

DETERMINANTS OF CAPITAL FLIGHT: THE CASE OF NIGERIA

OKOLI, M. N. and AKUJUOBI, A. B. C.
Department of Financial Management Technology,
Federal University of Technology Owerri

Abstract

Through the least square regression analysis, this study constructs a model explaining the capital flight phenomenon in Nigeria. The revelation is that only a type of government exerts a significant effect on the volume of capital flight experience in Nigeria within the study period. Thus, it informs the conclusion that the volume of capital flight being experience in Nigeria can be explained significantly using macroeconomic indices corresponding to the period of such flight.

Key words: Capital flight determinants, Macroeconomic indices, Multiple regression analysis.

Introduction

It was observed that in the early 1980s many countries that had a problem in servicing their external debt were at the same time experiencing capital flight. Capital flight measures thus gained increasing prominence as a crucial indicator of a country's ability to finance international debt repayments. As a result, when capital flight increases, the international banking community could see it as a warning of possible risk not to lend further to a debt burdened country.

In the aftermath of the worst debt crises, the problems seem to have abated and countries began a process of stabilization. It might be interesting to note that towards the end of 1980s, many of these countries that were previously burdened by capital flight began to enjoy capital inflows of considerable magnitude. Consequently, the need for such an extensive form of external debt to developing countries diminished lessening widespread interest in capital flight. But surprisingly this positive situation lasted for just some years.

This period, after the debt crises of 1980s, which saw a big relief to many of the previously indebted and flight ridden countries, was as a result of the emergence and development of new markets. The common trait of these markets was a possibility of high-returns as well as high-risk investment. It was believed that the relief from capital flight in many of these countries was not primarily as a result of domestic returns rather it was due to a reflection of temporary improvement of economic and political situations as well as a reflection of emerging markets attributes that followed many investment opportunities. Increase in investment in these markets was also caused by domestic investors reversing capital flight.

Events that occurred after the relatively quiet period confirmed the fears of those sceptical about the permanence of this situation. From the mid 1990s the international financial system was confronted with the outbreak of several financial and economic crises. These moves contributed to large outflows of capital from several developing countries and

led to renewed attention to capital flight phenomenon. From 1994-1995, Mexico and some Latin America countries experienced the Tequila crises. In Mexico this led to serious devaluation of peso and investors, both domestic and international, reduced their investment in Mexico and other emerging markets. Then in 1997-1998, several Asian countries experienced a deep financial and economic crisis followed by Russia in 1998 and Brazil in 1999 (Hermes, et al 2002). The sub-Sahara Africa, of which Nigeria is one, is not left out. For instance Ndikumana and Boyce (2002) estimated the value of capital flight from sub-Sahara Africa between 1970 – 1996 at 186.8 billion dollars. He noted that during the period, roughly 80 cents on every dollar that flowed into the region from foreign loans flowed out again as capital flight in the same year, suggesting that the phenomenon of debt-fuelled capital flight was widespread.

These financial crises demonstrated how adverse domestic economic conditions could influence the behaviour of domestic and international investors in accelerating capital flight and has contributed to large capital outflows from these countries. This then added an important dimension to the capital flight problem. This actually led to the reoccurrence of capital flight and its problems. In spite of the lack of attention paid to capital flight, it still remains a serious problem in a number of developing and transition economies. In the past years, interest in capital flight has slightly increased and there is yet again a strand of literature dedicated to this problem. In many of these countries capital flight appears rather voluminous, taking away a substantial part of the resources which could otherwise be used for reversing the perverse economic trends like high indebtedness, foreign exchange shortages and finance for economic growth. Evidently, capital flight is not a solved problem and it still remains an important issue requiring attention.

Most analysts have also attributed the sluggish growth and persistent balance of payment deficits in most developing countries including Nigeria, despite private transfer and long-term capital inflows, to capital flight (Ajayi ,1996). All told, there appears to be no conclusive and consistent evidence on what actually causes capital flight both in developed and developing economies (Tornell and Velasco,1992 ; Ajayi ,1996;Trevelline,1999). which this paper intends to resolve in the Nigerian context. Finally, we also intend to draw up policy implications from the findings with some suggested recommendations.

