

The Impact of Capital Flight on Economic Development: Ghana and Nigeria Compared.

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IMPACT OF CAPITAL FLIGHT ON ECONOMIC DEVELOPMENT

**The Impact of Capital Flight on Economic Development: Ghana and Nigeria
Compared.**

By

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DECLARATION

I hereby declare that this thesis is my original work and that no part of it has been presented for another degree in this university or elsewhere.

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I hereby declare that the preparation and presentation of this thesis were supervised in accordance with the guidelines on supervision of theses established by Ashesi University College.

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List of Acronyms Used

FDI-Foreign Direct Investment

BEPS-Base Erosion and Profit Shifting

IMF-International Monetary Fund

SSA-Sub-Saharan Africa

AU-African Union

GDP- Gross Domestic Product

SCDC- Service Centre for Development Cooperation

MNC-Multinational Corporation

PEP-Politically Exposed Person

U.N-United Nations

HDI-Human Development Index

OECD-Organization for Economic Co-operation and Development

IRS-Internal Revenue Service

OLS-Ordinary Least Squares

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Definition of Terms

Profit shifting- Allocation of income and expenses between related corporations or branches of the same legal entity so as to reduce the overall tax liability of the group or corporation¹.

Base Erosion- Tax planning strategies that rely on mismatches and gaps that exist between the tax rules of different jurisdictions to minimize the corporation's overall tax liability².

Transfer Pricing- The practice whereby one part of a multinational corporation in a country transfers goods, services or know how to other part in another country and charges price for the goods or services that may be unrelated to costs incurred, operations carried out or added value.

Foreign Direct Investment- cross border investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise resident in another economy. The lasting interest implies the existence of a long term relationship between the direct investor and the enterprise and a significant degree of influence by the direct investor on the management of the enterprise³.

Gross Domestic Product-The total value of the goods and services produced by the people of a nation during a year not including the value of income earned in foreign countries⁴.

¹ Svendgaard L.T 2011, "Profit shifting - Moneycontrol." 2011. 12 Dec. 2015
<http://www.moneycontrol.com/glossary/taxes/profit-shifting_3053.html>

² Financial Times, 2014 "Base Erosion And Profit Shifting Beps Definition from ..." 2014. 12 Dec. 2015
<<http://lexicon.ft.com/Term?term=base-erosion-and-profit-shifting-Beps>>

³ OECD iLibrary, 2013 "Foreign direct investment - definitions." 2013. 12 Dec. 2015 <<http://www.oecd-ilibrary.org/sites/factbook-2013-en/04/02/01/index.html?itemId=/content/chapter/factbook-2013-34-en>>

⁴ Merriam Webster Online Dictionary, 2007 "Gross Domestic Product definition." 2007. 12 Dec. 2015
<<http://www.merriam-webster.com/dictionary/gross%20domestic%20product>>

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Human Development Index- A tool developed by the United Nations to measure and rank countries levels of social and economic development based on life expectancy at birth, mean years of schooling, expected years of schooling and gross national income per capita⁵.

Politically Exposed Person- An individual who is or has been entrusted with a prominent public function in a country for example heads of state, senior politicians, senior government, judicial or military officials, senior executives of state owned corporations as well as important political party officials⁶.

Trade misinvoicing-A method for moving money illicitly across borders which involves deliberately misreporting the value of a commercial transaction on an invoice submitted to customs⁷.

Illicit financial flows- Moneys moved illegally from one country to another. The movement of such funds is termed illicit financial flow when the funds are illegally earned, transferred or utilized⁸.

Money laundering-Any act or attempted act to conceal or disguise the identity of illegally obtained proceeds so that they appear to have originated from legitimate sources.⁹

⁵Investopedia,2011 "Human Development Index (HDI) Definition | Investopedia." 2011. 12 Dec. 2015
<<http://www.investopedia.com/terms/h/human-development-index-hdi.asp>>

⁶ OECD iLibrary,2012 "Politically Exposed Persons (PEPs) - definitions." 2012. 12 Dec. 2015
<<http://www.oecd.org/site/adboecdanti-corruptioninitiative/meetingsandconferences/44442206.pdf>>

⁷ Global Financial Integrity,2014"Trade Misinvoicing « Global Financial Integrity." 2014. 12 Dec. 2015
<<http://www.gfintegrity.org/issue/trade-misinvoicing/>>

⁸ Global Financial Integrity,2014"Illicit Financial Flows - Global Financial Integrity." 2014. 13 Dec. 2015
<<http://www.gfintegrity.org/issue/illicit-financial-flows/>>

⁹Interpol International, 2011"Money laundering / Financial crime / Crime areas / Internet ." 2011. 13 Dec. 2015 <<http://www.interpol.int/Crime-areas/Financial-crime/Money-laundering>>

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ABSTRACT

This study examines the relationship between capital flight and economic development in Africa by focusing on the impact of capital flight on economic development in Nigeria and Ghana.

Existing literature on the phenomenon of capital flight, has focused almost exclusively on exploring the relationship between capital flight and economic growth instead of economic development. The preponderance of that literature indicates that a negative relationship exists between capital flight and economic growth. Using a combination of regression, correlational, graphical and descriptive analyses secondary data collected from sources such as the World Bank on capital flight and indicators of development were analysed. Capital flight estimates for Nigeria and Ghana (1990-2014) were computed using the World Bank's residual method.

The main findings of this study are: (i) Total capital flight is more severe in Nigeria as compared to Ghana in terms of magnitude. On a per capita basis, however, capital flight is much worse in Ghana. (ii) There is a negative and statistically significant relationship between capital flight and economic development for Nigeria but the relationship is positive and statistically significant for Ghana. Results seem to suggest that although capital flight seems to negatively impact development in Nigeria but not in Ghana, it may be that it is the totality (not the per capita) of capital flight that matters in terms of impact on development.

Thus, African governments must take steps to minimize capital flight so that their paths to economic development is accelerated to ensure the wellbeing of their citizens.

Keywords: Capital flight, Economic development, Policy, Nigeria, Ghana

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CHAPTER 1: INTRODUCTION

Background

In recent times, there has been much discourse (both intellectual and popular) on the nature, extent and incremental growth rate of net capital outflows from Africa.¹⁰

There is no widely accepted definition of capital flight. The term is widely used to describe widespread currency speculation especially when it results in cross-border movements of private funds in quantities large enough to impact national financial markets.

The major distinction between capital flight and normal capital outflows is thus a matter of degree, much like the difference between a bank run and normal withdrawals.¹¹ Capital flight has also been described as the outflow of substantial funds from one country to another within a very short time period.¹² Money laundering on the other hand is one of the popular channels of capital flight used by agents such as criminal organizations and corrupt public officials

Capital flight usually consists of commercial and private capital that is transferred across national borders. The legal component of capital flight is distinguishable from the illegal component by the fact that it is duly recorded as it crosses national borders and

¹⁰ Ndikumana, L. & Ajayi, I., 2015 "Capital Flight from Africa - Oxford University Press." 2014. 7 Oct. 2015
<<http://ukcatalogue.oup.com/product/9780198718550.do>>

¹¹ McLeod, D., 2008 "Capital Flight - Library of Economics and Liberty." 2008. 29 Mar. 2016
<<http://www.econlib.org/library/Enc1/CapitalFlight.html>>

¹² Alesina, Alberto, and Tabellini, G., 1989 "External debt, capital flight and political risk." *Journal of International Economics* 27.3 (1989): 199-220.

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remains on the ledgers of the country from which it moves.¹³ Such legal flight capital is generally accepted and considered an integral part of free market activities.¹⁴

Illegal capital flight however nearly always involves tax evasion. Hence, it is poorly documented if at all and often disappears from the official records in the source country¹⁵. Legal flight capital is mostly in pursuit of safety and can therefore be expected to return to the source country should the investment climate improve. On the other hand, illegal flight capital is always in search of secrecy and therefore rarely returns to the source country.

The phenomenon of capital flight in Africa first attracted scholarly attention in the mid-1980's, thanks to the popularity of the foreign-aid based development agenda of the World Bank and IMF. This is because the foreign-aid capital hypothesis suggests that substantial foreign exchange inflows often result in significant outflows of domestic capital.¹⁶

By providing easy access to foreign exchange, foreign capital provides the liquidity to support the flight of domestic capital.¹⁷ The hypothesis has been proved true in China, South Korea, Hong Kong, Singapore and Taiwan.¹⁸ Consequently, researchers like Paul Collier and Leonce Ndikumana anticipated that the foreign-aid based

¹³ Baker, R. W. 1999 "The biggest loophole in the free-market system." *Washington Quarterly* 22.4 (1999): 27-46.

¹⁴ Baker, R.W. 1999 "The biggest loophole in the free-market system." *Washington Quarterly* 22.4 (1999): 27-46.

¹⁵ Baker, R. W. 1999 "The biggest loophole in the free-market system." *Washington Quarterly* 22.4 (1999): 27-46.

¹⁶ Quazi, R. 2004 "Foreign aid and capital flight." *Journal of the Asia Pacific Economy* 9.3 (2004): 370-393.

¹⁷ Quazi, R. 2004 "Foreign aid and capital flight." *Journal of the Asia Pacific Economy* 9.3 (2004): 370-393.

¹⁸ Quazi, R. 2004 "Foreign aid and capital flight." *Journal of the Asia Pacific Economy* 9.3 (2004): 370-393.

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development strategy promoted by the Bretton Woods institutions in Africa would result in capital flight just like it did for the Asian Tigers.¹⁹

The excesses of African leaders like Mobutu Seko of Zaire and Sani Abacha of Nigeria in the 1970's and 1990's respectively highlighted the scale of the capital flight problem in Africa.²⁰ Upon Sani Abacha's death in 1998, it was discovered that he had stashed more than \$3 billion of public funds in multiple bank accounts in notorious tax havens such as Switzerland and Luxembourg.²¹ This represents a classic example of capital flight as a result of public sector corruption.

According to Dambisa Moyo, in spite of the billions of foreign aid poured into Africa by the year 2000, Africa's access to capital has not improved and capital rather is leaving the continent.^{22, 23}

For instance, capital flight from Ghana in 2004 was estimated to be 98.7% of GDP for 2004. According to Kant (1998), although FDI inflows to African countries like Nigeria have steadily increased over the years, capital flight from African countries may have increased at a faster rate.²⁴

¹⁹ Collier, P. "Paul Collier at IDEAS." 2014. <<https://ideas.repec.org/f/pco353.html>>

²⁰ Modern Ghana, 2014 "How Capital Flight Is Undermining Africa's Development." 2014. 7 Oct. 2015 <<http://www.modernghana.com/news/526874/1/how-capital-flight-is-undermining-africas-developm.html>>

²¹ Forbes Magazine, 2011 "Who Were Africa's Richest Dictators? - Forbes." 2011. 10 Jan. 2016 <<http://www.forbes.com/sites/mfonobongnsehe/2011/11/08/who-were-africas-richest-dictators/>>

²² Armah, S. E., 2010 "Does political stability improve the aid-growth relationship? A panel evidence on selected Sub-Saharan African countries." *African Review of Economics and Finance* 2.1 (2013): 54-76.

²³ Moyo, D. 2009 "Why foreign aid is hurting Africa." *The Wall Street Journal* 21 (2009): 1-2.

²⁴ Kant, C. 1998 "Capital Inflows and Capital Flight—Individual Countries Experience." *Journal of Economic Integration* (1998): 644-661.

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The consequences of capital flight include severe income inequality, economic stagnation, loss of human capital, persistent balance of payment deficits and a negative feedback loop of increasing capital flight.²⁵

Fortunately, the problem of capital flight has been acknowledged by African leaders on the continental level. The most recent concerted effort to address it was in 2014 when a high-profile panel was tasked by the African Union to investigate illicit financial flows from the continent.²⁶

Definition of Key Variables

A key variable is a variable that is of paramount importance to the research. It could be a dependent variable in which case the research seeks to explain it. It could also be an independent variable in which case it is one of the determinants of the explained or dependent variable. The key variables in this research are capital flight and economic development. Capital flight is the independent variable and economic development is the dependent variable.

Capital flight is most commonly measured using the World Bank's Residual method. Other methods used in estimating capital flight are the Dooley method, Cline method and Morgan method.²⁷ Economic development is commonly measured using

²⁵ Ajayi, S.I, and Ndikumana L.(2014) '*Capital flight from Africa: Causes, effects, and policy issues*'. OUP Oxford, 2014.

²⁶ NEPAD,2013"Stop it, track it and get it - Renewed drive to stop illicit financial flows from Africa ." 2013. 7 Oct. 2015 <<http://www.nepad.org/ceo039s-office/news/3188/text-web-story-and-e-alert-illicit-financial-flow>>

²⁷ Ndikumana, L. (2014). Capital Flight: Measurement and Drivers. Retrieved from http://www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_351-400/WP363.pdf.

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indicators such as the Human Development Index (HDI), real GDP per capita growth rate, reduction in National Poverty Rate and reduction in National Unemployment Rate.

Capital flight refers to the outflow of substantial financial assets from a country within a short period usually in search of greater stability returns.²⁸ It may involve open or clandestine, legal or illegal movement of large sums of money from an economy perceived to be unstable to one considered more stable.²⁹

Economic development is the continuous improvement in the living conditions of a country's citizens as well as their self-esteem needs in an increasingly free and just society.³⁰

This paper explores the relationship between economic development and capital flight in Nigeria and Ghana by comparing and estimating relationships between-capital flight estimates and HDI scores, GDP per capita growth rates, unemployment and poverty rates of both countries over the 25 year period (1990-2014).

This study focuses on both Nigeria and Ghana because these are the two dominant English speaking economies in West Africa and are in fact the two largest economies in the region. The study also seeks to reinforce the reliability of findings on the correlation between capital flight and economic development. The fact that Nigeria experiences substantial capital flight whereas Ghana's capital flight estimates fall in the low bracket (relative to other SSA countries) reduces the effect of scale on the nature of any relationships discovered.

