpluses. The issue at hand is whether these fiscal decisions influence capital flight.

The study also acknowledges that fiscal policy is designed and implemented by the ruling political class. Since independence, Kenya has had four changeovers in national leadership, implying four governance regimes. Each regime has implemented different public administration ideologies, resulting in different fiscal management strategies. It is therefore important to ascertain the impact of fiscal policy on capital flight through the lens of political regimes.

The remainder of the paper is organized as follows. Section 2 provides the background and motivation of the study. Sections 3 and 4 present a review of literature while Section 5 describes fiscal policy under different political regimes and its effect on capital flight. The section also looks at different tax regimes and their influence on capital flight, and analyses the effect of budget

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deficits on capital flight in Kenya. An econometric analysis of the relationship between fiscal policy and capital flight is undertaken in Section 6, while Section 7 concludes.

## 2. Background and Motivation

Investors in any given context will focus on the risk factors likely to curtail their returns, which include fiscal policy, especially budget deficits. From the 1960s to 1971, the Kenyan government was able to finance all its recurrent expenditure and most of its development expenditure using domestic revenue receipts. As a result, it incurred minimal fiscal deficits, which averaged 1.8 percent of GDP (Figure 1).

From 1971 to 1995 the economy experienced chronic fiscal deficits. The deficits averaged 4 percent of GDP in the late 1970s, rose to an average of 5 percent in the 1980s, peaking at 8.4 percent in 1989. The persistence of these deficits was attributed to uncontrolled public expenditure (Mureithi and Moyi, 2003; Kiptui, 2005). To bring down the budget deficit, it was imperative that the government improve domestic revenue mobilization while keeping public expenditures under control. However, the government failed to mobilize additional resources on a sustainable basis (Mureithi and Moyi, 2003; Kosimbei *et al.*, 2010).

In response to immense pressure from the World Bank and the IMF to conduct the budgetary process with prudence, the government undertook stringent stabilization policies. These included the retrenchment of civil servants, privatization of public corporations, and the introduction of cost sharing schemes. These measures were relatively successful in bringing down deficits in the latter part of the 1990s, with an average of 1 percent between 1994 and 2000. However, in the 2000s, fiscal deficits increased and largely remained erratic. The swelling fiscal deficit was attributed to impropriety in the handling of public funds. Fiscal indiscipline over time has been the single largest problem in the Kenyan economy, one that the government is still grappling with to date (Kiptui, 2005; Kirira, 2011).

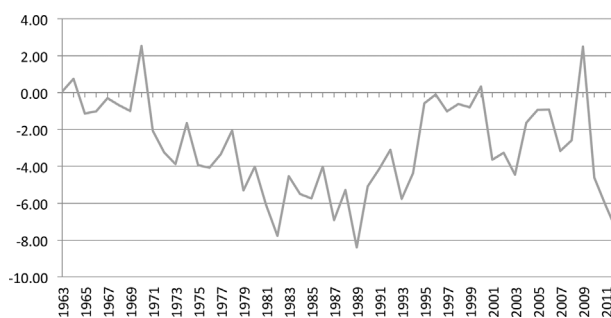
It is clear that despite attempts by the government to institute fiscal reforms in Kenya, the overall budget deficit has been quite high and erratic. Have the persistently large fiscal deficits contributed to capital flight in Kenya?

Tax issues in Kenya have also been in the limelight insofar as their contribution to resource mobilization is concerned. Kenya has had different tax regimes with different tax structures since independence. These regimes have been shaped by different political regimes in Kenya and structural adjustment initiatives. It is therefore worthwhile to investigate the relationship between tax regimes and capital flight.

While a number of studies have explored the relationship between fiscal policy and capital flight in Africa (see, for example, Ayadi, 2008; Ndikumana and Boyce, 2003; and Nyoni, 2000), they have focused on assessing the impact of public debt, external debt, and taxes on capital flight. The role of tax regimes, fiscal policy regimes, and governance on capital flight has largely been ignored. Moreover, the issue of uncontained government expenditure and its role in fueling capital flight has not received adequate attention from researchers.

In this context, this study addresses the following questions as they pertain to the case of Kenya: what is the effect of government consumption on capital flight? Do taxation practices influence capital flight? How do political regimes affect capital flight?

**Figure 1: Budget balance as percentage of GDP in Kenya, 1963–2011**



Data source: Kenya National Bureau of Statistics.