Following the introduction, the remaining part of the paper is divided into four parts. While part two covers the theoretical discussions and literature review, part three highlights some stylized facts about the current situation. In part four the impact of public expenditure is empirically investigated, with highlights of the findings. The paper ends in part five with recommendations and conclusion.

Theoretical Discussion and Literature Review

Theoretical Discussion

According to Trevelline (1999), five reasons account for the volume of capital flight in modern times:

- (1) The means of transferring funds are readily available as extensive international finance system is in place making private investment in the developed world both safe and efficient.
- (2) Telecommunications and air transportation make it easy to keep track of foreign investments. Telephones allow investors to keep in touch and monitor United States

investment with ease. Through television and the print media, an investor can keep abreast of happenings in the developed world.

- (3) Knowledge of and dissemination of information about financial centers, especially New York and London, mean greater confidence in the investment process.
- (4) The ubiquity of the United State dollar means that often one needs not convert one's holdings before transferring it. Substantial portions of third-world liquid assets are already held in United States dollar or other major currencies.
- (5) The spread of capitalism and the increase in the number of large capital holders along side the rise of the welfare state mean great taxation of these large capital holders and so greater motive to avoid taxation by secreting away money (Tomell and Velasco, 1992).

The perceived sources of these flows are distortions, amplified by the interactions of policy makers and investors. Usually what happens in the economy is that something disturbs investors and causes them to lower their valuation of the assets in that country (a loss of confidence). This leads to a disappearance of wealth and is usually accompanied by a sharp drop in exchange rate of the affected country. This fall is particularly damaging when the capital in flight belongs to the people of the affected country, because not only are the citizens now burdened by loss of faith in the economy and devaluation of their currency, but probably a lot of their assets lose their nominal value. This, coupled with the loss of the country's purchasing power, leads to dramatic decreases in purchasing power of the country's assets and makes it increasingly expensive to import goods.

Capital flight is the international transfer of short-term funds- investment or loans maturing within a year or less, as well as long-term funds escaping domestic taxation, inflation, political instability, devaluation or some other unfavourable circumstances. Such flights of capital can cause balance of payments problems, since they can rapidly deplete domestic reserves. Before the World War 11, numerous countries experienced severe flights of capital which they tried to counter by imposing exchange restrictions and other government controls. This problem is endemic to many LDCs including Nigeria.

The standard view of capital flight is that exogenous economic events interact with existing policies and /or provoke new polices which cause perceived private returns on domestic investment to fall. The resulting distortion of relative returns diverts resident savings abroad, reducing domestic investment, growth and government revenues. These effects are exacerbated when the government, faced with a dwindling tax base, bound by political and financial commitments, and limited in its access to international credit, enacts more intrusive policies Capital flight therefore involves the movement of cash and investments out of a country to a place in which they believe the assets will be safe for their use.

Many writers on this phenomenon agree that capital flight is a response to political and economic uncertainties, but no further consensus. Various estimates and definitions can be obtained using different concepts simply because economic theory has failed to agree on which flows of capital that should or should not be included in the capital flight. While some prefer to equate capital flight with all outflows of capital, others argue that it is only a subset of all outflows .Therefore, two categories of definitions of the term capital flight can be identified – those that distinguish between motivated flows and normal flows, and those that do not.

Determinants of Capital Flight

There is a vast body of literature on the determinants of capital flight. Primarily this literature identifies macroeconomic policies and outcomes of macro policies – such as overvalued exchange rates, high budgetary deficits, high inflation, interest rate differentials, and domestic tax and trade policies – as significant determinants of capital flight (Cuddington, 1987; Lessard and Williamson, 1987; Boyce, 1992; Dooley and Kletze, 1994; Henry, 1996; Bhattacharya, 1999; Olopoenia, 2000; Nyoni, 2000; Fisher, 1993; Dornbusch, 1987; Hermes and Lensink, 2000).