²⁸ Epstein, G. (2006) "1. Capital Flight and Capital Controls in Developing .." 2006.
<http://www.peri.umass.edu/fileadmin/pdf/chapter_1.pdf>

²⁹ Business Dictionary,(2007) "What is capital flight? - BusinessDictionary.com." 16 Dec. 2015
<<http://www.businessdictionary.com/definition/capital-flight.html>>

³⁰ Sen,A. (1999) "Economic development definition - What is Economics?." 1 Oct. 2015
<<http://www.whatisanomics.org/economic-development>>

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Problem Statement

Capital flight is increasing in African countries. Fig.1 below illustrates capital flight from SSA from 1970-2010.³¹

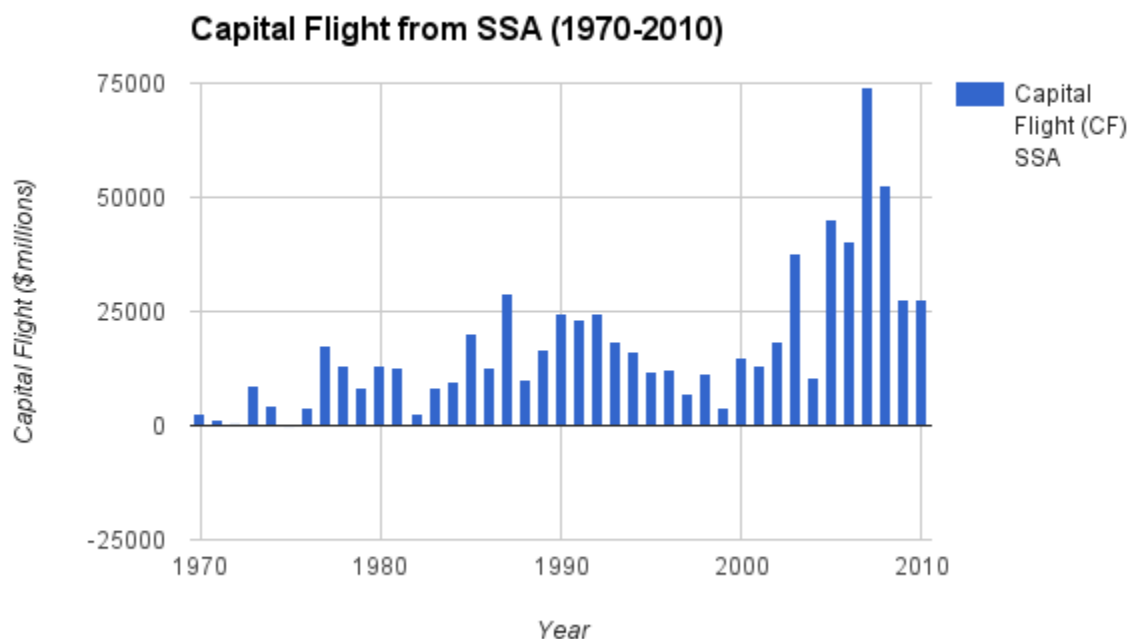


Figure.1. Capital Flight Results from sub-Saharan Africa

Source: Ndikumana et al (2012).³²

At the same time that capital flight is on the increase, capital is scarce in countries like Ghana and Nigeria and the cost of capital is indeed high and rising. Average cost of capital in Nigeria is 18.5% while for Ghana, commercial interest rates stand at 28% on

³¹ Boyce J. K., 2014 "Strategies for Addressing Capital Flight" 2014. 16 Dec. 2015

<http://aercafrica.org/index.php/publications/doc_download/358-strategies-for-addressing-capital-flight>

³² Boyce J. K., 2014 "Strategies for Addressing Capital Flight" 2014. 16 Dec. 2015

<http://aercafrica.org/index.php/publications/doc_download/358-strategies-for-addressing-capital-flight>

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average as at November 2015.³³ Currently, annual capital flight estimates for Nigeria and Ghana combined stands between \$46.26 and \$52.44 billion while the total of foreign direct investment (FDI) in both countries for 2014 is \$30 billion.³⁴ To put this into perspective, FDI in both countries make up only 57-65% of capital flight from Nigeria and Ghana.

It appears that African countries have challenges attracting and retaining capital in spite of the fact that they have the lowest levels of capital per worker. Nobel laureate Robert Lucas first discussed this phenomenon in 1990 after observing that capital does not flow from developed countries to developing countries despite possible higher rates of return contrary to classical economic theory.³⁵

Periods of economic growth and development in Nigeria and Ghana seem transient. The levels of government and private investments are typically lower than in other developing regions leading to significant market failures such as the lack of public goods and negative externalities. Government investment seems not to have as much impact on development as in other places.³⁶ This is possibly a consequence of capital flight. Capital flight may also be the result of bad institutions.

A compelling reason why capital flight from Africa is a potential problem is the fact that most African governments make huge concessions via tax-breaks and holidays to multinationals. They do this mainly to create employment for their citizens.

³³ Bank of Ghana, 2015 "Daily Interest Rates " 2015. 16 Dec. 2015

<https://www.bog.gov.gh/index.php?option=com_wrapper&view=wrapper&Itemid=255>

³⁴ NEPAD, 2013 "Stop it, track it and get it - Renewed drive to ... -" 2013. 7 Oct. 2015

<<http://www.nepad.org/ceo039s-office/news/3188/text-web-story-and-e-alert-illicit-financial-flow>>

³⁵ Lucas, R. E. 1990 "Why doesn't capital flow from rich to poor countries?." *The American Economic Review* 80.2 (1990): 92-96.

³⁶ Ndikumana, L 2014 "Capital flight and economic development in ..." 2014. 16 Dec. 2015

<http://aercafrica.org/index.php/publications/view_document/360-capital-flight-and-economic-development-in-africa>

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Unfortunately, the multinationals set up only to avoid the already minimal taxation through clever accounting practices such as profit shifting.³⁷

For example in 2013, MTN Ghana was investigated by the Ghana Revenue Authority for aggressive tax shifting activities. The Ghanaian government suspended all MTN Ghana's management fee transfers to Mauritius indefinitely. This was after MTN failed to prove that their subsidiary in Mauritius indeed provided management to MTN Ghana.³⁸ Similarly, according to a 2012 report by ActionAid Ghana, Accra Brewery Limited uses tax havens and transfer pricing to avoid taxes to the tune of GHS 2 million annually on behalf of the parent firm SABMiller.³⁹

Such illegal actions deprive African economies of the much-needed tax revenue. FDI oriented development strategies also become ineffective as a result.⁴⁰ This is because African countries like Ghana encourage FDI by providing incentives via programs such as the Ghana Free Zones Scheme. The Free Zones Scheme is essentially a program aimed at attracting foreign investors to Ghana. By way of incentives, the firms in this enclave are 100% exempt from import duties and export levies. For ten years, these firms are 100% exempt from income taxes and are subject to a tax rate of only 8% thereafter. Oddly enough, there are no restrictions on profit repatriation for the foreign firms. As a result, capital flight due to profit repatriation leads to a substantial reduction in scarce resources available for domestic investment and other productive ventures.

³⁷ Boyce, J.K. 2008 "PERI: Capital Flight from Africa." 7 Oct. 2015 <<http://www.peri.umass.edu/300/>>

³⁸ Maya, E 2015 "Finance Uncovered Investigation: MTN's Mauritian Billions ..." 2015. 19 Nov. 2015 <<http://www.financeuncovered.org/investigations/finance-uncovered-investigation-mtns-mauritian-billions/>>

³⁹ ActionAid, 2013 "Why SABMiller Should stop dodging taxes in Ghana..." 2013. <http://www.actionaid.org.uk/sites/default/files/doc_lib/calling_time_on_tax_avoidance.pdf>

⁴⁰ Boyce, J.K. 2012 "Capital Flight from Sub-Saharan African Countries - Political ..." 2012. <http://www.peri.umass.edu/fileadmin/pdf/ADP/SSAfrica_capitalflight_Oct23_2012.pdf>

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In addition, in African countries such as Nigeria where economic inequality is high, capital flight has the potential to worsen unequal distribution of wealth. All these effects of capital flight necessitate the examination of the impact that it has on economic development in countries like Nigeria and Ghana.

Significance of the Research

James Boyce, an expert on capital flight postulates that if a quarter of the stock of capital which has left Africa is returned and invested in the continent, Africa would go from trailing to leading developing regions in terms of domestic investment.⁴¹

Having access to capital for investment is important. This is because per the traditional neoclassical model, investment stimulates output per worker and economic growth⁴². Robert Solow's acclaimed growth model and other neoclassical growth models such as the Harrod-Domar model posit that economic growth (represented by output per worker) is a function the amount of capital available to each worker in the economy.⁴³ Thus, the role of capital in the quest for economic growth and development cannot be overemphasized. The exodus of capital from African countries is therefore a source for concern.

Further, the issue of capital flight deserves attention because African countries like Nigeria and Ghana are experiencing a significant decline in industrialization in spite

⁴¹ Boyce, J.K., 2008 "PERI: Capital Flight from Africa." 7 Oct. 2015 <<http://www.peri.umass.edu/300/>>

⁴² Todaro M.P., Smith, S.C., 2012 "Economic Development (10th Edition)" 2012. 31 Mar. 2016 <<http://www.amazon.com/Economic-Development-Edition-Michael-Todaro/dp/0321485734>>

⁴³ Todaro, M.P., Smith, S.C., 2012 "Economic Development (10th Edition)" 2012. 31 Mar. 2016 <<http://www.amazon.com/Economic-Development-Edition-Michael-Todaro/dp/0321485734>>

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of rising foreign direct investment.⁴⁴ Thus, it is becoming increasingly clear that African countries cannot afford to ignore the role of capital flight and its reversal in their quest for economic development.

Most of the research on capital flight in Africa has been focused on deriving accurate estimates of capital flight and discovering the reasons behind it. This paper explores the relationship between economic development and capital flight in Nigeria and Ghana. In addition, this paper proposes steps policymakers in Ghana and Nigeria can take to help reduce the incidence and impact of capital flight.

Research Questions and Objectives

Research Questions:

1. What is the extent/magnitude of capital flight in Nigeria and Ghana?
2. Does capital flight impact economic development in Nigeria and Ghana? If it does by how much?
3. How can existing measures of controlling capital flight be made more effective in Nigeria and Ghana?

Research Objectives:

1. To determine the extent/magnitude of capital flight from Ghana and Nigeria.
2. To analyse the impact of capital flight on economic development in Ghana and Nigeria.
3. To identify the means by which existing measures of controlling capital flight can be made more effective in Ghana and Nigeria.

⁴⁴ UNCTAD, 2015 "unctad.org | Foreign direct investment inflows to Africa ..." 2015. 7 Oct. 2015
<<http://unctad.org/en/pages/PressRelease.aspx?OriginalVersionID=250>>

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Ultimately, this paper puts into perspective the impact of capital flight on Ghana and Nigeria's ability to translate economic growth into economic development for the benefit of their citizens.

Hypothesis & Anticipated Findings

Null Hypothesis: Capital flight has no statistically significant impact on economic development in Ghana and Nigeria, ($H_0: \beta_{KF} = 0$).

Alternative Hypothesis: Capital flight has a statistically significant impact on economic development in Nigeria and Ghana, ($H_0: \beta_{KF} \neq 0$).

This study expected to find that capital flight significantly impacts economic development in both Nigeria and Ghana. The impact on development in Nigeria was expected to be more severe than that of Ghana due to the scale difference in capital flight estimates. Consequently, it was suspected that notable differences exist between the measures put in place to prevent capital flight in Nigeria and Ghana.

The results suggest that there are no stark differences between the measures used to check capital flight in Nigeria and those used in Ghana. The results suggest however that the scale difference in annual capital flight for Nigeria and Ghana is less than the size of their economies would predict. In fact, annual capital flight growth rates in Ghana have exceeded the rate of economic growth for the last 5 years.

Assumptions

The assumptions used in this research paper are:

1. Nigeria has a higher number of multinational corporations (MNCs) as compared to Ghana. This contributes to Nigeria's total annual capital flight exceeding that of Ghana.

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2. Nigeria has a higher number of well-established criminal and terrorist organizations (such as rebel groups, cyber fraud, drug and human trafficking syndicates) as compared to Ghana. This contributes to Nigeria's total annual capital flight exceeding that of Ghana.

Cognitive Map

The plan for the paper is as follows. Chapter 2 contains a discussion of the theories and conceptual issues related to the nature of capital flight in Ghana and Nigeria. A review of the relationships between capital flight and economic growth and development that have been identified and explored in the literature thus far is also presented in Chapter 2. Chapter 3 discusses the methodology used in this study. The empirical results and a comparison of capital flight-economic development relationships are presented in Chapter 4. The final chapter offers the policy implications of the findings and other concluding remarks.

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CHAPTER 2: LITERATURE REVIEW

Conceptual Issues

There is some controversy in the literature surrounding the term capital flight as divergent notions exist about what constitutes capital flight. One argument is that developing countries complain about capital flight on one hand but desire to see FDI inflows increasing annually on the other hand. Guillermo et al believe this is hypocritical since any FDI flowing into a developing country is essentially capital flight from the perspective of the developed country⁴⁵.

The existence of different methods of computing capital flight in the literature has also led to divergent estimates of the phenomenon. It is difficult to determine the portion of capital flight that is not due to regular portfolio choice decisions of citizens.

Africans currently hold approximately 40% of their private assets abroad. This makes Africa the leading region in terms of private assets held overseas.⁴⁶ The implication is that the average African has a penchant for foreign assets as compared to domestic assets. As such, whenever the opportunity to fly out capital is present, capital flight will almost always occur. Hence, it is nearly impossible to distinguish between abnormal and normal financial asset outflows empirically when estimating capital flight from Africa.⁴⁷

⁴⁵ Calvo, G.A, Leonardo L, and Reinhart C. M. "Inflows of Capital to Developing Countries in the 1990s." *The Journal of Economic Perspectives* 10.2 (1996): 123-139.

⁴⁶ Collier, P., Anke H., and Pattillo, C. "Flight capital as a portfolio choice." *the world bank economic review* 15.1 (2001): 55-80.