### 3. Theoretical Perspectives on Fiscal Policy and Capital Flight

Various theories explain how taxation affects capital flight. The first theory postulates that international corporations seek operational residence in low-tax or tax-free territories with the aim of minimizing their tax liability (Gordon and Levine, 1989). Capital will therefore exit countries with unfavorable tax rates and flow to countries with low tax rates or countries offering tax incentives to foreign capital. The problem is that lowering tax rates and offering tax incentives with the aim of attracting or retaining capital creates market distortions and tax favoritism, leading to capital flight. Moreover, when tax breaks are lifted, international capital seeks destinations with favorable tax rates, thus triggering capital flight.

Ndikumana and Boyce (2003) presented four arguments that explain how taxation is thought to affect capital flight. First, *ceteris paribus*, expected high tax rates imply lower expected net returns to domestic investment. Second, the tax rate's volatility results in higher investment risk and lower risk-adjusted returns to domestic investment. Third, low tax levels in a country could lead to budget deficits. Fourth, discriminatory tax treatment in favor of foreign assets that is often used to attract foreign capital may discourage domestic investment and cause domestic capital to move across the border in search for better terms (see also Dooley and Kletzer, 1994).

Government consumption is also a variable of interest in theoretical considerations. Keynesian theory suggests that increases in government spending boost economic growth by enhancing purchasing power in the economy. Keynesian theory further asserts that deficit spending could provide a stimulus to the economy, and shields it from recessionary pressures. This has two consequences for capital flows. First, a boost to economic growth resulting from increased government spending inspires investor confidence, thus reducing capital flight. Second, an increase in government spending bolsters aggregate demand, fostering domestic investment, which attracts international capital. Most developing countries, however, engaged in deficit spending to spur growth. This kind of spending has several theoretical implications for capital flight. For example, high budget deficits may cause tax-like distortions and increases in expected taxes that lead to capital flight (see Ndikumana and Boyce, 2003). Mitra (2006) found that increased borrowing by the public sector crowds out private investment and dampens long-run growth, which may induce capital flight.

According to Gordon and Levine (1989), developing countries' authorities are typically bound by expenditure commitments and constrained by a limited set of revenue-raising opportunities. To maintain political power and national cohesion, governments must satisfy a variety of public demands. These binding expenditure responsibilities create severe limitations on the government's ability to impose direct taxes. Consequently, developing countries frequently resort to alternative means of public finance such as seigniorage. Access to international financial markets is restricted in such countries due to unresolved debt problems. In this context, budget deficits will induce capital flight (see also Dornbusch, 1987).

The expenditure theory can be extended to explain how excessive government consumption is financed. In developing countries the need for private credit is high, which pushes the price of capital to relatively high levels. In this regard, international markets offer a cheaper alternative for developing economies to raise funds to meet their budgetary obligations. This induces increased external sovereign debt, which is an important determinant of capital flight (see Boyce, 1992). However, as discussed by Ndikumana and Boyce (2003), the causal relationships can run both ways; foreign borrowing can cause capital flight, while at the same time capital flight can lead to more foreign borrowing.

### 4. Empirical Evidence on Fiscal Policy and Capital Flight

Several studies have looked at fiscal policy variables that influence capital flight, particularly government consumption, external debt, and tax. The empirical evidence is presented below.

#### 4.1 Government Consumption

Ndikumana and Boyce (2003) found that the effects of budget deficits on capital flight were ambiguous in 30 sub-Saharan African countries for the period 1970–1996. The primary budget surplus had a negative and statistically significant effect on capital flight in cross-sectional regressions, but the effect was positive and statistically significant in regressions with pooled annual data. In Nigeria, Ajayi (1992) found a negative relationship between fiscal surplus and capital flight (see also

Schineller, 1997) while Agu (2010) established that government expenditure had a direct impact on capital flight. The effect of the overall deficit/GDP ratio has been found to be statistically insignificant (see Hermes and Lensink, 1992 and Boyce, 1992).

## 4.2 Taxation

The tax/GDP ratio has been found to have no significant consequence on capital flight in the empirical literature (Pastor, 1990; Hermes and Lensink, 1992; Vos, 1992; Schineller, 1997; and Ndikumana and Boyce, 2003). Researchers (see, for instance, Hermes and Lensink, 2001) believe that it is uncertainty in taxation policy that matters most for portfolio decisions. In fact, Hermes and Lensink (2001) analyzed the effect of policy uncertainty with respect to tax payments and found a statistically significant positive effect on capital flight.

## 4.3 External Borrowing

External borrowing has been found to be positively and significantly related to capital flight from sub-Saharan African countries, suggesting that to a large extent, capital flight was debt-fueled in these countries (Ndikumana *et al.*, 2015; Ndikumana and Boyce, 2003). Ndiaye (2009) found that amongst other factors, capital flight was driven by public rulers through external debt and aid in the Franc Zone in the period 1970–2005. For the case of Nigeria, Ajayi (1992) did not find any evidence to support the hypothesis that disbursement of external debt influenced capital flight.