This empirical literature on the determinants of capital flight also directs attention to non-macro variables such as political risks factors. For instance, Gibson and Tsakalotos (1993) conclude from their study of five European countries that political risk and expected depression were significant determinants of capital flight. Similarly, Fatehi (1994) has examined the association between capital flight and variations in political stability in seventeen Latin American countries and deduce that political instability adversely influence foreign direct investment (fdi) into a country. Fatehi argues that “whatever keeps foreign investors away from a politically volatile country should influence capital flight as well” (Fatehi, 1994). In a similar vein, Lensink, Hermes and Murinde (1998) examined the cross-sectional relationship between political risks and capital flight for a large set of developing countries. They surmise that no matter how capital flight is defined conceptually and/or measured, political risk factors do matter in the case where no other macroeconomic variables are taken into account.

Another strand of literature on capital flight spotlights the significant and often contemporaneous association between capital flight and other perverse macroeconomic outcomes such as low rates of growth (Pastor, 1990; Varman – Schneider, 1991; Nyoni 2000); increased aid inflows (Collier, Hoeffler, and Pattillo, 2004); high external debt (Boyce, 1992; Chipalkatti and Rishi, 2001; Demir, 2004) and Moghaddam et al., 2003; corruption (Le and Rishi, 2005; World Bank, 2005).

Most of these studies on capital flight have been done for Latin America Studies on capital flight from Africa include those of Ajayi (1992: 1997) for Nigeria, Ngeno (1994) for Kenya, Awung (1995) for Cameroon, Olopoenia (1995) for Uganda, Nyoni (2000) for Tanzania, Onwioduokit (2001) for Nigeria.

Of particular interest to this work are the studies and findings of Ayayi (1992) and Onwioduokit (2001) which are the only known empirical studies on Nigeria. Ajayi (1992) indicated that trade faking was an important vehicle for capital flight in Nigeria. For the period of his study 1970–1988, he suggested that a significant amount of underinvoicing of exports and overinvoicing of imports took place. Exports were invoiced to the tune of \$8.2 billion while imports were over-invoiced by up to \$5.96 billion. Most of this was related to Nigeria’s oil trade. He concluded that domestic economic policy errors were largely responsible for capital flight. These included high inflation, exchange rate misalignment, fiscal deficits, and lack of opportunities for profitable investments in the domestic economy. There are indications therefore that criminal transfers arising from malfeasance and corruption are also a major source of capital flight in many countries and these have to be dealt with differently through the institution of sound governance structures.

Onwioduokit (2000) on the other hand, empirically estimated the determinants of capital flight from Nigeria. In carrying out his econometric analysis for the period (1970 – 1998), he made use of two alternative variables as his dependent variable – capital outflow

and error and omission. The result of the model showed that domestic inflation, availability of capital, parallel market premium and competitive growth rate of the economy are among the major determinants of capital flight from Nigeria.

Given the above, the relevance of this work derives from the following observed weaknesses of the reviewed models.

1. The models reviewed have not adequately covered current developments especially as regards the compilation procedures of balance of payments at IMF on which the data estimates are based. These procedures have changed since 1995. The data provided by the IMF and World Bank undergo constant review which affects the resulting estimate. As a result, the current data may not strictly be comparable with the ones based on earlier data base. Therefore a current and constant database was needed to review historical experiences.
2. Furthermore, the time frame is short and not quite recent. The study by Ajayi (1992) covered twelve annual observations (1980 –1992) with four variables, while that of Onwioduokit (2001) had thirty-one (1970 – 2000) with five variables. This study intends to contribute to the existing literature on capital flight determinants in Nigeria by extending the time period to (1970-2005) covering thirty-six years with twelve variables. Enlarging the years and variables will enable the researcher use updated measures of these variables. A large data base is also chosen to identify the occurrence and scale of the problem.

Moreover, there is general evidence of a multitude and possible determinants of capital flight in other countries. The association between and across these variables as they apply to Nigeria still remains largely unaddressed. Therefore, while one cannot instrument for all the variables, future research might consider instrumenting for alternative combinations since different categories of variables may affect capital flight differently. And, as more time series data become available, one should continue to consider whether there are fundamentally different determinants of capital flight. Here then lies the need for further research.