⁴⁷ Khan, M. S, and Ajayi S. I. *External debt and capital flight in sub-Saharan Africa*. International Monetary Fund, 2000.

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Theoretical Literature

Numerous theories exist that attempt to explain capital flight. The five main capital flight theories are: political risk theory, portfolio choice theory, debt-overhang theory, investment diversion theory and development trajectory theory.⁴⁸

Development trajectory theory: This theory postulates that the level of capital flight is a consequence of the strategy employed to promote economic development. It maintains that on average, countries that pursue rapid industrialization based on multinational corporation-led FDI are more likely to record high levels of capital flight than countries that attain economic development through domestic efforts.⁴⁹

Debt-overhang /Revolving-door theory: This theory asserts that capital flight mainly occurs as a result of the heavy debt burdens of most developing countries. Rising debt levels causes residents to move resources to foreign countries. This is because residents seek to insure themselves against the risks of currency devaluation, high inflation, high interest rates and expropriation of their assets to repay debt via high taxes).This results in a vicious cycle where capital flight leads to stunted economic growth which necessitates borrowing that in turn leads to more capital flight.⁵⁰

Investment diversion theory: This theory posits that corrupt bureaucrats and political leaders fly out illegally obtained capital to developed countries. This is because developed countries have high interest rates, political and economic stability, attractive tax environment, secrecy of accounts and a wide range of financial instruments. By so

⁴⁸ Wei, L. X. Z. "Capital Flight: Theories and a Positive Study in China [J]." *STATISTICAL RESEARCH* 6 (1998).

⁴⁹ Ashman, S., Fine, B. and Newman S. "Amnesty International? The nature, scale and impact of capital flight from South Africa." *Journal of Southern African Studies* 37.01 (2011): 7-25.

⁵⁰ Dooley, M. P, and Kletzer.K. M "Capital flight, external debt and domestic policies." 1 Jul. 1994.

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doing, they divert scarce capital resources to advanced countries and contribute to depreciating domestic currency where a floating exchange rate regime exists.⁵¹

Portfolio Choice theory: This theory maintains that rational investors naturally move capital overseas in search of maximum returns at the minimum risk level. Thus, the relative macroeconomic stability and developed financial markets of advanced countries provide capital owners in developing regions with perfect incentives to diversify their investment portfolios and hedge against financial risks by investing in foreign financial instruments.⁵²

Political Risk theory: This theory postulates that capital flight is mainly a response to the perceived political risk associated with a given country. As such, countries experiencing war or other forms of political instability record high levels of capital flight. Residents fly out capital to secure its value and ownership. Hence, the level of capital flight recorded for a country is a function of political risk.⁵³

Theories of Economic Development

Schumpeter (1912) proposed a theory of economic development that is currently making waves in academia and development planning circles. He postulated that there

⁵¹ Gordon, D.B, and Levine R. "The 'Problem of Capital Flight—A Cautionary Note." *The World Economy* 12.2 (1989): 237-252.

⁵² Collier, P., Anke H., and Pattillo, C "Flight capital as a portfolio choice." *the world bank economic review* 15.1 (2001): 55-80.

⁵³ Alesina, Alberto, and Tabellini, G. "External debt, capital flight and political risk." *Journal of International Economics* 27.3 (1989): 199-220.

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can be no real economic development without the emergence and sustenance of an indigenous entrepreneurial class.⁵⁴

In essence, Schumpeter posits that all national attempts to attain sustainable economic development will not yield any lasting result unless it has indigenous entrepreneurship at its core.⁵⁵ Schumpeter's theory is at odds with the neo-mercantilist theory of economic development which suggests that developing countries must encourage FDI to boost its exports in order to gain trade surpluses⁵⁶.

Economic development or the lack of it has also been viewed in the literature as a by-product of a given country's geographic location, international trade patterns or institutions.

Regarding the role of geography in development, economic development has been known to be associated with countries located in temperate regions (Europe, North America & Australia) whereas most developing countries are located in the tropics (Latin America, Africa and South Asia)⁵⁷.

Geography is the most significant determinant of climate, natural resource endowment, spread of knowledge, disease burden, and technology and transport costs, for a given country. It therefore influences agricultural production and human resource quality.⁵⁸ Frankel & Romer (1999), posit that the level of international trade is the principal predictor of economic growth and development. Hence, the trade theory of

⁵⁴ Schumpeter, J. A. *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Transaction publishers, 1934.

⁵⁵ Schumpeter, J.A. *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Transaction publishers, 1934.

⁵⁶ Blaug, M. *"Economic theory in retrospect"*. Cambridge university press, 1997.

⁵⁷ The Earth Institute, 2009 "The Geography of Poverty and Wealth ." 2009. 31 Mar. 2016
<<http://www.earth.columbia.edu/sitefiles/file/about/director/documents/sciam0301.pdf>>

⁵⁸ McArthur, J.W, and Sachs J. D. "Institutions and geography: comment on Acemoglu, Johnson and Robinson (2000)." 1 Feb. 2001.

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economic development emphasizes international trade as the driving force behind significant changes in productivity⁵⁹. As such, the more favourable a developing country's trade balance, the faster it will attain economic growth and development.⁶⁰

Finally, economic development has been linked to the strength of a given country's institutions. Acemoglu, Johnson & Robinson (2001) assert that a given society's rules for governance must foster desirable economic conduct in order for economic development to occur.⁶¹ In particular, the rule of law and property rights play crucial roles in economic development⁶². This is because in the absence of rule of law and property rights, the expropriation risk borne by citizens and foreign investors discourages investment⁶³.

Impact of Capital Flight on Economic Growth and Development

According to Obidike et al. (2015), capital flight impacts Nigeria negatively by depleting foreign exchange reserves, worsening inflation and reducing resource mobilization.⁶⁴ As a result, economic growth slows down. The slump in growth affects

⁵⁹ Frankel, J. A, and Romer D. "Does trade cause growth?." *American economic review* (1999): 379-399.

⁶⁰ Frankel, J. A, and Romer D. "Does trade cause growth?." *American economic review* (1999): 379-399.

⁶¹ Acemoglu, D., Johnson S., and Robinson J. A. "The colonial origins of comparative development: An empirical investigation." 1 Jun. 2000.

⁶² Acemoglu, D, Johnson S, and Robinson J. A. "Reversal of fortune: Geography and institutions in the making of the modern world income distribution." 1 Sep. 2001.

⁶³ Acemoglu, D., Johnson S., and Robinson J. A. "Institutions as a fundamental cause of long-run growth." *Handbook of economic growth* 1 (2005): 385-472.

⁶⁴Obidike,P.2015 "The Impact of Capital Flight on Economic Development ..." 16 Dec. 2015
<<http://sciencedomain.org/download/MTE2NDIAQHBM>>

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economic development negatively as job creation falls below the optimal level leading to high unemployment and poverty.⁶⁵

Olugbenga et al (2013) maintains that the deterioration in terms of trade of African countries is a leading cause of capital flight.⁶⁶ They assert that in most cases exchange rate overvaluation, balance of payment disequilibrium and fiscal deficits cause governments to increase taxes. This creates the need for investors in African countries to divert capital abroad.⁶⁷ However, because most citizens do not have the means to fly out capital, the value of their assets depreciate due to inflation and rising consumption taxes. This severely affects purchasing power of the average citizen thereby increasing poverty.⁶⁸

Ajayi & Ndikumana (2015) found that capital flight impacted economic development of 21 African countries (including Nigeria and Ghana) negatively. They assert that capital flight reduces the stock of investment capital available to African governments for essential development projects such as schools and hospitals.⁶⁹ This leads to insufficient access to healthcare and education which directly affects the quality of life of citizens.⁷⁰

Obidike et al. (2015) found that capital flight has a negative significant impact on economic growth and development of Nigeria. This finding is corroborated by

⁶⁵ Weeks,J,2015"The Impact of Capital Flight on Economic Development ..." 2015. 16 Dec. 2015
<<http://sciencedomain.org/download/MTE2NDIAQHBM>>

⁶⁶ Olugbenga, A. A, and Alamu O. A. "Does Capital Flight Have a Force to Bear on Nigerian Economic Growth?." *International Journal of Developing Societies* 2.2 (2013): 80-86.

⁶⁷ Olugbenga, A. A, and Alamu. O. A "Does Capital Flight Have a Force to Bear on Nigerian Economic Growth?." *International Journal of Developing Societies* 2.2 (2013): 80-86.

⁶⁸ Olugbenga, A. A, and Alamu O. A. "Does Capital Flight Have a Force to Bear on Nigerian Economic Growth?." *International Journal of Developing Societies* 2.2 (2013): 80-86.

⁶⁹ Boyce, JK. "Capital Flight from Sub-Saharan African Countries - Political ..." 2012.
<http://www.peri.umass.edu/fileadmin/pdf/ADP/SSAfrica_capitalflight_Oct23_2012.pdf>

⁷⁰Ndikumana et al,2015 "Capital Flight from Africa | Edited by S. Ibi Ajayi and Leonce ..." 2015. 16 Dec. 2015 <<http://www.oupcanada.com/catalog/9780198718550.html>>

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researchers such as Ajilore (2010), Olugbenga & Alamu (2013), Ajayi & Ndikumana (2015) and Onodugo et al. (2014).

Magnitude of capital flight in Nigeria & Ghana

A 2011 report released by the Service Centre for Development Cooperation asserts that for every euro of development assistance received by developing countries, roughly ten euros flows out from developing countries to the developed ones.⁷¹

Similarly, Ndikumana et al. argue that close to 67 cents of every dollar of publicly-guaranteed long-term borrowing in Africa is re-exported as capital flight.⁷² This is due to debt-fuelled capital flight where borrowed funds are captured by corrupt African political elite and converted into private assets in foreign banks.⁷³ If these claims are accurate, then it is likely that the true level of capital flight from Africa far exceeds even the least conservative estimates available.

The IMF in its regional economic report for SSA (2013) named Ghana as one of the countries likely to experience increase in capital flight. This is due to increase in foreign investors holding domestic debt in equity markets.⁷⁴ Indeed, the AU modestly estimates illicit financial flows (the illegal component of capital flight) in Ghana and

⁷¹ Service Centre for Development Cooperation, 2011 "illegal capital flight from developing countries - Kepa." 2011. 19 Nov. 2015 <<https://www.kepa.fi/tiedostot/julkaisut/illegal-capital-flight.pdf>>

⁷² Ndikumana, L., and Boyce J. K. "Public debts and private assets: explaining capital flight from Sub-Saharan African countries." *World Development* 31.1 (2003): 107-130.

⁷³ Ndikumana, L. "Capital Flight from Sub-Saharan Africa: Linkages ... - PERI." 2011. <http://www.peri.umass.edu/fileadmin/pdf/ADP/Capital_flight_from_sub-Saharan_Africa_linkages_with_external_borrowing.pdf>

⁷⁴ IMF, 2015 "Regional Economic Outlook: Sub-Saharan Africa; April ... - IMF." 2015. 19 Nov. 2015 <<https://www.imf.org/external/pubs/ft/reo/2015/afr/eng/pdf/sreo0415.pdf>>

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Nigeria to be approximately \$8 billion and \$41 billion respectively between 2001 and 2010.⁷⁵

It is interesting to note that illicit financial flows from Ghana alone in the 2001-2010 period represents approximately a sixth of Ghana's 2014 GDP of \$38.65 billion.⁷⁶ Similarly, Nigeria's capital flight has been estimated by Ajilore (2010) to constitute nearly 6.5% of GDP per annum on average between 1970 and 2010.⁷⁷ For 2004, Ndikumana et al estimate that capital flight from Nigeria and Ghana constituted 230% and 98.7% of their GDPs respectively.

Though these figures are alarming, it is important to note that these estimates are possibly understated.⁷⁸ The non-rigorous nature of checks and balances in countries like Ghana makes room for underreporting of data pertaining to capital flight.⁷⁹ Evidently, the problem of increasing capital flight needs to be seriously addressed by Ghana and Nigeria.

⁷⁵ UNECA, 2014 "High Level Panel on Illicit Financial Flows | United Nations ..." 2014. 19 Nov. 2015 <<http://www.uneca.org/iff>>

⁷⁶ World Bank.org, 2015 "Ghana Home - World Bank." 2015. 16 Dec. 2015 <<http://www.worldbank.org/en/country/ghana>>

⁷⁷ Ajilore, T. O. "An economic analysis of capital flight from Nigeria." *International Journal of Economics and Finance* 2.4 (2010): p89.

⁷⁸ "Reports « Global Financial Integrity." 2014. 17 Dec. 2015 <<http://www.gfintegrity.org/reports/>>

⁷⁹ "Global Financial Integrity." 2011. 17 Dec. 2015 <<http://www.gfintegrity.org/>>

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Proposed measures and policies for tackling capital flight

The Service Centre for Development Cooperation released a report in 2011 that discussed whether developing countries should focus on taxing multinationals or leveraging their presence for development cooperation. The authors favoured taxation income because it is more steady and predictable. However, a creative approach to mandatory development cooperation may yield better results in both tangible and intangible value addition to the economies of Nigeria and Ghana.

The Nobel laureate Joseph Stiglitz has proposed an interesting solution to capital flight by MNC's. He is advocating for taxing multinationals' global profits and distributing the revenue proportionately according to each country's contribution to global profits.⁸⁰

This proposal seems promising considering the fact that MNCs operating in Africa are determined to avoid taxes by any means possible. The introduction of global profit taxation could return more tax revenue to Nigeria and Ghana than they currently receive once the procedural problems associated with its implementation are overcome.