# 5. The Practice of Fiscal Policy and Capital Flight in Kenya

We now turn to evaluating the conduct of fiscal policy in Kenya and its relationship to capital flight. We begin by evaluating government expenditure under different political regimes. We then evaluate the impact of tax policy regimes and budget deficits on capital flight.

## 5.1 Background to Political Regimes in Kenya

Since independence, Kenya has had four political regimes: the Jomo Kenyatta regime, Moi regime, Kibaki regime, and Uhuru Kenyatta regime. This paper focuses on the first three regimes since Uhuru Kenyatta's regime had only been in power for a short period and therefore its impact cannot be substantially captured.

The first post-independence regime under Jomo Kenyatta instituted economic policies that boosted economic growth averaging 6.1 percent between 1964 and 1978. This regime practiced expansionary fiscal policy, targeting growth and social welfare (see Republic of Kenya, 1965). Following Kenyatta's death in August 1978, Vice President Daniel Toroitich Arap Moi became Kenya's second president.

President Moi inherited a booming economy. However, a coup attempt in 1982 threatened his power and changed a few political fundamentals. For instance, in 1982, Kenya was officially declared a one-party state by the National Assembly and the Constitution was amended accordingly. For the remainder of President Moi's regime, he surrounded himself with extreme loyalists, some of whom added very little value to proper governance and the management of public resources. The loyalists took advantage of their public positions and amassed wealth for themselves with impunity, leading to heightened corruption in public service. In this era, public service was highly ineffective and inefficient. Economic policy (including fiscal policy) was not well coordinated. Due to the continued erosion of Kenya's economic conditions, the World Bank and the IMF pressured the government to implement structural adjustment reforms; the results of these programs are still debatable. Economic growth in Moi's regime (1979–2002) averaged 3 percent. In December 1991, Parliament annulled the one-party section of the Constitution due to public pressure. Moi's regime ended in 2002 when Mwai Kibaki was elected president.

Mwai Kibaki's regime was marked by fundamental changes in economic planning and management. Long-term plans were drawn, such as the economic recovery strategy and the Kenya Vision 2030. Tax collection and administration were enhanced, with the policy of *tujitegeme* (literally indicating that Kenya would meet its budgetary obligations without much external aid and debt) as a centerpiece. Public service was run on the basis of performance contracting. Despite these measures, corruption persisted under Kibaki's reign and his cabinet was plagued by dissent and discord. This culminated in a disputed 2007 election

and the consequent post-election violence of 2007–2008. In a resilient fashion, the country was able to shed the consequences of this dark period and there was economic rebound from 2009. From the point of view of economic policy, Kibaki's term was characterized by relative fiscal prudence, relatively sound macroeconomic policies, and a restoration of confidence in the Kenyan economy. Economic growth under Kibaki's regime (2003–2012) averaged 4.6 percent, which was higher than the average in Moi's regime.

## 5.2 The Effect of Government Expenditure on Capital Flight under the Three Political Regimes in Kenya

Figure 2 shows the trend of government expenditures through the different political regimes.

The Kenyatta regime saw a gradual and steady increase in the expenditure/GDP ratio. This is characteristic of Kenya's economic take-off immediately following independence. Government expenditure, however, had a relatively smooth trend, implying predictability. From Figure 2, the Moi regime experienced an erratic expenditure pattern, while the Kibaki regime saw less volatility and an upward expenditure trend.

Similarly, in the case of capital flight, the Moi regime saw stochastic movements in capital flight while the Kibaki regime saw a continued decline in capital flight, as shown in Figure 3.

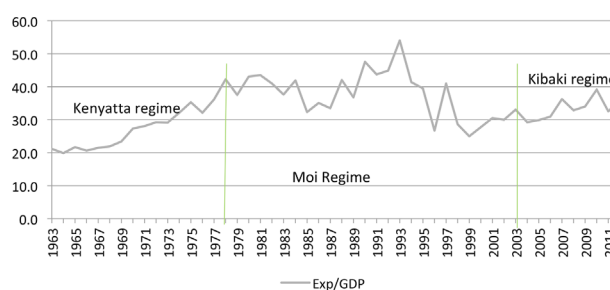
From Figure 3, the Kenyatta regime experienced less volatile capital flight behavior with an initial decline from \$611 million in 1970 to \$76 million in 1972. There was an increase in capital flight from 1972 to 1974 before a further general decline from 1974 to 1977. The less volatile trend in this regime is reminiscent of the less volatile expenditure behavior (observed in Figure 2) for this regime. Moi's regime was characterized by extreme volatility, culminating in the highest-ever capital flight of \$1826 million in 2002. The volatile behavior is a reflection of unpredictable and sometimes vague economic policies that led to high expenditure and borrowing. Kibaki's regime, which was characterized by renewed confidence in the Kenyan economy, experienced a general decline in capital flight accompanied by predictable expenditure patterns. This could be attributed to a stable and favorable investment environment accompanied by transparency and accountability with regard to foreign borrowing and the management of borrowed funds. The evidence therefore suggests that governance in Kenya has had a visible impact on fiscal behavior, which in turn had an impact on capital flight.