Empirical Analysis of the Determinants of Capital Flight in Nigeria Specification of Models

The actual capital flight figures for the period (1970 – 2005) herein represented by the symbol, $CAPF_t$, are regressed on the explanatory variables for the corresponding period. These explanatory variables are hereby represented as follows;

$EXTD/GDP_t$ = Level of ratio between External Debt and GDP in year t.
(which measures the debt overhang)

$GRAD_t$ = Level of Growth Rate Differentials in year t
(measures the difference between growth rate in Nigeria and U.S.)

PBB_t = Level of government primary budget balance

$EXIMRAT_t$ = Level of sum of imports and exports as a ratio of GDP
(measures the size of the external sector, that is openness of the economy)

$FOREV_t$ = Level of Foreign Exchange Reserve in year t
(measures the availability of capital)

DOMIR _t	=	Level of Domestic Interest Rate in year t. (Proxy by domestic deposit rate)
EXP _t	=	Level of Export in year t
INFR _t	=	Level of Inflation in year t. (capturing the macroeconomic instability)
PAMP _t	=	Level of Parallel Market Premium in year t. (difference between official and black market rate)
TOT _t	=	Level of Terms of Trade in year t. (ratio of the index of export price to index of import price)
TOG _t	=	type of government
EXTD _t	=	Level of External Debt in Year t.

Data Presentation

The data for analysis are therefore presented below in Table 4.1.

Table 4.1. Nigeria Data Set on Determinants of Capital Flight and GDP (1970 -2005)

Year	External Debt/GDP Ratio (%)	Growth Rate Differential between USA and Nigeria	Primary Budget Balance	Sum of imports & exports/GDP (%)	Reserves (US \$) Millions	Interest Rate	Exports (US \$) Millions	Inflation	Parallel Market Premium	Terms of Trade	Type of Govt	External Debt (US \$) millions	GDP at market prices (Cur US\$) Millions
1970	7	25	-641	21	223	3	1331	14	0.81	35	1	837	12546
1971	10	11	242	41	432	3	1994	16	0.81	45	1	960	9182
1972	9	-3	-89	34	391	3	2301	3	0.88	43	1	1082	12274
1973	12	-1	252	42	623	3	3733	5	1.26	52	1	1779	15163
1974	8	11	2851	57	5709	3	9883	13	1.4	105	1	1881	24847
1975	6	-5	-690	60	5666	3	8612	34	1.45	86	1	1687	27779
1976	4	4	-1731	57	5257	3	10484	24	1.42	91	1	1338	36309
1977	9	1	-1221	69	4336	3	12955	15	1.58	135	1	3146	36035
1978	14	-12	-4409	67	2029	4	11096	22	1.79	125	1	5091	36528
1979	13	4	2436	66	5900	4	17631	12	1.75	118	0	6245	47260
1980	14	4	-3591	70	10640	5	27006	10	1.65	182	0	8922	64202
1981	19	-16	6294	67	4168	6	18511	21	1.51	192	0	11421	59919
1982	24	-2	-9111	60	1926	8	12607	8	1.69	166	0	11972	49763
1983	50	-10	-4673	70	1252	7	10738	23	2.51	152	1	17561	34951
1984	63	-12	-3455	82	1674	8	12324	18	4.24	156	1	17771	28183
1985	66	6	-3415	81	1892	9	13032	7	4.24	144	1	18643	28408
1986	110	0	-4717	77	1350	9	7119	6	2.38	70	1	22212	20211
1987	124	-4	-1465	62	1498	13	7757	11	1.38	73	1	29021	23441
1988	130	6	-2679	63	933	13	7403	55	1.33	61	1	29621	22848
1989	126	3	-2056	74	2041	15	9979	50	1.43	75	1	30122	23844
1990	117	6	-2751	82	4129	20	14083	7	1.2	89	1	33441	28473
1991	123	5	-3608	83	4678	15	12324	13	1.35	74	1	33528	27313
1992	89	0	-2494	72	1196	18	12034	45	1.17	65	1	29019	32710
1993	144	-1	-4882	97	1640	23	10062	57	1.64	60	1	30698	21353
1994	140	-4	-3194	80	1649	13	9533	57	4.54	56	1	33092	23663
1995	121	0	46	82	1709	14	11869	73	3.82	55	1	34092	28109
1996	89	0	1465	77	4329	13	16246	29	3.8	86	1	30968	35299
1997	79	-2	-228	78	7781	7	15661	8	3.88	65	1	30465	36229
1998	94	-2	-6094	74	7299	10	10972	10	4.02	44	1	29903	32144
1999	84	-3	-3088	78	5650	13	12871	5	1.08	59	0	20230	34776
2000	75	0	-1	90	10099	12	22363	15	1.09	100	0	28933	42078
2001	65	2	-2	77	10647	15	20592	17	1.2	102	0	31262	48000
2002	65	0	-3	80	7567	17	18692	13	1.14	101	0	30476	46711
2003	61	8	-2	88	7415	14	27638	24	1.09	101	0	34963	57622
2004	50	2	-1	91	17257	12	38943	10	1.04	110	0	35890	72100
2005	21	-2	-1	89	28632	12	54715	12	1.1	151	0	20500	99000