According to Moshi (2014), institutional frameworks and measures for tackling capital flight exist on the country, regional and global levels. However, the lack of political will, incomprehensive legislation, persistence of secrecy havens like Switzerland and weak enforcement capacities hinder their effectiveness.⁸¹

He identifies greater monitoring of international banks and the offshore financial activities as a solution to the capital flight problem. This will help reduce the amount of

⁸⁰ IMF, 2013 "Capital Flight Risk - Finance & Development, September 2013." 2013. 19 Nov. 2015
<<http://www.imf.org/external/pubs/ft/fandd/2013/09/Arezki.htm>>

⁸¹ Moshi, P.B, 2014 "African Economic Research Consortium - Capital flight ..." 2014. 19 Nov. 2015
<http://aercafrica.org/index.php/publications/view_document/357-capital-flight-and-institutional-frameworks-to-promote-transparency>

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flight capital channelled through international banks. In order to do this, global collaboration is required to regulate financial institutions in famous capital flight destinations such as Switzerland and Cayman Islands.⁸²

On the other hand, Heggstad & Fjeldstad (2010) opine that African governments are unlikely to strictly enforce any international banking regulations that might reduce capital flight significantly. This is because international banks double as the channel through which the African political elite export the proceeds of their corrupt activities. The solution they propose is mandatory international disclosure on financial assets held abroad by politically exposed persons (PEPs) in Africa.⁸³

Moshi (2014) asserts that African governments are aware of the methods and magnitude of capital flight attributable to MNCs. However, due to their lack of market intelligence and technical/financial resources, they often cannot prove tax evasion. Their inability to accurately determine the tax liabilities of multinationals renders them impotent. Accordingly, he suggests that this can be remedied if advanced development partners offer technical assistance to African governments.⁸⁴

Heggstad & Fjeldstad (2010) identify that the cash-based economies of African countries coupled with their large informal sectors creates the perfect conditions for capital flight courtesy of crime to flourish. Hence, they suggest minimizing the informal

⁸² Moshi, P.B. 2014 "Capital Flight and Institutional Frameworks to Promote Transparency." *Capital Flight from Africa: Causes, Effects, and Policy Issues* (2014): 366.

⁸³ Heggstad, K., and Fjeldstad O. "How banks assist capital flight from Africa. A literature review." *CMI Report* 6 (2010).

⁸⁴ Moshi, P.B, 2014 "African Economic Research Consortium - Capital flight ..." 2014. 19 Nov. 2015 <http://aercafrica.org/index.php/publications/view_document/357-capital-flight-and-institutional-frameworks-to-promote-transparency>

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sector and promoting cashless economies to reduce capital flight from criminal organizations⁸⁵.

To sum up, capital flight control measures that have been proposed in the literature reviewed include: strengthening regulations governing MNCs and domestic financial institutions; reinforcement of checks and balances to minimize public sector corruption; active pursuit of sound macroeconomic policies and concerted effort to monitor criminal organizations with international operations. Moving forward, it is imperative that countries like Nigeria that experience significant capital flight collaborate with stakeholders to generate creative means of strengthening measures to curb capital flight.

A Discussion of Methods Employed by Previous Literature in Determining the Relationship between Capital Flight and Economic Growth

The World Bank's residual method is the most widely used measure of capital flight in the literature reviewed. Researchers that have employed this method in estimating capital flight include Collier et al. (2001), Ndikumana (2012, 2014) and Ayadi (2013) to name a few.

The residual method basically involves subtraction of the uses of capital inflows from the value of capital inflows to derive the value of capital that is unaccounted for. This is what is termed capital flight.⁸⁶

⁸⁵ Heggstad, K., and Fjeldstad, O. "How banks assist capital flight from Africa. A literature review." *CMI Report* 6 (2010).

⁸⁶ Ndikumana, L. "Measurement of Capital Flight - Political Economy Research ..." 2010. http://www.peri.umass.edu/fileadmin/pdf/ADP/Measurement_of_Capital_Flight_Methodology_and_Results_for_Sub-Saharan_01.pdf

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The sources of funds used in this method are mainly external debt and net FDI inflows.⁸⁷ The uses of funds include additions to foreign reserves and current account deficits.⁸⁸ With the exception of researchers like Ndikumana et al (2014) who adjusted for imputed interest, all computations were done using data provided in the World Bank Debt Tables and the IMF's Balance of Payment Statistics tables. OLS method is also widely used in the literature to investigate the relationship between economic growth and capital flight.

⁸⁷ Ayadi, F. S. "Econometric analysis of capital flight in developing countries: A study of Nigeria." *8th Global Conference on Business & Economics, Florence, Italy. October* Oct. 2008.

⁸⁸ Ndikumana, L. "Measurement of Capital Flight - Political Economy Research ..." 2010.
<http://www.peri.umass.edu/fileadmin/pdf/ADP/Measurement_of_Capital_Flight_Methodology_and_Results_for_Sub-Saharan_01.pdf>

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CHAPTER 3: METHODOLOGY

Overview of the Methods Section

The fundamental research question this study attempted to answer is what effect capital flight has on the development of the economies of Ghana and Nigeria. To that end the objectives established were to:

- i. Determine the extent/magnitude of annual capital flight from Ghana and Nigeria
- ii. Analyse and compare the impact of capital flight on economic development in Ghana and Nigeria
- iii. Identify the means by which existing measures of controlling capital flight can be made more effective in Ghana and Nigeria.

Chapter 3 (methodology) outlines how these research objectives were achieved. It comprises the Research Scope, the Research Design, a Description of the models and data used, Description of the Sample, Sample Size and Sampling Procedure, Sources of Data, Data Collection & Data Preparation, Data Analysis, Limitations of the research and Ethical Considerations.

Research Scope

Due to the fact that capital flight mainly affects developing countries, the geographical focus of this research is sub-Saharan Africa. The choice of the sample area was informed by the fact that capital flight in SSA has received significantly less scholarly attention as compared to other developing regions such as Latin America and

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Asia.⁸⁹ The population of this study is all sub-Saharan African countries for which data relating to capital flight and economic development is available.

The research sample in this study comprises the West African countries of Nigeria and Ghana only. These are the dominant economies in West Africa. They are both Anglophone and they have a similar economic structure although Nigeria's economy is much larger than that of Ghana. This study focused on data for both countries for the 1990-2014 periods. Data pertaining to capital flight as well as the various indicators of economic development for Nigeria and Ghana is available for 1990-2014. Also, recent periods of economic growth in Nigeria and Ghana have occurred within this 25-year interval.

Research Design

A research design refers to the overall strategy used to integrate the different components of the research. This ensures that each research problem is effectively addressed.⁹⁰ The design constitutes the blueprint for the collection, measurement and analysis of data.⁹¹ Commonly used designs in quantitative research include descriptive research design, correlational research design, quasi-experimental research design and experimental research design.⁹²

This study employed a mix of correlational and explanatory research design. This is because the key objective in this research was to determine and explain the extent of

⁸⁹ Ajilore, T. O. "An economic analysis of capital flight from Nigeria." *International Journal of Economics and Finance* 2.4 (2010): p89.

⁹⁰ Labaree, R. "Types of Research Designs - Organizing Your Social ..." 2013.
<<http://libguides.usc.edu/writingguide/researchdesigns>>

⁹¹ Labaree, R. "Types of Research Designs - Organizing Your Social ..." 2013.
<<http://libguides.usc.edu/writingguide/researchdesigns>>

⁹² New York University, 2014 "What is research design? 1." 2014. 24 Dec. 2015
<<https://www.nyu.edu/classes/bkg/methods/005847ch1.pdf>>

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the relationship between two variables (capital flight and economic development) using statistical data.

Correlational studies allow researchers to determine the relationship between two or more variables using statistical data and to interpret the relationship.⁹³ In correlational research such as this study, the variables are only identified and studied as they occur in a natural setting without manipulation of any kind.⁹⁴ The case study approach is used in this research mainly for its simplicity and the fact that it allows a richer analysis of a particular phenomenon such as capital flight.

A Description of Models and Data Used

The statistical model that was employed in this study is the Multiple Linear Regression (MLR) model. The MLR is typically used to model the linear relationship between a dependent variable and one or more independent variables. The dependent or explained variable is sometimes also called the predictand, and the independent variables are also known as the explanatory variables, the covariates or the predictors.⁹⁵

In this study, the dependent variable (Y) is economic development while the independent variable of interest (X_1) is the estimated annual capital flight.

The Multiple Linear Regression (MLR) method was used to determine the relationship between capital flight and economic development. The mathematical formula for the MLR model is:

⁹³ Encyclopedia.com, 2007 "Research design – Dictionary definition of research design ..." 24 Dec. 2015
<<http://www.encyclopedia.com/doc/1O88-researchdesign.html>>

⁹⁴ New York University, 2014 "What is research design? 1." 2014. 24 Dec. 2015
<<https://www.nyu.edu/classes/bkg/methods/005847ch1.pdf>>

⁹⁵ Kanen, J.T "The linear regression model." 2011. 7 Jan. 2016
<<https://catalogue.polytechnique.fr/site.php?id=289&fileid=4318>>

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$$Y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 \dots \beta_k x_k + u_i^{96}$$

Where Y_i is the dependent variable, u_i represents the error term, and β_0 and $\beta_1, \beta_2, \dots, \beta_k$ are unknown constants. Here, β_1 represents the slope estimate which will measure the effect of capital flight (x_1) on economic development (Y_i).

The five assumptions of the MLR model are:

1. MLR1-Linearity in Parameters: The model in the population can be written as:

$$Y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 \dots \beta_k x_k + u_i$$

Where 0, 1, ..., k are the unknown parameters (constants) of interest and u_i is an unobservable random error or disturbance term.⁹⁷

2. MLR2-Random Sampling: The sample is a random one of n observations $\{(x_{i1}, x_{i2}, \dots, x_{ik}, y_i) : i = 1, 2, \dots, n\}$ which follows the population model in assumption MLR 1 above.⁹⁸

3. MLR3-No Perfect Collinearity: In the sample (and therefore in the population), none of the independent variables is constant and there are no exact linear relationships among the independent variables.⁹⁹

4. MLR4-Zero Conditional Mean: The error term (u) has an expected value of zero given any values of the independent variables. Such that:

$$E(u|x_1, x_2, \dots, x_k) = 0^{100}$$

⁹⁶ Kanen, J.T "The linear regression model." 2011. 7 Jan. 2016
<<https://catalogue.polytechnique.fr/site.php?id=289&fileid=4318>>

⁹⁷ Kanen, J.T "The linear regression model." 2011. 7 Jan. 2016
<<https://catalogue.polytechnique.fr/site.php?id=289&fileid=4318>>

⁹⁸ Kanen, J.T "The linear regression model." 2011. 7 Jan. 2016
<<https://catalogue.polytechnique.fr/site.php?id=289&fileid=4318>>

⁹⁹ Kanen, J.T "The linear regression model." 2011. 7 Jan. 2016
<<https://catalogue.polytechnique.fr/site.php?id=289&fileid=4318>>

¹⁰⁰ Kanen, J.T "The linear regression model." 2011. 7 Jan. 2016
<<https://catalogue.polytechnique.fr/site.php?id=289&fileid=4318>>

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5. MLR5-Homoskedasticity: The error term (u) has the same variance given any values of the explanatory variables. Such that:

$$Var(u|x_1, x_2, \dots, x_k) = \sigma^2^{101}$$

The OLS estimator is the most desirable one in this context because it is the best linear unbiased estimator in the class of competing estimators. The justifications for using OLS in this study include the fact that its estimators are unbiased given that assumptions MLR 1 through MLR 4 hold for the data used in the regression, as is the case in this research.

More importantly, OLS employs the Gauss-Markov Theorem which states that among all linear and unbiased estimators the OLS is the most efficient since it has the smallest variance. As such, OLS guarantees the highest efficiency in the class of linear unbiased estimators.

In this research, annual capital flight (the independent variable) for Ghana and Nigeria was estimated using the World Bank's residual method. The residual method involves subtracting the uses of foreign exchange (as captured in the IMF's Balance-of-payment (BoP) tables) from the inflows of foreign exchange (as captured by the World Bank's Debt tables)¹⁰². The difference between foreign exchange inflows and recorded outflows of foreign exchange represents capital flight¹⁰³.

¹⁰¹ Kanen, J.T "The linear regression model." 2011. 7 Jan. 2016
<<https://catalogue.polytechnique.fr/site.php?id=289&fileid=4318>>

¹⁰² World Bank, 2010 "Methodologies | Data - The World Bank." 29 Mar. 2016
<<http://data.worldbank.org/about/data-overview/methodologies>>

¹⁰³ World Bank, 2010 "Methodologies | Data - The World Bank." 29 Mar. 2016
<<http://data.worldbank.org/about/data-overview/methodologies>>

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The mathematical formula representing the residual method for capital flight is provided below. In this study, capital flight (KF) is defined as the remainder when recorded foreign exchange outflows are subtracted from total capital inflows. Therefore, for a country i , in a given year t capital flight (KF) is computed as:

$$KF_{it} = \Delta DEBTADJ_{it} + DFI_{it} - (CA_{it} + \Delta RES_{it})^{104}$$

Where $\Delta DEBTADJ$ stands for the change in total outstanding external debt, DFI represents net direct foreign investment, CA refers to the current account deficit and ΔRES stands for net additions to foreign reserves¹⁰⁵. The World Bank's Debt Tables and the IMF's Balance of Payment Statistics contain annual computations of variables such as total external debt, net FDI, the current account deficit and net additions to foreign reserves.

Economic development which is the dependent variable in this research was operationalized such that indicators for economic development include: HDI scores, real GDP per capita growth, national unemployment rates and poverty rates.

According to Dudley Seers, the main goal of economic development is the reduction of poverty, unemployment and inequality.¹⁰⁶ Recently, Nobel laureate Amartya Sen redefined economic development to be the continuous pursuit of increasing freedoms and the reduction of deprivation.¹⁰⁷

¹⁰⁴ World Bank, 2010 "Methodologies | Data - The World Bank." .29 Mar. 2016
<<http://data.worldbank.org/about/data-overview/methodologies>>

¹⁰⁵ World Bank, 2010 "Methodologies | Data - The World Bank." 2010. 29 Mar. 2016
<<http://data.worldbank.org/about/data-overview/methodologies>>

¹⁰⁶ Seers, Dudley. "The birth, life and death of development economics." *Development and Change* 10.4 (1979): 707-719.

¹⁰⁷ Evans, Peter. "Collective capabilities, culture, and Amartya Sen's Development as Freedom." *Studies in comparative international development* 37.2 (2002): 54-60.