## 5.3 Tax Regimes and Capital Flight

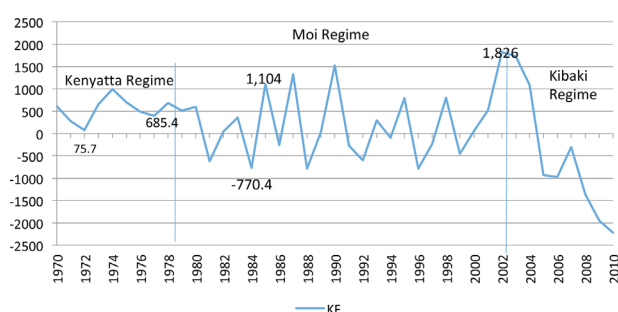
As in other developing economies, taxes form a significant part of public revenue in Kenya. To raise this revenue, the government has formulated and implemented tax policies. This section examines the association between tax regimes and capital flight over the different political regimes, as summarized in Table 1.

The behavior of capital flight in the different tax regimes demonstrates that tax practices play a role in capital movement. In Phase I, the regime's highest priority was to increase tax collections. Tax incentives were introduced to attract capital. In Phase II, there was an introduction of new taxes, that is, sales tax, withholding tax on non-resident entrepreneurs, and custom tariffs on

**Figure 2: Expenditure/GDP ratio in Kenya**



Data source: Kenya National Bureau of Statistics.

**Figure 3: Capital flight trend in Kenya**

Data source: Boyce and Ndikumana (2012).

**Table 1: Tax regimes and capital flight behavior in Kenya**

Tax regime	The behavior of capital flight
<p><b>Phase I: 1963–1970</b></p> <ul style="list-style-type: none"> <li>– Africanization of the economy and public service.</li> <li>– Self-reliance by the government, resulting in cautionary spending</li> <li>– Not fully developed income, corporation, trade, and excise taxes</li> <li>– Increased tax collections by government</li> <li>– Realization that excessive taxation could induce capital flight</li> <li>– Introduction of tax incentives to attract capital (e.g., capital allowance)</li> </ul>	<ul style="list-style-type: none"> <li>– Positive capital inflow recorded</li> </ul>
<p><b>Phase II: 1971–1976</b></p> <ul style="list-style-type: none"> <li>– Introduction of: <ul style="list-style-type: none"> <li>o 10% sales tax</li> <li>o 20% withholding tax on non-resident entrepreneurs</li> <li>o New taxes on sale of property, land, and shares</li> <li>o Custom tariff of 10% on a range of previously duty-free goods.</li> </ul> </li> <li>– Capital allowance restricted to rural investment.</li> </ul>	<ul style="list-style-type: none"> <li>– From 1972–1974, capital flight increased from 0% to 2% of GDP.</li> <li>– Unexpected trend of capital flight declining after the implementation of the new taxes in 1974</li> </ul>
<p><b>Phase III: 1977–1985</b></p> <ul style="list-style-type: none"> <li>– Increase in: <ul style="list-style-type: none"> <li>o Sales tax from 10% to 15%</li> <li>o Excise duties from 50% to 59%</li> </ul> </li> <li>– Decrease in personal income tax from 36% to 29%.</li> <li>– Suspension of capital gains tax</li> </ul>	<ul style="list-style-type: none"> <li>– Capital flight inflow of \$1104 million recorded after the suspension of capital gains tax</li> <li>– Capital flight decreased from \$685.4 million in 1978 to \$770.4 million in 1984.</li> </ul>
<p><b>Phase IV: 1986–2000</b></p> <ul style="list-style-type: none"> <li>– Reduction of direct taxes</li> <li>– A shift from international trade taxes to domestic goods and services taxes.</li> <li>– Introduction of VAT in 1990 to replace sales tax.</li> <li>– Exemption system reviewed in 1991 <ul style="list-style-type: none"> <li>o Reduction in the range of exempt goods; imports by all parastatals tax deductible.</li> <li>o Restrictions imposed on NGO exemptions</li> </ul> </li> <li>– Introduction of duty/VAT exemption on direct and indirect imports of raw materials for use in the production of exports, duty-free items for the domestic market, and inputs for aid-funded projects</li> </ul>	<ul style="list-style-type: none"> <li>– Net capital inflow (1991–1998) was \$97.3 million</li> </ul>
<p><b>Phase V: Post-2000</b></p> <ul style="list-style-type: none"> <li>– Massive reforms in tax administration—Modernization of the Kenya Revenue Authority (KRA)</li> <li>– New constitution with a new tax structure with two tiers of government (National and County), both expected to raise revenue</li> <li>– Capital gains tax re-introduced</li> </ul>	<ul style="list-style-type: none"> <li>– Capital flight declined persistently from \$1,826.4 million in 2002 to a capital inflow of \$2,219 million in 2010</li> </ul>