Sources : World Bank Africa Database CD-ROM 2004 and 2005

Table 4.2. Calculating Capital Flight Using Residual Method (U. S. % Million)

Year	Change in Debt	Net Foreign Investment	Sources of funds	Current Account Balance	Changes in Reserves	Uses of funds	Capital Fight
1970	123	205	328	-348	-73	-421	749
1971	122	286	408	-396	-160	-556	964
1972	697	305	1,002	-306	62	-244	1,246
1973	102	373	475	36	-202	-166	641
1974	-194	257	63	4,955	-4,898	57	6
1975	-349	418	69	189	-209	-20	89
1976	1,808	339	2,147	-272	380	108	2,039
1977	1,945	382	2,327	-1,007	823	-184	2,511
1978	1,154	211	1,365	-3,754	2,096	-1,658	3,023
1979	2,677	305	2,982	1,671	-3,148	-1,477	4,459
1980	2,499	-739	1,760	5,178	-4,382	796	964
1981	551	542	1,093	-6,474	4,976	-1,498	2,591
1982	5,589	430	6,019	-7,282	2,085	-5,197	11,216
1983	210	364	574	-4,332	431	-3,901	4,475
1984	873	189	1,062	123	-478	-355	1,417
1985	3,569	486	4,055	2,604	-506	2,098	1,957
1986	6,809	193	7,002	211	454	665	6,337
1987	600	611	1,211	-73	-39	-112	1,323
1988	501	379	880	-296	506	210	670
1989	3,317	1,884	5,201	1,090	-1,186	-96	5,297
1990	87	588	675	4,988	-2,478	2,510	-1,835
1991	-4,509	712	-3,797	1,203	-640	563	-4,360
1992	1,679	897	2,576	2,668	3,727	6,395	-3,819
1993	2,394	1,345	3,739	-780	-610	-1,390	5,129
1994	1,000	1,959	2,959	-2,128	-327	-2,455	5,414
1995	-3,124	1,079	-2,045	-2,578	217	-2,361	316
1996	-503	1,593	1,090	3,507	-2,634	873	217
1997	-562	1,539	977	552	-3,507	-2,955	3,932
1998	-673	1,051	378	-4,244	481	-3,763	4,141
1999	-297	1,005	708	506	1,650	2,156	-1,448
2000	2,329	9	2,338	4,173	-3,959	214	2,124
2001	-786	1,104	318	1,256	-1,023	233	85
2002	4,487	1,281	5,768	-5,108	2,742	-2,366	8,134
2003	937	1,200	2,137	-2,141	213	-1,928	4,065
2004	-15,400	1,400	-14,000	3,251	-9,487	-6,236	-7,764
2005	-15,151	2,000	-13,151	12,447	-11,324	1,123	-14,274
TOTAL	4,511	26,182	30,693	9,089	-30,427	-21,338	52,031

Capital Flight=Δ in Debt+Net FDI – (Current A/C Balance+Δin Reserves)

Note : In residual method , negative values are capital netflows, while positive are capital flight .