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The development metrics proposed by Sen are the components of the human development index (HDI). Thus, in addition to HDI scores, GDP per capita growth, national poverty and unemployment are used in this research because they are good measures of the general well-being of citizens.¹⁰⁸ These four measures of economic development are computed by the United Nations and the World Bank. In addition, annual unemployment and poverty data is also computed by the Ghana Statistical Service and Nigeria's National Bureau of Statistics.

A Description of the Sample, Data Range, Sample Size and Sampling Procedure

The sample consists of two countries namely Ghana and Nigeria. This is because given the size of the population (54 countries), a subjective decision was made to select two countries that are homogenous in some respects yet divergent with regard to the variables of interest in this study. Though Ghana and Nigeria are the two biggest West African economies and share similar colonial and postcolonial political history, annual capital flight in Nigeria is about five times that of Ghana. Although the choice of countries (Ghana and Nigeria) in the case study is clearly purposive and so non-random, for reasonable OLS estimates the data for each of the two countries is fairly random.

A cursory look at the HDI scores of both countries reveals that while Ghana's scores have been improving steadily, Nigeria's HDI scores appear to have improved at a much slower rate.

¹⁰⁸Wayne Nafziger "From Seers to Sen: The Meaning of Economic Development." 2007. 29 Mar. 2016
<<http://www.rrojasdatabank.info/widerconf/Nafziger.pdf>>

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Nigeria and Ghana are the two biggest West African economies with estimated GDP of \$569 billion and \$38.65 billion respectively¹⁰⁹. Annual capital flight from Ghana is estimated to be \$4.8 billion whereas that of Nigeria is estimated to be \$30 billion¹¹⁰. Average HDI score for Ghana (2000-2010) is 0.54 while Nigeria's average HDI score in the same period is 0.48.¹¹¹ For each country, data used spans 1990-2014 giving a sample size of 25.

The choice of countries (Ghana and Nigeria) in the case study is purposive hence non-random. However for reasonable OLS estimates the data for each of the two countries is fairly random.

Sources of Data, Data Collection & Data Preparation

The data used in this study is mainly secondary time series data. The major sources of data are the World Bank, IMF, United Nations Human Development Reports (1989-2015).

Other sources of data are Ghana Statistical Service, National Bureau of Statistics for Nigeria, Global Financial Integrity report (2015) and Mbeki Panel Report on Illicit Financial Flows (2015).

The data is organized into tables and representative charts and graphs for analysis and interpretation. The main method of data collection was internet research mostly via the official websites of the World Bank, IMF, UN, Ghana Statistical Service and Nigeria's National Bureau of Statistics among other minor sources.

¹⁰⁹ World Development Indicators, 2015 "Nigeria | Data." 2015. 24 Dec. 2015
<<http://data.worldbank.org/country/nigeria>>

¹¹⁰ "Reports « Global Financial Integrity." 2014. 24 Dec. 2015 <<http://www.gfintegrity.org/reports/>>

¹¹¹ World Bank Group, 2012. *World development indicators 2012*. World Bank Publications, 2012.

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Data Analysis

The data sets that were analysed in this study include HDI scores, national unemployment statistics, real GDP per capita growth rates, national poverty statistics, as well as computed capital flight estimates for Ghana and Nigeria (1990-2014). The main statistical tool that was used to determine the nature of the relationship between capital flight and economic development indicators is multiple linear regression/ordinary least squares method (OLS) method.

Reliability and Validity

Reliability, in simple terms represents the repeatability and consistency of a test/experiment¹¹². Research validity also refers to the how strong the results of a test/experiment are and whether they can be regarded as accurately describing the real world¹¹³.

The fact that data used in this study has undergone very little transformation makes the reliability of the results high. Similarly, the reliability is improved by the sample choice. This is because the two countries used in the research record different magnitudes of capital flight. Thus, if capital flight is found to have a significant effect on economic development in both countries then it reinforces the reliability and generalizability of the results in this study.

Further, to improve the validity of the findings, specification tests (such as tests of heteroskedasticity and multicollinearity) were carried out using STATA and any

¹¹² Phelan,C. 2014"Validity and Reliability - How to Know if the Research is ..." 2014. 24 Dec. 2015
<<https://explorable.com/validity-and-reliability>>

¹¹³Phelan C.,2014"Validity and Reliability - How to Know if the Research is ..." 2014. 24 Dec. 2015
<<https://explorable.com/validity-and-reliability>>

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problems dealt with. The use of OLS regression model lends credence to the validity of the results as well. This is because OLS estimates are considered to be the best linear unbiased estimators.

No OLS assumption was violated in carrying out this study as heteroskedasticity, normality, multicollinearity and endogeneity were tested for. Thus, the results presented are reliable and valid.

Limitations

Major limitations of this study include the non-availability and inaccessibility of the relevant data for some years. This limitation was especially strong as data such as national poverty statistics are computed on an interval basis (every 6 years) instead of an annual basis. The lack of data for some years resulted in the use of only 25 observations in the study. This may have compromised the significance of the regression results obtained.

Another limitation is the fact that the data available may be insufficient in explaining some of the more complex issues as well as the context of the phenomenon of capital flight. Finally, the use of the case study approach as well as purposive sampling technique may lead to difficulty in disproving researcher bias in this study.

Ethical Considerations

Note that this research involved analysis of publicly available secondary data not primary data. There were few ethical issues to resolve as the research did not employ

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human subjects. The major potential ethical considerations in this study include reporting only favourable /significant results, editing and fabricating data as well as using inappropriate statistical tests. To overcome these potential ethical challenges, the data that is used in this research is unedited and easily verifiable from their cited sources.

The regressions are easily replicable and regression outputs are included as appendices. Also, only imputed data generated using SPSS multiple imputation and deletion (MID) is included in computations for years for which data was unavailable.

Further, this study presents all findings (both contradictory and expected) as they are without embellishment or omission. In addition, the research was submitted to Ashesi University's Institutional Review Board who duly assessed the validity of the research methodology and procedures used.

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CHAPTER 4: DISCUSSION OF RESULTS

Extent and Magnitude of Capital Flight in Nigeria and Ghana

Annual capital flight estimates for Nigeria and Ghana over the 25-year period (1990-2014) are presented in Table 5 of the appendix. A cursory glance at Table 3 reveals Nigeria's capital flight estimates are larger than that of Ghana. This is consistent with expectation as Nigeria's economy is bigger.

On average, annual capital flight from Nigeria is \$12.7 billion while annual capital flight for Ghana is \$2.9 billion. For Nigeria, annual capital flight increases consistently from 2011 to 2014 whereas capital flight in Ghana falls from a record high \$12.4 billion in 2013 to \$9.5 billion 2014. The onset of the exchange rate crisis that peaked in 2014 might have been the main trigger behind the all-time high capital flight estimate of \$12.4 billion in 2013. Capital flight may have fallen to \$9.5 billion as a result of the central bank's intervention via the introduction of restrictive regulations on forex transactions.

A combined capital flight estimate for the sample in the period (1990-2014) is presented in Table 4. From Table 4, the minimum and maximum combined capital flight estimates are -\$20.4 billion in 1997 and \$44.9 billion in 2008 respectively. The negative capital flight figure recorded for 1997 suggests that recorded uses of foreign exchange for the sample exceeded official foreign exchange inflows. Cumulative capital flight from both countries (1990-2014) is estimated to be \$391 billion.

Estimates for capital flight per capita in Nigeria and Ghana is captured in Table 5. Although Nigeria's capital flight in absolute terms is larger than that of Ghana, per capita values in Table 5 indicate that capital flight might be a bigger concern for Ghana than

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Nigeria. This is because capital flight per capita for Ghana 2010-2014 is more than twice the estimated values for Nigeria and appears to be increasing at an increasing rate. Table 5 shows capital flight per capita for both Nigeria and Ghana fluctuating over time until 2011 when it increases year-on-year thereafter. From 1990 to 2014, the mean capital flight per capita was \$89.12 and \$125.35 for Nigeria and Ghana respectively.

Table 6 presents net FDI for the two countries in volume and as a percentage of annual capital flight figures. FDI for Nigeria exceeded annual capital flight in only two out of the 25 years under consideration, in 1994 and 2000. For Ghana, FDI exceeded annual capital flight in 2004 only. Evidently, for the most part Nigeria and Ghana lose more capital annually than they attract from foreign investors.

The value of net external assets (accumulated capital flight -accumulated external debt) for Ghana is approximately -\$182 billion. For Nigeria, net external assets computed over the 25-year period stands at -\$343 billion. Thus, it can be concluded that both Ghana and Nigeria are net borrowers from the rest of the world.

Capital Flight & Economic Development

Discussion of Economic Development Indicators

Table 7 in the appendix contains Human Development Index scores for Ghana and Nigeria from 1990 to 2014. The HDI scores for Ghana as shown in Table 7 indicate that economic development has improved significantly from 0.39 in 1990 to 0.58 in 2014.

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For Nigeria, economic development has increased from 0.246 in 1990 to 0.514 in 2014.

The mean HDI for Nigeria and Ghana over the period is 0.44 and 0.49 respectively.

Table 8 and Table 9 in the appendix present data on national poverty rates for Nigeria and Ghana spanning 1990-2014. From Table 9, it is shown that the national poverty rate in Ghana has fallen drastically from 56.5% in 1992 to 24.2% in 2012. On the contrary, Nigeria's national poverty rate has increased by 18.2 percentage points from 42.7% in 1992 to 60.9% in 2012. Table 10 in the appendix indicates that while Ghana's unemployment rate ranges from 1.8% to 10.4% over the period, Nigeria's unemployment rate has remained fairly stable ranging from 7.4% to 7.7%.

Analysis of Multiple Linear Regression Results

Capital flight & Economic development in Ghana

Table 1

OLS Estimates of the Effect of Capital Flight on Economic Development Indicators

Dependent Variable	HDI Score	Poverty Rate	Unemployment Rate	GDP per capita Growth Rate
Coefficient of Capital Flight	0.00002 (0.000007)	-0.0015 (0.000575)	-0.00003 (0.00016)	0.00006 (0.00002)
No. of observations	25	25	25	25
Adjusted R^2	0.39	0.41	0.19	0.97
P-value	0.006	0.013	0.05	0.04

Source: Researcher's computations

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The results reported in Table 1 above shows statistically significant relationships between capital flight and all four development indicators. The results suggest that capital flight impacts Ghana's economic development positively for the 1990-2014 periods. Thus, the null hypothesis $H_0: \beta_{KF} = 0$ is rejected using HDI score, poverty rate, unemployment rate and GDP per capita growth rate as indicators of economic development in Ghana.

Regressing Ghana's HDI score on capital flight, adult literacy rate, tertiary enrolment rate, life expectancy and GDP per capita, capital flight appears to have a positive effect on economic development.

Capital Flight & Economic Development in Nigeria

Table 2

OLS Estimates of the Effect of Capital Flight on Economic Development Indicators

Dependent Variable	HDI Score	Poverty Rate	Unemployment Rate	GDP per capita Growth Rate
Coefficient of Capital Flight	-0.000005 (0.000002)	-0.00015 (0.0001)	-0.000005 (0.000003)	-0.0003 (0.0002)
No. of observations	25	25	25	25
Adjusted R^2	0.37	0.008	0.41	0.19
P-value	0.03	0.22	0.08	0.09

Source: Researcher's computations

The table reveals a negative and statistically significant relationship between capital flight and HDI scores at a 5% significance level. Thus, the null hypothesis

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$H_0 : \beta_{KF} = 0$ is rejected when HDI is used as a measure of economic development in Nigeria. The relationships between capital flight and GDP per capita growth rate and unemployment rate are statistically insignificant at a 5% significance level. However, at a 10% significance level the null hypothesis $H_0 : \beta_{KF} = 0$ is rejected when unemployment and GDP per capita growth are used as indicators of economic development in Nigeria. The relationship between poverty rate and capital flight is insignificant at all levels hence the null hypothesis $H_0 : \beta_{KF} = 0$ is accepted using poverty as a proxy for development in Nigeria

Capital flight in Nigeria appears to have weak statistical significance regarding two of the four development indicators (unemployment rate and real GDP per capita growth rate) in Nigeria. The impact of capital flight on Nigeria's HDI score (the most important development indicator) is significant and strong.

Economic Significance of Regression Results

The slope coefficients obtained from regressions run on Ghana's economic development indicators are -0.00003, 0.00002, -0.0015 and 0.00006. This indicates that ceteris paribus, if Ghana's capital flight increases by \$1 billion, HDI score and real GDP per capita growth rate can be expected to rise by 0.02 and 0.06% respectively. The poverty rate and unemployment rate can be expected to fall by 1.5% and 0.03% if capital flight increases by \$1 billion and vice versa.

The slope coefficients derived from regressions run on Nigeria's economic development indicators are -0.000005, -0.000005, -0.00015 and -0.0003. This implies that ceteris paribus, if Nigeria's capital flight increases by \$1 billion unemployment rate, HDI

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score, GDP per capita growth rate and poverty rate can be expected to fall by 0.005%, 0.005, -0.03% and 0.15% respectively.

Thus, for the sample the incidence of capital flight appears to impact poverty and unemployment positively. The impact of capital flight on HDI score and GDP per capita growth is favourable for Ghana whereas it is unfavourable for Nigeria.

It is important to note once again that five out of the eight slope coefficients interpreted above are significant at 5% significance level; another two are significant only at 10% significance level. Hence, one may conclude from the mixed nature of the results that on the whole, the magnitude of capital flight may play a big role in determining its impact on development and not the mere incidence of capital flight per se.

Comparison of Regression Results for the Sample

The effect of capital flight on economic development as measured by HDI score and GDP per capita growth rate is contradictory for the sample. In Nigeria, a \$1billion increase in capital flight decreases HDI score and GDP per capita growth rate by 0.005 and 0.3% respectively. On the other hand, a \$1billion increase in capital flight results in an increase of 0.02 and 0.06% in Ghana's HDI score and GDP per capita growth rate. The results for Nigeria are consistent with expectations from a theoretical standpoint. In that, capital flight directly subtracts from capital stock leading to inhibited economic growth which in turn retards development. However, the positive effect of capital flight on Ghana's HDI score and GDP per capita growth raises some questions.