Source: Authors.

a range of previously duty-free goods. The behavior of capital flight, however, was not entirely attributable to taxation in this phase. In Phase III, there were increases in the sales tax rate and excise duties, a reduction in the personal income tax rate, and a suspension of the capital gains tax. In this phase, capital flight generally trended downward, which was consistent with these developments. Phase IV saw some reforms in tax administration, including a reduction of direct taxes, a shift from the reliance on taxes from international trade to taxes on domestic goods and services, the introduction of VAT to replace the sales tax, and a reduction in the range of exempt goods. These reforms, which increased taxes in some cases but reduced them in others, seem to have had mixed effects on capital flight, as reflected in the latter's high fluctuations. In Phase V, the modernization of the Kenya Revenue Authority and other innovations in the tax administration were accompanied by a reduction in capital flight, albeit with a lag.

### *Tax Incentives and Capital Flight*

The Tax Justice Network Africa and Action Aid International (2012) defined tax incentive as a deduction, exclusion, or exemption from a tax liability offered as an enticement to engage in a specified activity such as investment in capital goods for a certain period. The Institute of Economic Affairs (2012) enlisted the two main tax incentives in Kenya: investment promotion incentives, which influence physical and financial capital, and export promotion incentives, geared towards encouraging exports.

Tax incentives are meant to attract foreign capital and promote specific economic policies, such as those that encourage investment in certain sectors. However, studies examining the case of Kenya and other developing countries find no evidence of the role of tax incentives in restricting capital flight. The study by the Institute of Economic Affairs (2012) did not find any rationale for retaining tax incentives in Kenya, as they were not effective in attracting or retaining capital. Of serious concern was the finding that tax holidays in Kenya led to 'tax shopping' where companies exited as soon as the holiday expired, as demonstrated in Kenya's Export Processing Zones (EPZ). This result implies that tax incentives could induce capital flight. For the case of the East Africa Community (EAC), the IMF (2008) report supported the general conclusion that tax incentives were not the most important determinant of foreign capital inflows. While Uganda had abolished tax holidays in 1997, it had continued to attract an increasing volume of foreign investment, higher than in Kenya. Similarly, the introduction of EPZs in Tanzania in 2002 had not resulted in a noticeable pickup in foreign capital inflow.

The use of investment incentives by different countries in the world is not normally based on any cost-benefit analysis, which makes it a risky affair due to the associated and sometimes unjustifiable loss in revenue. The IMF (2008) report argued that providing investment incentives would only be justified if the expected social return of the investment exceeded the risk-adjusted private return. In fact, investment decisions were found to be more sensitive to the general economic prospects of the country in question, and to institutional and regulatory policies, than to tax incentives. Tax incentives should therefore be evaluated very carefully by the fiscal authority. So far there is no evidence linking tax incentives to reduced capital flight in Kenya.

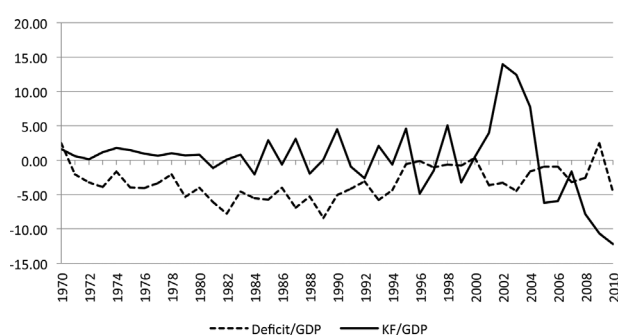
### **5.4 Explaining Budget Deficits and Capital Flight Relations in Kenya**

Kenya has experienced persistent budget deficits since 1971. Based on trend analysis, there appears to be some relationship between budget deficits and capital flight in Kenya (correlation coefficient,  $-0.1871$ ; Figure 4).

The 1970–80 period was characterized by both a stable fiscal regime and minimal capital flight. This period also saw the country's economy take off, supported in part by high development expenditures. The positive economic outcomes spurred confidence among private economic actors, which reduced capital flight.