Source : Authors computations using data for change in debt, net foreign direct investment, current account balance and change in reserves from World Bank Africa DatabaseCD-ROM 2005.

Mathematical Form of the Model

Hypothesis

There is no significant relationship between volumes of capital flight and the explanatory variables.

Hence;

$$H0_1: \beta_0 = \beta_1 = \beta_2 = \beta_3 \dots \beta_{10} = 0$$

This hypothesis will be achieved through Multiple Regression Analysis cast in the Linear Model format thus;

$$HA1: \beta_0 \neq \beta_1 \neq \beta_2 \neq \beta_3 \dots \beta_{10} \neq 0$$

Hence, the contribution of at least one of the explanatory variables significantly affects the capital flight.

$$CAPF_t = f(\text{EXTD}/\text{GDP}_t, \text{GRAD}_t, \text{PBB}_t, \text{EXIMRAT}_t, \text{FOREV}_t, \text{DOMIR}_t, \text{EXP}_t, \text{INFR}_t, \text{PAMP}_t, \text{TOT}_t, \text{TOG}_t, \text{EXTD}_t, U_t) \dots \dots \dots 3.5$$

That is, actual CAPF_t in a given year is a function of the above stated variables in that particular year. The Ordinary Least Square regression model (Multiple Regression Model) to be adopted for the study can be mathematically represented as follows, as already stated in equation 3.1 above.

$$\begin{aligned} CAPF_t = & \beta_0 + \beta_1 \text{EXTD}/\text{GDP}_t + \beta_2 \text{GRAD}_t + \beta_3 \text{PBB}_t + \beta_4 \text{EXIMRAT}_t + \beta_5 \text{FOREV}_t \\ & + \beta_6 \text{DOMIR}_t + \beta_7 \text{EXP}_t + \beta_8 \text{INFR}_t + \beta_9 \text{PAMP}_t + \beta_{10} \text{TOT}_t + \beta_{11} \text{TOG}_t \\ & + \beta_{12} \text{EXTD}_t + U_t \dots \dots \dots 3.1 \end{aligned}$$

where;

β_0 = the intercept parameter and
 $\beta_1 \dots \beta_{10}$ = (betas) are the regression coefficients or the slope parameters for the various regressors (explanatory variables stated above).

The expected signs are as listed under the variables.

The term U_t, otherwise known as the stochastic term of the regression is introduced to represent the random of unexplained variation to be encountered in the modelling since in real life situation, which we are trying to mimic through this estimation, chance events do occur which would make our model not to be 100% deterministic.

Hypothesis Testing

Table 2: Regression Output of Capital Flight and Its Determinants in Nigeria.

Independent variable	X ₁ EXTD/ GDP	X ₂ GRAD	X ₃ PBB	X ₄ EXIMRA T	X ₅ FORE V	X ₆ INTR	X ₇ EXP	X ₈ INFR	X ₉ PAMP	X ₁₀ TOT	X ₁₁ TOG	X ₁₂ EXTD
Coefficient Of the Variables	- 11.364	43.385	- 0.265	87.687	0.162	- 134.53	- 0.436	24.769	883.691	14.813	- 6554.5	3. E-02
Standard error	41.406	88.191	0.215	78.932	0.379	278.301	0.263	40.160	729.012	26.608	1978.878	0.167
T-statistic calculated	- 0.274 NS	0.492 NS	- 1.231 NS	1.111 NS	0.427 NS	- 0.483 NS	- 1.657 NS	0.617 NS	1.212 NS	0.557 NS	- 3.322 ***	0.164 NS
T-statistic Tabulated 1%	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500
T-statistic Tabulated 5%	1.714	1.714	1.714	1.714	1.714	1.714	1.714	1.714	1.714	1.714	1.714	1.714

NB:***=Significant at 1%,**=Significant at 5%,NS= Not Significant.