The regression results indicate that national poverty rate and unemployment rate are favourably affected by capital flight for the sample. In that, a \$1billion increase in capital flight is expected to reduce poverty by 1.5% and 0.15% in Ghana and Nigeria

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respectively. Likewise, a \$1billion increase in capital flight is expected to decrease unemployment in Ghana and Nigeria by 0.3% and 0.005% respectively. This contradicts economic theory and is implausible for Nigeria especially given the negative effect that capital flight has on HDI core and GDP per capita growth rate.

Among the four indicators used as proxies for economic development, the Human Development Index score is the most representative of the true state of well-being of citizens. As a result, the relationship between capital flight and HDI score is paramount to all others explored in this study. For Nigeria, the relationship between HDI score and capital flight is negative and statistically significant. For Ghana on the other hand, the relationship between HDI score and capital flight is positive and also statistically significant.

From Table 5 in the appendix, capital flight per capita for Ghana is more than double that of Nigeria. Thus, capital flight should impact Ghana's HDI score more negatively than it does Nigeria's HDI score all things being equal, yet the opposite is true. In addition, capital flight appears to have a favourable effect on all other development indicators (poverty, unemployment and GDP per capita growth) for Ghana. This may suggest that the incidence of capital flight per se is not to blame for Nigeria's inability to translate economic growth into economic development. Rather, it may very well be the case that once capital flight crosses a certain threshold it begins to impact economic development negatively as in Nigeria's case.

Existing National Policies and the Way Forward

According to Ghana's Public Office Holders Act (Act 550) which was promulgated in 1998, all public-office holders are required to declare their assets before

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taking office, at the end of every four years and at the end of their term in office¹¹⁴. Currently, both Ghana and Nigeria constitutionally require public officers to declare their assets before, during and after their terms in office¹¹⁵. Regrettably, neither the Nigerian nor the Ghanaian public has access to the contents of the asset declaration forms. Thus, the declaration of assets appears to be a self-defeating exercise. This is because, politically exposed persons in Africa innovate means of disguising the ownership of the assets that they acquire with appropriated state funds. Thus, failure to disclose to the public the assets of public office holders prevents citizens who may have information on assets acquired during politicians' terms in office from coming forward.

At the same time, the regulatory institutions responsible for checking public sector corruption comprise individuals appointed by the president in both Nigeria and Ghana.¹¹⁶ Evidently, this results in conflict of interest on the part of those entrusted with preventing/investigating public sector corruption. Anti-corruption institutions such as Ghana's Commission on Human Rights and Administrative Justice (CHRAJ) and Nigeria's Economic and Financial Crimes Commission need to be empowered with total independence¹¹⁷. This would align the interests of the public and anti-corruption officers. Surely, there is much to be gained from amending existing laws on asset declaration and the appointment of anti-corruption officers. This will help foster transparency and reduce capital flight resulting from public sector corruption.

¹¹⁴ "THE 1992 CONSTITUTION OF THE REPUBLIC OF GHANA - Public Office Holders Act (ACT 550) ..." 2008. 29 Mar. 2016 <http://www.judicial.gov.gh/constitution/chapter/chap_3.htm>

¹¹⁵ Federal Government of Nigeria, 1999 "Nigeria - Code of Conduct for Public Officers." 2012. 29 Mar. 2016 <<http://unpan1.un.org/intradoc/groups/public/documents/aapam/unpan038432.pdf>>

¹¹⁶ CHRAJ 2012 "Human Rights - (CHRAJ) - GHANA." 2012. 1 Apr. 2016 <http://www.chrajghana.com/?page_id=43>

¹¹⁷ "Economic and Financial Crimes Commission - EFCC - Home." 2009. 1 Apr. 2016 <<https://efccnigeria.org/>>

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Secondly, the competition among developing countries to attract foreign direct investment at all costs has contributed to sometimes detrimental policies such as Ghana's Free Zones Act. Ghana's Free Zones Act (Act 540) seeks to encourage foreign investment by granting firms in the free zones enclave a 10-year tax exemption. In addition, firms covered by the Free Zones Act pay only 8% income tax instead of the flat 25% corporate tax rate after the 10 years have elapsed¹¹⁸. At the moment, there are several instances of foreign-owned businesses that shut down their operations in Ghana immediately they reach the 10 year tax-free mark only to re-register for a business licence using a different name. Their sole intention is to avoid taxes ad infinitum. As such, it is imperative for African governments to closely monitor the financial conduct of MNCs to seal off the numerous loopholes that facilitate capital flight. Alternatively, Ghana and Nigeria should innovate means by which the contributions of MNCs to development can be made more effective. For instance, instead of MNCs paying direct taxes to the IRS, they could be tasked to undertake specific developmental projects in specified local communities.

In addition, the problem of trade misinvoicing takes its toll on the incidence of capital flight in Nigeria and Ghana. More effort must be directed toward enforcing checks and balances on the part of Nigeria's Federal Inland Revenue Service and Ghana Revenue Authority. Another contributing factor to capital flight is the problem of unrecorded remittances. There is the need for more strident customs controls at national borders and other entry points. This would go a long way in reducing the incidence of unrecorded remittances in both countries.

¹¹⁸ Parliament of Ghana, 2014 "Free Zones Act 504 - Publications | Parliament of Ghana." 2014. 29 Mar. 2016 <<http://www.parliament.gh/publications/37/141>>

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Also, there is the need to strengthen regulation in the financial sector. This is especially crucial where the prevention of crime and corruption related capital flight is concerned. Nigeria and Ghana should invest in modern software used for monitoring bank accounts in order to detect and track suspect transactions of PEPs and MNCs. In the same vein, the introduction of software for profiling potential terrorists and other criminals would also help to minimize crime-related capital flight.

At the moment, emerging non-bank financial platforms such as mobile money and online payment platforms merit scrutiny as potential channels for flight capital in Ghana and Nigeria. The capital flight risk associated with emerging financial technologies like mobile money is exacerbated by the fact that they are mostly run by large multinational networks such as MTN. It should be a matter of concern that MTN is playing a key role in financial technologies like mobile money in Ghana. This is because MTN, like any other multinational corporation is constantly seeking avenues (legal/illegal) to repatriate as much profit as possible. In fact, MTN has been recently investigated in at least 3 African countries including Ghana and Nigeria for transfer pricing¹¹⁹. Clearly, flight capital can be easily channelled through technologies like mobile money without detection if the perpetrators double as the operators of non-bank financial platforms.

There is the need for African countries to introduce and implement fiscal and monetary policies that diminish the frequency of large changes in exchange rates. This will help boost investor confidence. The governments of Nigeria and Ghana can also focus on generating tax revenue from sales and consumption taxes instead of profits and

¹¹⁹ Premium Times, 2015 "INVESTIGATION: How MTN ships billions abroad, paying less tax in ..." 2015. 29 Mar. 2016 <<http://www.premiumtimesng.com/investigationspecial-reports/192159-investigation-how-mtn-ships-billions-abroad-paying-less-tax-in-nigeria.html>>

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interest. This will go a long way to eliminate the motive behind practices such as transfer pricing that result in capital flight.

Further, African governments need to support their domestic financial markets and facilitate the introduction of a wide range of assets in order to reduce the attractiveness of foreign financial markets. Another means by which the problem of capital flight can be curtailed is diversification of exports. If countries like Nigeria and Ghana successfully diversify their economies such that traditional export commodities like crude oil and cocoa play a small role, exchange rate instability can be reduced significantly. This will help to reduce portfolio-choice inspired capital flight.

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CHAPTER 5: CONCLUSIONS

Countries such as Nigeria and Ghana cannot overcome the problem of capital flight without adjusting their current economic development strategy. They must focus on building indigenous entrepreneurs and improving their business climates in order to replace the FDI-based development model that they currently use. Judging by the results presented in Chapter 4 above, it may be argued that capital flight has a significant impact on economic development in both Nigeria and Ghana for the most part. Thus, it can be concluded that capital flight has a significant impact on economic development in African countries.

The results for Ghana seem to mirror the case of the Asian Tigers where increasing capital flight was accompanied by economic development. The difference, however lies in the fact that FDI in the sample countries does not outweigh annual capital flight unlike their Asian counterparts. Thus, this may be an indication that the proportion of capital flight attributable to MNCs in Nigeria and Ghana is smaller as compared to public sector corruption and crime. It is therefore worth investigating the proportions of annual capital flight attributable to MNCs, criminal activities and public-sector corruption in African countries as a topic for further research. The threshold above which capital flight begins to impede economic development also deserves attention in future research.

Capital flight is revealed to have a significant effect on economic development for Nigeria and Ghana. It is therefore important that African leaders strengthen their commitment to managing it. The successful management of capital flight will make available more capital to stimulate economic growth which in turn will provide more

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resources to be invested in education, healthcare, rule of law and freedom for citizens. In addition, countries like Nigeria must invest in reviewing and modifying the current policies they have in place that contribute to capital flight. Finally, there is the need to explore effective means by which African countries like Nigeria can allocate scarce financial resources to the crucial sectors like education and healthcare. This will ensure that economic growth translates into economic development for all citizens of African countries.

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Appendices

Table 3

Annual Capital Flight Estimates For Nigeria & Ghana (1990-2014)			
Nigeria		Ghana	
Year	Capital Flight (\$ millions)	Year	Capital Flight (\$ millions)
1990	9071.9	1990	873.4
1991	7660.7	1991	484.1
1992	8440.3	1992	861.3
1993	2622.5	1993	1064.3
1994	813.5	1994	996.7
1995	-918.9	1995	705.7
1996	1661.8	1996	592.4
1997	-3356.8	1997	1321
1998	-2030	1998	1524.9
1999	2170.9	1999	1308.1
2000	517.6	2000	622
2001	3356.5	2001	692.5
2002	2723.1	2002	1052.3
2003	13106.9	2003	-30.6
2004	9812.1	2004	94.9
2005	29263.4	2005	957.1
2006	24307.3	2006	-1548.8
2007	26908.4	2007	5015.5
2008	37990.8	2008	6896.9
2009	29029.3	2009	3594.8
2010	18454.6	2010	5949.4
2011	18735.2	2011	7993.8
2012	23038.8	2012	9572.7
2013	26544.9	2013	12442
2014	28260.1	2014	9593.4

Source: Researcher's computations

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Table 4

Combined Capital Flight Estimates for Nigeria & Ghana (1990-2014)	
Year	Combined Estimate (\$ millions)
1990	9945.3
1991	8144.8
1992	9301.6
1993	3686.8
1994	1810.2
1995	-213.2
1996	2254.2
1997	-2035.8
1998	-505.1
1999	3479
2000	1139.6
2001	4049
2002	3775.4
2003	13076.3
2004	9907
2005	30220.5
2006	22758.5
2007	31923.9
2008	44887.7
2009	32624.1
2010	24404
2011	26729
2012	32611.5
2013	38986.9
2014	37853.5

Source: Researcher's computations

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Table 5

Capital Flight Per Capita for Nigeria & Ghana (1990-2014)			
Nigeria		Ghana	
Year	Capital Flight per capita (\$)	Year	Capital Flight per capita (\$)
1990	100	1990	59.7
1991	82	1991	32.2
1992	88	1992	55.7
1993	27	1993	66.9
1994	8	1994	61
1995	-8	1995	42
1996	15	1996	34.5
1997	-30	1997	75.2
1998	-18	1998	84.9
1999	19	1999	71.2
2000	4	2000	33
2001	27	2001	35.9
2002	22	2002	53.2
2003	101	2003	-1.5
2004	74	2004	4.6
2005	215	2005	44.8
2006	174	2006	-70.6
2007	187	2007	222.6
2008	257	2008	298.4
2009	191	2009	151.7
2010	118	2010	245.2
2011	116	2011	322.1
2012	140	2012	377.3
2013	157	2013	475.6
2014	162	2014	358.1

Source: Researcher's computations

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Table 6

	Foreign Direct Investment for Nigeria & Ghana (1990-2014)			
	Nigeria		Ghana	
Year	Net FDI (\$millions)	FDI as % of Capital Flight	Net FDI (\$millions)	FDI as % of Capital Flight
1990	587.88	6.48%	14.80	1.69%
1991	712.37	9.30%	20.00	4.13%
1992	896.64	10.62%	22.50	2.61%
1993	1,345.37	51.30%	125.00	11.74%
1994	1,959.22	240.84%	233.00	23.38%
1995	1,079.27	-117.45%	106.50	15.09%
1996	1,593.46	95.89%	120.00	20.26%
1997	1,539.45	-45.86%	81.80	6.19%
1998	1,051.33	-51.79%	167.40	10.98%
1999	1,004.92	46.29%	243.70	18.63%
2000	1,140.14	220.27%	165.90	26.67%
2001	1,190.63	35.47%	89.32	12.90%
2002	1,874.04	68.82%	589.30	56.00%
2003	2,005.39	15.30%	136.75	-446.90%
2004	1,874.03	19.10%	139.27	146.75%
2005	4,982.53	17.03%	144.97	15.15%
2006	4,854.42	19.97%	636.01	-41.06%
2007	6,034.97	22.43%	1,383.18	27.58%
2008	8,196.61	21.58%	2,714.92	39.36%
2009	8,554.84	29.47%	2,372.54	66.00%
2010	6,026.23	32.65%	2,527.35	42.48%
2011	8,841.11	47.19%	3,222.24	40.31%
2012	7,069.93	30.69%	3,294.52	34.42%
2013	5,562.87	20.96%	3,227.00	25.94%
2014	4,655.85	16.47%	3,363.39	35.06%