From 1980 to 2002, public resources were mismanaged, eroding investor confidence as budget deficits were interpreted as economic risk that would be brought about by debt accumulation. Any increase in the budget deficit in this era was met by near-proportional capital outflows as depicted in Figure 4. Capital flight reached a peak during this period, which also witnessed a substantial level of budget deficit, most notably in 2002, an election year that marked the constitutionally sanctioned end of President Moi's regime. Traditionally, election years are characterized by political instability in Kenya. The increased budget deficit accompanied by political uncertainty led to high capital flight.

The period after the 2002 elections was characterized by a sharp decline in capital flight and a relatively stable budget, which kept budget deficits at their bare minimum. The change in political regime brought better management of public resources and

**Figure 4: Budget deficits and capital flight in Kenya**

Data source: Kenya National Bureau of Statistics, Boyce and Ndikumana (2012).

development programming. Peace prevailed during and after the 2002 elections, consolidating the stability of the country. In addition, increased efficiency in revenue mobilization and low budget deficits instilled confidence in capital owners vis-à-vis the state of public affairs. This had the long-term effect of bringing international capital to Kenya and reversing capital flight, as shown in Figure 4.

Another important issue is Kenya's external public debt. Figure 5 shows that ever since Kenya attained independence in 1963, the share of external debt in total debt has remained above the 50 percent mark. The ratio was slightly lower in 2012, at 45 percent.

Since independence, the ratio of external debt to total debt has generally been on the decline, apart from the noted increase in 1982–1984, 1989–1992, and 2001. This could be explained by the fact that the first and third political regimes embraced the policy of self-reliance. In addition, there was restricted access to international financial markets for Kenya between 1985 and 1989, which can be explained by the economic risk factors that were specifically attributed to Kenya's second political regime. In the third political regime, up to 95 percent of Kenya's budget was self-financed by the year 2007.

## 6. Econometric Analysis

The analysis in the previous sections has revealed a qualitative relationship between fiscal policy variables and capital flight in Kenya. This section undertakes a quantitative analysis of the relationship between fiscal policy and capital flight. Fiscal policy variables included in the analysis are: government expenditure, taxation, change in the stock of debt, and external debt. For proper specification of our model, control variables presented in the literature were included. These variables are: the exchange rate, which captures risk and return to investment; political regimes; previous capital flight; financial deepening; and inflation, which captures the macroeconomic environment.

**Figure 5: External debt in Kenya (in percentage of total debt)**

Data source: Kenya National Bureau of Statistics.



## 6.1 Data and Measurement of Variables

The study uses annual time series data for the period 1970–2010 obtained from the Kenya National Bureau of Statistics (KNBS) and the World Bank’s World Development Indicators. Capital flight data are from Boyce and Ndikumana (2012). The variables were measured as follows:

- *Capital Flight (KF)*: Capital flight/GDP. Capital flight is computed using the extended Balance of Payments residual method (see Ndikumana and Boyce, 2010).
- *Change in the Stock of Debt (CD)*: CD /GDP.
- *Financial Deepening (FD)*: M2/GDP.
- *Inflation (INF)*: Annual average inflation rate (consumer price index).
- *External Debt (ED)*: Total external debt/GDP.
- *Exchange Rate (ER)*: Annual average exchange rate; Kenya shilling against the US dollar.
- *Tax rate (T)*: Total taxes/GDP.
- *Expenditure (EXP)*: Government Expenditure/GDP.
- *Political Regimes (P)*: Dummy variable: 1 in regimes that demonstrated fiscal discipline (Jomo Kenyatta and Mwai Kibaki regimes), 0 otherwise (Moi regime).
- *Politics and Expenditure (PEXP)*: Interaction of government expenditure with political regimes.

## 6.2 Regression Results

To analyze empirically the fiscal policy variables that could induce capital flight in Kenya, we employed a regression model of the following form:

$$KF_t = a_0 + a_1KF_{t-1} + a_2CD_t + a_3ED_t + a_4T_t + a_5EXP_t + a_6PEXP_t + a_7P_t + a_8FD_t + a_9INF_t + a_{10}ER_t + e_t \quad (1)$$

where  $a_1$  to  $a_{10}$  are parameters to be estimated,  $t$  is time and  $e$  is the error term.