Constant = **4288.4**
Correlation (R) = **0.822**
Coefficient determination (R²) = **0.676**
No of observations = **36**
Degree of freedom = **(12, 23)**
Analysis of Variance (ANOVA)

From the F-tables, since we read the following; F-tabulated (12, 23), 1%= 3.07; 5%= 2.20 while the F-ratio calculated is 4.00

Decision Rule

Since F-ratio calculated(4.00 > F-ratio (3.07, 2.20) tabulated, we therefore, reject the Null hypothesis; Ho: and accept the Alternative, Ha, which states that the estimated model, significantly explains the variation in the dependent variable, growth in Capital Flight, CAPF_t, for the respective periods under investigation, 1970-2005.

Hence, we reject H0 to conclude that the model is significant, and the estimated regression equation is represented thus;

$$CAPF = 4288.40 - 11.36 EXTD/GDP_t + 43.39 GRAD_t - 0.27PBB_t + 87.69EXIMRAT_t - 0.16 FOREV_t - 134.53DOMIR_t - 0.44EXP_t + 24.77INFR_t + 883.69 PAMP_t + 14.81TOT_t - 6574.5 TOG_t + 3. E -02 EXTD_t \dots\dots\dots 1.5$$

Test of the Influence of the Explanatory Variables on Capital Flight T-Test.

The t-test is used in determining the extent of contribution of each explanatory variable to the change in the level of capital flight.

The result of this hypothesis is shown in Table 2.

Two levels of significance (1% and 5% with df, N-K

or 36 -13 = 23) are set and we read from Table 2. , the t-calculated is compared with the t-tabulated ,

$$\begin{aligned} 1\% &= 2.500 \\ 5\% &= 1.714 \end{aligned}$$

These readings show that only the type of government as an explanatory variable contributes significantly to the volume of capital flight in Nigeria. However the other of importance of the variables is displayed thus;

$$\begin{aligned} \text{TOG}_t > \text{EXP}_t > \text{PBB}_t > \text{PAMP}_t > \text{EXIMRAT}_t > \text{TOT}_t > \\ (3.322) & (1.657) & (1.231) & (1.212) & (1.111) & (0.617) & (0.557) \end{aligned}$$

$$\begin{aligned} \text{GRAD}_t > \text{DOMIR}_t > \text{FOREV}_t > \text{EXTD/GDP}_t > \text{EXTD}_t \\ (0.492) > (0.483) > (0.427) > (0.274) > (0.164) \end{aligned}$$

The figures in parenthesis are the t-values.

It is interesting to note that of all the variables estimated , the most significant one is type of government ..

Hypothesis Testing

From the results, it is striking to note that Capital Flight bears a significant relationship with the selected determinants. Added to this, the model shows about 82% level of relationship between the explanatory variables taken together and the Capital Flight (see the ANOVA table in appendix I). Also, with an R² of about 67% it then follows that the explanatory variables have been able to explain about 67% of the variations in the Capital Flight, thus leaving only about 33% to chance occurrence.

Conclusion

1. The volume of capital flight being experience in Nigeria can be explained significantly using macroeconomic indices corresponding to the period of such flight.
2. Similarly, a significant relationship exists between all the determinants of capital flight and the volume of capital flight in the Nigerian economy .
3. More durable regime types have less capital flight while countries with civil wars and military rule, in short unstable regimetype , have more capital flight .
4. Conflict reduces the productivity of domestic capital and increases expected physical depreciation rates.
5. Domestic investors will relocate their capital abroad, leading to a reduction in domestic output.

Recommendations

The findings of this study therefore bring to the fore the need for the following recommendations:

1. First and foremost, actions are needed to create a favourable investment climate and to generate growth sufficient to discourage the capital flight.
2. Akin to this is the need to step up the war on corruption which appears to be endemic in Nigeria just as evidence supports the fact that a high inverse correlation exists between corruption and level of investment in any country`

References

- Ajayi, S. I. (1992) "An Economic Analysis of Capital Flight from Nigeria World Bank Policy Research Working Paper Series No.993.
- Ajayi, S. I. (1997) "An Analysis of External Debt and Capital Flight in the Severely Indebted Low Income Countries in the Sub-Sahara Africa," IMF, Working Paper WP/97/68. C.
- Boyce, J.K. (1992) The Revolving Door? External Debt and Capital Flight: A Philippine Case Study. *World Development*, 20 (3), 335-349
- Boyce, J.K. and L .Ndikumana (2001) Is Africa a Net Creditor? New Estimates of Capital Flight from Severely Indebted Sub-Sahara African Countries, 1970-1996. *Journal of Development Studies*, 38(2) 27-56.
- Collier, P. A., Hoeffler. and C. Pattillo (2003) "Aid and Capital Flight " Draft paper for the *UNU/WIDER* Conference on sharing Global Prosperity. Helsinki, September, 2003.
- Cuddington, J.T., (1987) "Capital Flight:: Estimates, Issues, and Explanations", Princeton Studies in International Finance, Princeton University, Department of Economics, p. 58.
- Dooley, M. P. and Kletzer, K. (1994) "Capital Flight, External Debt, and Domestic Policies." NBER Working Paper No. 4793. Cambridge, MA: *National Bureau of Economic Research*.
- Hermes, N. and Lensink, R. (2000) "Capital Flight and the Uncertainty of Government Policies." University of Groningen, Unpublished Manuscript.
- Hermes, N., R. Lensink, and V. Murinde (2003) "Flight Capital and its Reversal for Development Financing". *WIDER, Discussion Paper* 2002/99. (www.wider.unu.edu/publications/dps/dps2002/-99.pdf) D.R. and J. Williamson (*Washington: Institute for International Economics*, 1987.)
- Le, Quan V and M. Rishi, (2005),"Corruption and Capital Flight: An Empirical Assessment "*.International Economic Journal, December, 2005.*
- Lessard, D. R. and Williamson, J. (1987) Capital Flight and Third World Debt, *Institute of International Economics*, Washington DC,
- Ndikumama, L. and Boyce, J.K. (2002)." Public Debts and Private Assets: Explaining Capital Flight from Sub-Saharan African Countries". Political Economy Research Institute, *UMASS, Working Paper* Series No. 32.

- Ng'eno, N.K. (2000) "Capital Flight in Kenya." In Ajayi, I. and M. Khan (eds). External Debt and Capital Flight in Sub-Saharan Africa. Washington, D. C.: *The IMF Institute*, pp 300-321.
- Nyoni, T. (2000) "Capital Flight from Tanzania". In Ajayi, I. and M.S. Khan (eds) External Debt and Capital Flight in Sub-Saharan Africa. Washington, D.C.: *The IMF Institute*, pp 265-299.
- Olopoenia, M . (2000). "Capital Flight from Tanzania". In Ajayi, S .I. and M.S. Khan (eds) External Debt and Capital Flight in Sub-Saharan Africa. Washington, D.C.: *The IMF Institute*, pp 238-264.
- Onwioduokit , E.A. , (2001) "Capital Flight from Nigeria : An Empirical Re-Examination. " *WIDER Development Conference on Debt Relief*, 2001.
- Pastor, Manuel, Jr (1990) "Capital Flight from Latin America", *World Development* 18:1-18.
- The World Bank: World Bank Africa Database 2004.
The World Bank: World Bank Africa Database 2005.
- Tornell , Aaron and Andres Velasco (1992) The Tragedy of The Commons and Economic Growth: Why Does Capital Flow from Poor to Rich Countries? *Journal of Political Economy*, 100(6), 1208-31.
- Trevelline, M. J (1999) "The Sociological Reasons for Capital Flight."
(Website\copy\new articles\The Sociological Reasons for Capital Flight.wpd.)
- Varman-Schneider, B. (1991)," Capital Flight from Developing Countries," *Westview Press, Oxford U.K.*