Source: Researcher's computations

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Table 7

Human Development Index Scores for Nigeria & Ghana (1990-2014)			
Nigeria		Ghana	
Year	Score	Year	Score
1990	0.246	1990	0.399
1991	0.327	1991	0.382
1992	0.363	1992	0.37
1993	0.361	1993	0.395
1994	0.398	1994	0.41
1995	0.447	1995	0.524
1996	0.442	1996	0.483
1997	0.449	1997	0.39
1998	0.451	1998	0.49
1999	0.455	1999	0.542
2000	0.462	2000	0.548
2001	0.463	2001	0.567
2002	0.468	2002	0.568
2003	0.453	2003	0.52
2004	0.448	2004	0.532
2005	0.499	2005	0.553
2006	0.503	2006	0.518
2007	0.511	2007	0.526
2008	0.417	2008	0.453
2009	0.419	2009	0.467
2010	0.423	2010	0.554
2011	0.499	2011	0.566
2012	0.505	2012	0.572
2013	0.51	2013	0.577
2014	0.514	2014	0.579

Source: United Nations Human Development Reports (1989-2015)

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Table 8

National Poverty Rates for Nigeria (1990-2014)	
Year	Poverty Rate (%)
1992	42.7
1996	65.6
2000	59.7
2004	54.4
2008	46
2012	60.9

Source: National Bureau of Statistics for Nigeria (2016)

Table 9

National Poverty rates for Ghana (1990-2014)	
Year	Poverty Rate (%)
1992	56.5
1998	43.9
2005	31.9
2012	24.2

Source: Ghana Statistical Service (2016)

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Table 10

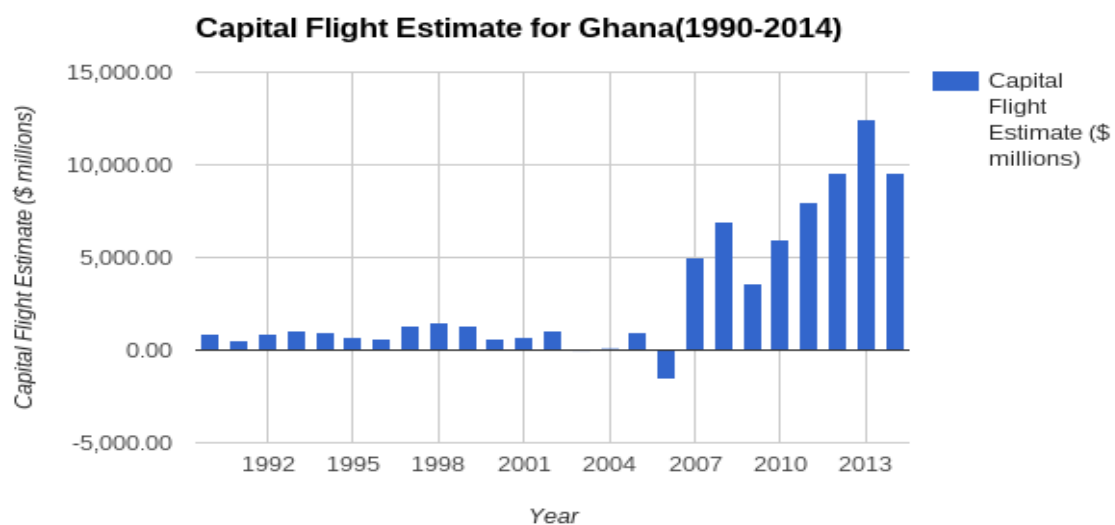
National Unemployment Rates for Nigeria & Ghana (1990-2014)			
Nigeria		Ghana	
Unemployment Rate (%)	Year	Unemployment Rate (%)	Year
7.4	1991	8.2	1991
7.4	1992	4.7	1992
7.4	1993	9.5	1993
7.4	1994	5.6	1994
7.5	1995	3.2	1995
7.5	1996	9.6	1996
7.5	1997	7.2	1997
7.5	1998	8.2	1998
7.5	1999	10.1	1999
7.6	2000	10.4	2000
7.6	2001	10	2001
7.7	2002	9.8	2002
7.6	2003	8.1	2003
7.7	2004	6.9	2004
7.6	2005	3.8	2005
7.6	2006	3.6	2006
7.6	2007	2.8	2007
7.6	2008	4.3	2008
7.6	2009	2.2	2009
7.6	2010	5.3	2010
7.6	2011	4.6	2011
7.5	2012	3.6	2012
7.5	2013	1.8	2013
7.5	2014	2.4	2014

Source: World Bank's World Economic Indicators (2016)

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List of Figures

Graphs of Capital Flight Estimates & Economic Development Indicators



*Figure 2.*Capital Flight Estimates for Ghana (1990-2014)

Source: Researcher's computations

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Figure 3. Capital Flight Estimates for Nigeria (1990-2014)

Source: Researcher's computations

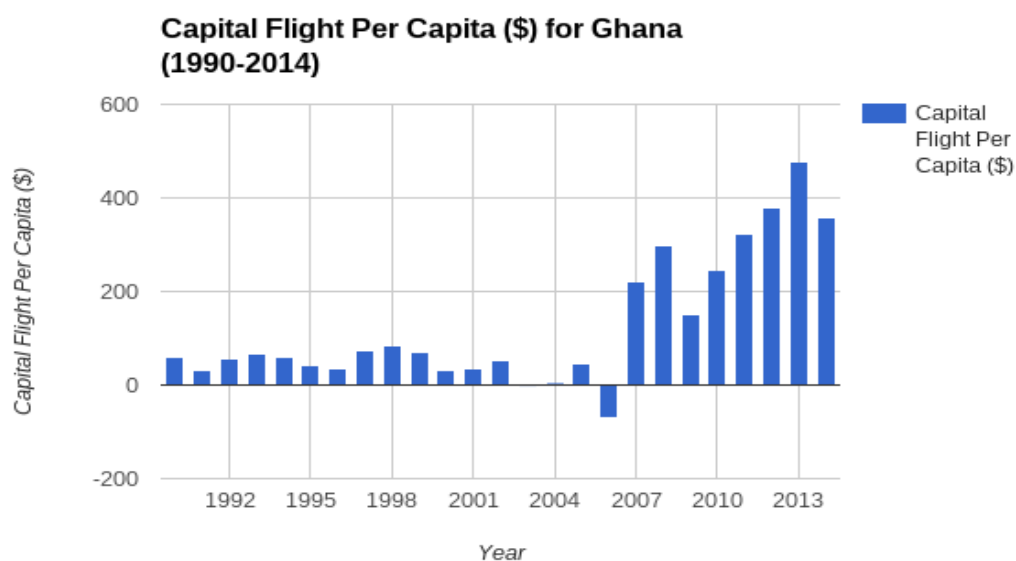


Figure 4. Capital Flight Per Capita for Ghana (1990-2014)

Source: Researcher's computations

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Figure 5. Capital Flight Per Capita for Nigeria (1990-2014)

Source: Researcher's computations

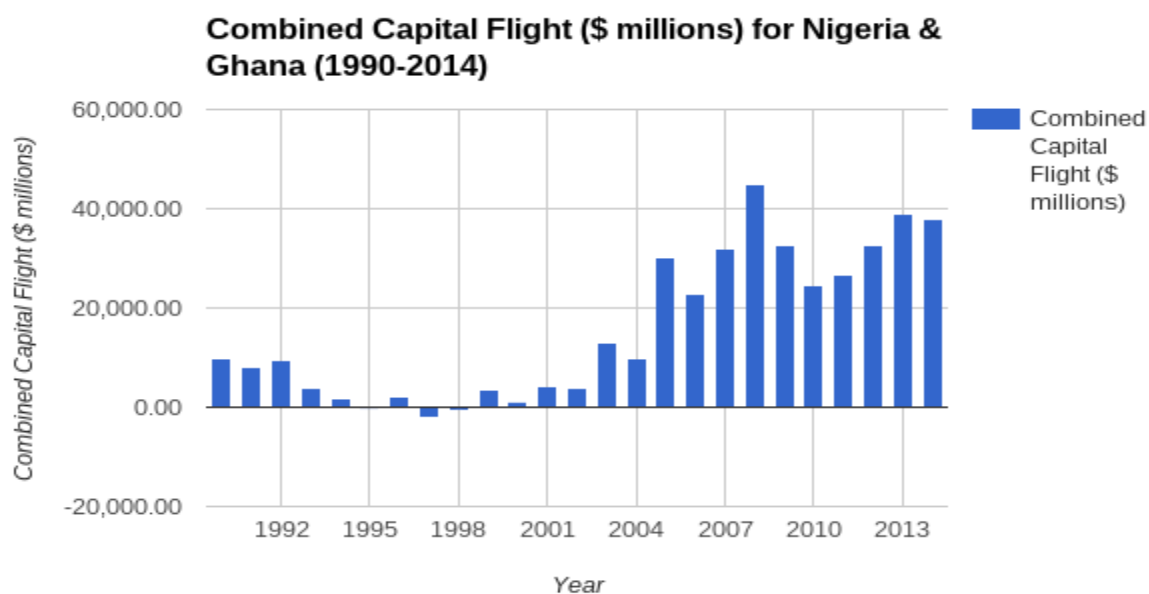


Figure 6. Combined Capital Flight Estimates for Nigeria & Ghana (1990-2014)

Source: Researcher's computations

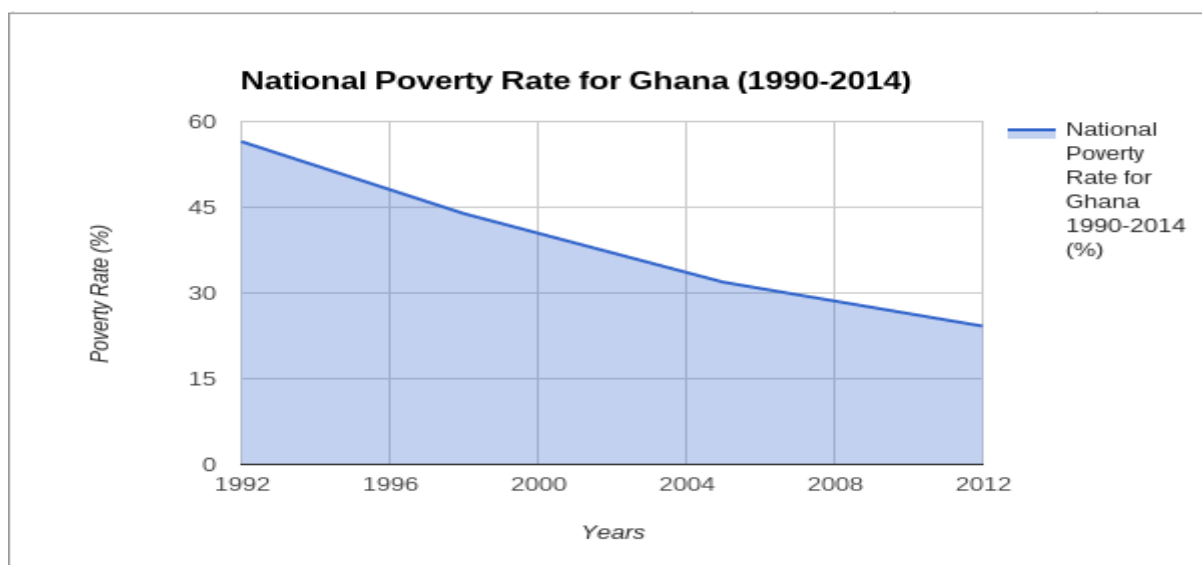


Figure 7. National Poverty Rates for Ghana (1990-2014)

Source: Ghana Statistical Service (2016)

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Figure 8. National Poverty Rates for Nigeria (1990-2014)

Source: National Bureau of Statistics for Nigeria (2016)

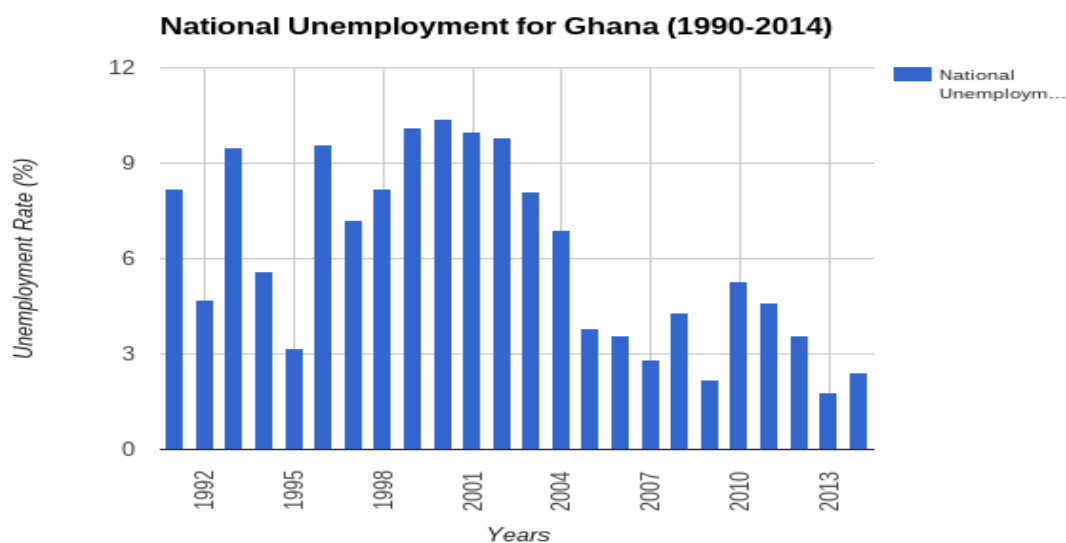


Figure 9. National Unemployment Rates for Ghana (1990-2014)

Source: World Bank's World Economic Indicators (2016)



Figure 10. National Unemployment Rates for Nigeria (1990-2014)

Source: World Bank's World Economic Indicators (2016)

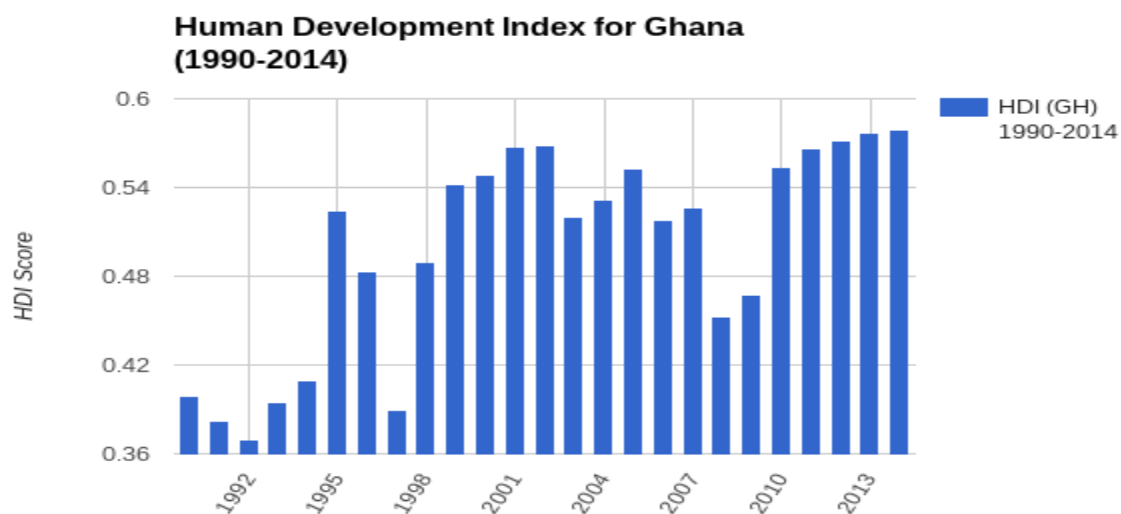


Figure 11. Human Development Index Scores for Ghana (1990-2014)

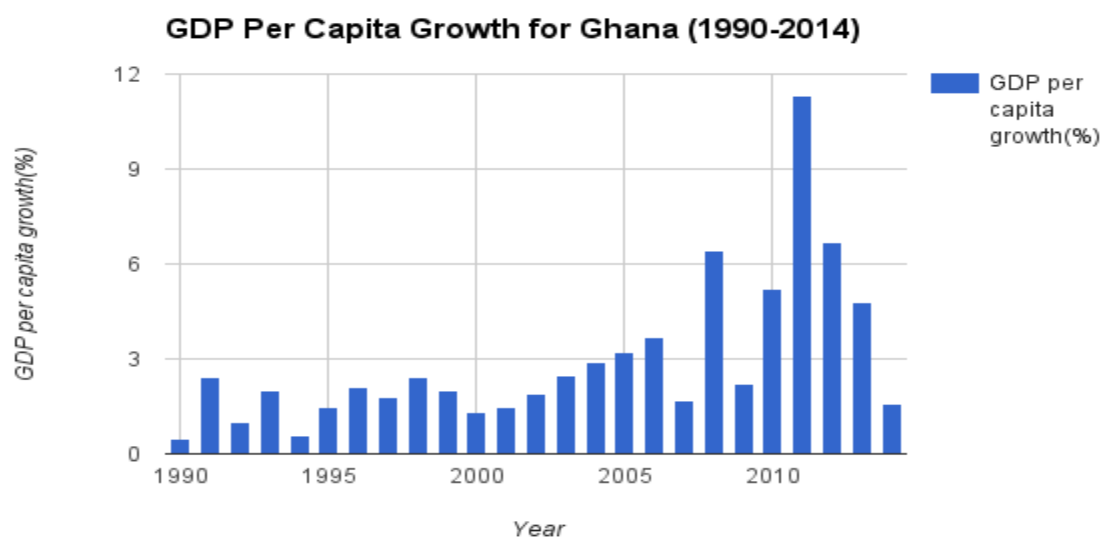
Source: United Nations Human Development Reports (1989-2015)

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Figure 12. Human Development Index Scores for Nigeria (1990-2014)

Source: United Nations Human Development Reports (1989-2015)



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*Figure 13.*Real GDP Per Capita Growth Rates for Ghana (1990-2014)

Source: World Bank's World Development Indicators (2016)



*Figure 14.*Real GDP Per Capita Growth Rates for Nigeria (1990-2014)

Source: World Bank's World Development Indicators (2016)

IMPACT OF CAPITAL FLIGHT ON ECONOMIC DEVELOPMENT

MLR(Unemployment for Ghana)						
Regression Statistics						
Multiple R	0.536980523					
R Square	0.288348082					
Adjusted R Square	0.186683522					
Standard Error	2.589439693					
Observations	25					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	3	57.05324357	19.01775	2.836269424	0.06277306	
Residual	21	140.8091564	6.705198			
Total	24	197.8624				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	6.63689467	2.17622878	3.049723	0.006087619	2.11117917	11.16261017
Capital Flight Estimate \$ millior	-0.000343911	0.000167869	-2.04868	0.053196988	-0.000693	5.19258E-06
GDP Growth Rate %	-0.079836722	0.287066038	-0.27811	0.78364569	-0.6768232	0.517149786
Inflation Rate %	0.031109575	0.047822766	0.650518	0.522411826	-0.0683433	0.13056246

Figure 15. MLR Results Showing the Partial Effect of Capital Flight on Unemployment in Ghana

Source: Researcher's computations

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MLR(HDI for Ghana)						
<i>Regression Statistics</i>						
Multiple R	0.720122264					
R Square	0.518576075					
Adjusted R Square	0.391885568					
Standard Error	0.055036515					
Observations	25					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	5	0.061992658	0.012399	4.093251255	0.01085121	
Residual	19	0.057551342	0.003029			
Total	24	0.119544				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-1.652744581	1.262958023	-1.30863	0.206268756	-4.2961461	0.990656941
CAP FLIGHT	2.35241E-05	7.61213E-06	3.090342	0.006023368	7.5917E-06	3.94564E-05
LIF EXP	0.045022776	0.022659073	1.986965	0.061538545	-0.0024032	0.092448762
Ad lit rate	-0.003675293	0.002899456	-1.26758	0.220263341	-0.0097439	0.002393339
GDP Per Capita	-0.000188495	9.173E-05	-2.05489	0.053902723	-0.0003805	3.49821E-06
Tertiary Enr rate	-0.014630296	0.005666684	-2.58181	0.018280495	-0.0264908	-0.00276979

Figure 16.-MLR Results Showing the Partial Effect of Capital Flight on HDI Score for Ghana

Source: Researcher's computations

IMPACT OF CAPITAL FLIGHT ON ECONOMIC DEVELOPMENT

MLR (Poverty in Ghana)						
Regression Statistics						
Multiple R	0.612504442					
R Square	0.375161691					
Adjusted R Square	0.250194029					
Standard Error	5.996208883					
Observations	25					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	4	431.7519807	107.9379952	3.002070179	0.043104033	
Residual	20	719.0904193	35.95452096			
Total	24	1150.8424				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	29.3234355	32.08202344	0.914014527	0.371597356	-37.59849272	96.24536371
Depen rat GH	0.187509611	0.364599883	0.51428873	0.612686367	-0.573032418	0.94805164
GNI Per Capita	-0.003657458	0.009936404	-0.368086731	0.716675565	-0.024384434	0.017069517
Unemployment	-0.392455039	0.633026167	-0.619966534	0.542279657	-1.712924484	0.928014406
Cap Fli	-0.000696777	0.001076709	-0.647135987	0.524902644	-0.002942754	0.001549199

Figure 17. MLR Results Showing the Partial Effects of Capital Flight on Poverty in Ghana

Source: Researcher's computations

IMPACT OF CAPITAL FLIGHT ON ECONOMIC DEVELOPMENT

MLR(GDP per capita growth for Ghana)						
<i>Regression Statistics</i>						
Multiple R	0.98872404					
R Square	0.977575226					
Adjusted R Square	0.973090272					
Standard Error	0.391573541					
Observations	25					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	4	133.6838032	33.4209508	217.9676912	3.47E-16	
Residual	20	3.066596763	0.15332984			
Total	24	136.7504				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-2.692752212	0.553072711	-4.8687128	9.30021E-05	-3.84644	-1.53906
Inflation Rate %	0.002871873	0.007448632	0.38555714	0.70389498	-0.01267	0.018409
Capital Flight Estimate \$ m	6.0845E-05	2.77265E-05	2.19446912	0.040178645	3.01E-06	0.000119
GDP Growth Rate %	0.997166811	0.043425517	22.9626928	7.61201E-16	0.906583	1.087751
Population Growth Rate %	-0.10253979	0.286528609	-0.3578693	0.724190276	-0.70023	0.495148

Figure 18. MLR Results Showing the Partial Effect of Capital Flight on GDP per capita growth in Ghana

Source: Researcher's computations

IMPACT OF CAPITAL FLIGHT ON ECONOMIC DEVELOPMENT

MLR(Unemployment in Nigeria)						
<i>Regression Statistics</i>						
Multiple R	0.764415983					
R Square	0.584331795					
Adjusted R Square	0.413174299					
Standard Error	0.066341486					
Observations	25					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	7	0.105179723	0.015025675	3.414000604	0.018222033	
Residual	17	0.074820277	0.004401193			
Total	24	0.18				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	8.233385076	1.047081287	7.863176604	4.61258E-07	6.024236666	10.44253349
GDP Growth Rate %	0.01689883	0.005860462	2.883531926	0.010316212	0.004534335	0.029263325
Lending Interest Rate %	-0.001552743	0.005376315	-0.288811712	0.776217622	-0.012895777	0.009790291
Population Growth Rate %	0.102707848	0.057562212	1.784292932	0.092233859	-0.018737804	0.224153501
Mean Years of Schooling	-0.199348109	0.214252924	-0.930433552	0.365171935	-0.651382265	0.252686047
Foreign Direct Investment \$millions	2.61735E-05	1.23397E-05	2.121087675	0.048918105	1.39094E-07	5.2208E-05
Capital Flight Estimate \$ millions	-4.75634E-06	2.52296E-06	-1.885220296	0.076610791	-1.00793E-05	5.66645E-07
Inflation rate %	-0.001043613	0.000982305	-1.062412099	0.302908701	-0.003116096	0.00102887

Figure 19. MLR Results Showing the Partial Effect of Capital Flight on Unemployment in Nigeria

Source: Researcher's computations

IMPACT OF CAPITAL FLIGHT ON ECONOMIC DEVELOPMENT

MLR (HDI for Nigeria)						
<i>Regression Statistics</i>						
Multiple R	0.708216422					
R Square	0.5015705					
Adjusted R Square	0.370404842					
Standard Error	0.050868153					
Observations	25					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	5	0.04947363	0.009894726	3.823946813	0.014481421	
Residual	19	0.04916381	0.002587569			
Total	24	0.09863744				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.735246642	0.886381135	-0.829492656	0.417125952	-2.590463679	1.119970395
CAP FLIGHT	-4.62812E-06	1.95355E-06	-2.369082338	0.028581352	-8.71695E-06	-5.39294E-07
LIF EXP	0.05724203	0.019711629	2.903972561	0.009098904	0.015985116	0.098498944
Adult (literacy) rate	-0.004892051	0.00581024	-0.841970638	0.410277569	-0.017053023	0.00726892
GDP Per Capita	-5.07525E-05	3.36706E-05	-1.50732545	0.148174561	-0.000121226	1.97208E-05
Tertiary Enrolment rate	-0.11780676	0.060119898	-1.959530253	0.064887666	-0.243639154	0.008025634

Figure 20. MLR Results Showing the Partial Effect of Capital Flight on HDI Score for Nigeria

Source: Researcher's computations

IMPACT OF CAPITAL FLIGHT ON ECONOMIC DEVELOPMENT

MLR(Poverty in Nigeria)						
<i>Regression Statistics</i>						
Multiple R	0.416080817					
R Square	0.173123246					
Adjusted R Square	0.007747895					
Standard Error	4.715359656					
Observations	25					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	4	93.10526623	23.27631656	1.046850363	0.408099904	
Residual	20	444.6923338	22.23461669			
Total	24	537.7976				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	209.724421	227.8167056	0.92058403	0.368239049	-265.4928996	684.9417415
Dependency ratio	-1.000892676	1.011136651	-0.989868852	0.334063639	-3.110086771	1.108301419
GNI per Cap \$	0.000536698	0.001670487	0.321282036	0.751329999	-0.002947878	0.004021273
Unemployment	-8.675019545	19.97694401	-0.434251582	0.668754533	-50.34619453	32.99615544
Capital Flight \$	-0.000149269	0.000117768	-1.267481587	0.219542517	-0.00039493	9.63913E-05

Figure 21. MLR Results Showing the Partial Effect of Capital Flight on Poverty in Nigeria

Source: Researcher's computations

IMPACT OF CAPITAL FLIGHT ON ECONOMIC DEVELOPMENT

MLR(GDP per capita growth for Nigeria)						
<i>Regression Statistics</i>						
Multiple R	0.680384424					
R Square	0.462922965					
Adjusted R Square	0.194384447					
Standard Error	5.820567614					
Observations	25					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	8	467.2214825	58.40269	1.723860582	0.168384	
Residual	16	542.0641175	33.87901			
Total	24	1009.2856				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	92.80415231	112.1944297	0.827173	0.420305247	-145.03741	330.6457184
Population Growth Rate %	0.538206394	4.551539234	0.118247	0.907343651	-9.1106257	10.18703854
GDP Growth Rate%	1.747699172	0.562027307	3.109634	0.006742412	0.55625451	2.939143838
Capital Flight Estimate \$ millior	-0.000329943	0.00018627	-1.77131	0.095552047	-0.0007248	6.49325E-05
Mean Years of Schooling	-11.037167	18.254951	-0.60461	0.553914825	-49.735934	27.66160037
Inflation rate %	0.028922879	0.08868946	0.326114	0.748564611	-0.1590904	0.216936136
Lending Interest Rate %	-0.321153887	0.482355301	-0.6658	0.515021688	-1.3437014	0.701393672
Dependency ratio	-0.434729564	0.919416362	-0.47283	0.642718745	-2.3838052	1.514346054
GNI per Cap \$	0.003287461	0.002455503	1.338814	0.199344027	-0.001918	0.008492896

Figure 22. MLR Results Showing the Partial Effect of Capital Flight on GDP per capita growth in Nigeria

Source: Researchers' computations