Since we are using time series data, the stationarity of the time series is important. Traditionally, the augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) have been used to test for the stationarity of macroeconomic variables. An improvement of these tests has seen the introduction of DF-GLS and KPSS, which perform better with small samples. However, all these tests do not consider the fact that the data in question could have structural breaks. To take into account the existence of structural breaks, the Clemente-Montanes-Reyes (1998) test was applied in this study. The Clemente-Montanes-Reyes (CMR) approach has two models: an additive outlier model (AO) which captures a sudden change in the mean of a time series, and an innovative outlier model (IO) which allows for a gradual shift in the mean of the series of the model. We employed the CMR-IO test, which is considered superior to the AO model since it can identify the long-run impact of changes (Kinuthia and Murshed, 2015). Stationarity test results are presented in Table 2.

Capital flight, external debt, inflation, change in debt, tax rate, and the politics-expenditure interaction variables are integrated of order 0 while government expenditure, exchange rate, and financial deepening are integrated of order 1.

Since seven (of ten) of the variables are I(0) processes, it is possible to run a long-run equation with our stationary variables. The results are presented as ‘Model 1’ in Table 4. For robustness and to avoid omitted-variable errors, we checked whether our I(1) variables were cointegrated with the stationary variables. Since the variables are a mix of I(0) and I(1) processes, the Pesaran *et al.* (2001) ARDL bounds test for cointegration was employed. This approach requires a suitable lag length to be determined. A lag length of 1 was selected based on the lag length criteria presented in Table A1 in the Appendix.

The ARDL assumes that the capital flight equation can be augmented with appropriate deterministic components such as intercepts or time trends (Pesaran *et al.*, 2001). The inclusion of dummy variables will also not affect our results. The capital flight model is specified as follows:

**Table 2: CMR unit root tests**

Variable	Break year	I(0)	I(1)
Capital Flight (KF/GDP)	2001, 2003	-7.782***	
Expenditure (EXP/GDP)	1986, 1992	-4.828	-14.970***
External Debt (ED/GDP)	1974, 1991	-5.755**	
Inflation (INF)	1991, 1993	-8.264***	
Exchange Rate (ER)	1990, 1997	-3.979	-8.881***
Change in Debt (CD/GDP)	1970, 1990	-15.827***	
Financial Deepening (M2/GDP)	1978, 1990	-5.149	-8.041***
Taxes (Total taxes/GDP)	1986, 1994	-5.349*	
PEXP	1977, 2000	-36.335***	

\*\*, \*, \*\*\* denotes 10 %, 5 %, and 1 % level of significance, respectively.

$$z_t = (KF_t, CD_t, ED_t, T_t, EXP_t, P_t, PEXP_t, FD_t, INF_t, ER_t)' = (KF_t, x_t')' \quad (2)$$

where  $x_t' = (CD_t, ED_t, T_t, EXP_t, P_t, PEXP_t, FD_t, INF_t, ER_t)$

The reduced-form equation is:

$$\Delta KF_t = c_0 + c_1 t + c_2 P + \gamma_1 KF_{t-1} + \gamma_2 x_{t-1} + \sum_{i=1}^{p-1} \psi_i' \Delta z_{t-i} + \partial' \Delta x_t + u_t \quad (3)$$

where  $c_0, c_1, c_2, \gamma_1, \gamma_2, \psi_i', \partial$  are parameters to be estimated, and  $p$  is the lag length, which is 1 in this case.

We estimated Equation (3) using OLS with and without a linear time trend at lag 1.  $F$ -statistics for the models were derived under different restrictions as presented in Table 3.

With the exception of case  $F_a$ , whose calculated  $F$ -statistic is within its critical value bounds at 95 percent, our estimated  $F$ -statistics for cases  $F_b$  and  $F_c$  are outside their critical value bounds at 95 percent. We therefore reject the null hypothesis of no long-run capital flight equation. The ARDL bounds test therefore confirms the existence of a long-run capital flight equation (Model 2). The regression results are presented in Table 4.

Model 2 results are better aligned with *a priori* expectation and overcome omitted variable bias (see Ramsey RESET test). The results indicate that external debt, tax, and the politics-expenditure interaction variable had significant coefficients. Past capital flight, the change in debt, government expenditure, and political regimes did not have a significant impact on capital flight. The coefficients for financial deepening, inflation, and exchange rate were also insignificant.

The finding that previous capital flight has no significant effect on the current capital flight implies that there is no habit formation. The change in the stock of debt was also found to have no significant effect on capital flight in Kenya. This finding is

**Table 3: The ARDL bounds test for cointegration**

Lags	With Trend		Without Trend	
	Estimated	Critical Values	Estimated	Critical Values
Lag 1	$F_a$ 4.553	$F$ (3.971, 5.486)	$F_c$ 2.217	$F$ (3.644, 5.464)
Lag 1	$F_b$ 4.136	$F$ (4.310, 5.965)		

Notes:  $F_a$  is the  $F$ -statistic for testing zero restrictions on the coefficients of the lagged level variables and the trend term in Equation (3).  $F_b$  is the  $F$ -statistic for testing zero restrictions on the coefficients of the lagged level variables in Equation (3).  $F_c$  is the  $F$ -statistic for testing zero restrictions on the coefficients of the lagged level variables in Equation (3) without the trend term.

**Table 4: Long-run capital flight regressions**

Variable	Model 1		Model 2	
	Coefficient	<i>t</i> -values	Coefficient	<i>t</i> -values
Previous capital flight	-0.093	-0.51	-0.145	-0.77
Change in debt	-2.212	-0.65	-0.176	-0.47
External debt	0.053	1.91*	0.061	1.67*
Tax	0.556	1.39	1.098	1.73*
Government expenditure			-0.214	-0.69
Political regimes	-0.212	-1.17	-0.323	-1.54
Politics*Expenditure	-0.757	-1.28	-1.166	-1.67*
Financial deepening			-0.541	-1.27
Inflation	-0.002	-1.23	-0.002	-1.22
Exchange rate			0.001	0.77
Constant	-0.101	-1.29	0.021	0.19
$R^2$	0.192		0.300	
Durbin Watson	1.988		1.986	
Ramsey RESET test	0.045**		0.258	

\*, \*\*, \*\*\* denotes 10%, 5%, and 1% level of significance, respectively.

inconsistent with the findings of other studies such as Hermes and Lensink (1992), Lensink *et al.* (1998), and Ndikumana and Boyce (2003). However, the finding is similar to Nyoni (2000), who focused on Tanzania. The results are consistent with the pattern observed in Figure 3, showing no persistence in capital flight dynamics.

External debt has a positive and significant influence on capital flight. This finding is consistent with the findings of Hermes and Lensink (1992), Lensink *et al.* (1998), and Ndikumana and Boyce (2003), but inconsistent with the finding of Nyoni (2000). The positive relationship can be explained by the revolving door theory where external financial resources find their way back to international havens and sometimes their countries of origin.

Tax has a significant coefficient, implying that taxation significantly influenced capital flight. This finding is consistent with the study of Alam and Quazi (2003) but inconsistent with Pastor (1990), Vos (1992), Schineller (1997), and Ndikumana and Boyce (2003). From economic analysis the behavior of capital flight was influenced by tax practices in different tax regimes. To a large extent, investors took into account tax policy while making portfolio decisions.

The political regimes variable had an insignificant effect on capital flight. Government expenditure also had an insignificant impact on capital flight. However, the interaction of political regimes and government expenditure variables yielded a negative and significant coefficient. This implies that expenditure patterns under different political regimes have influenced capital flight behavior in Kenya. Political regimes that observed sobriety in their expenditure behavior witnessed less capital flight. This finding is consistent with the analysis in Section 5.2.

The control variables returned insignificant results. Kenya has not had periods of exaggerated and worrisome macroeconomic instability. The inflation rate and the exchange rate have always been within tolerable levels for economic players. This could explain their insignificance in the econometric results.

## 7. Conclusion and Policy Implications

This study sought to understand how fiscal policy affects capital flight in Kenya. The study defined fiscal policy as decisions by government regarding the country's revenue and spending. As such, taxation practices in Kenya since independence were reviewed with the aim of establishing their influence on capital flight. Quantitative analysis was done to ascertain the effect of tax and public expenditure on capital flight. Both the qualitative and the econometric analysis revealed that taxes had a significant influence on capital flight in Kenya. External debt was found to have a positive and significant effect on capital flight, which validates the revolving door phenomenon for Kenya. Fiscal policy regimes were also considered in the study to explore their

effect on capital flight. Both the economic and econometric analyses established that political regimes that exercised some form of budgetary discipline experienced less capital flight.

The findings from this study have several policy implications. First, governments should be prudent in managing public resources as fiscal discipline is shown to be a significant factor in deterring capital flight. Second, external debt should be minimized. There is evidence of debt-fueled capital flight in Kenya. Third, taxation policies in Kenya should be implemented cautiously. Tax incentives directed towards attracting capital were found not to attract investment, nor did they help in retaining capital in Kenya. However, quantitative analysis revealed that the tax rate had an impact on capital flight. The government should therefore desist from a directed focus on tax incentives, but rather focus on the general tax rate in the economy.

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## Appendix

**Table A1: Lag length selection criteria**

Lag	LogL	LR	FPE	AIC	SC	HQ
0	43.94106	NA	2.32e-13	-0.714926	0.564737	-0.255794
1	2777.066	3644.167*	6.86e-72*	-135.7470*	-130.2018*	-133.7574*

\*indicates lag order selected by the criterion (each test at 5% level)

LR: sequential modified LR test statistic

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion