

29-30 August 2019

Wits Business School, University of the Witwatersrand
2 St David’s Place, Parktown, Johannesburg, South Africa

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Message from Conference Chair

We have great pleasure in welcoming you to the 2019 African Review of Economics and Finance Conference.

There is enough evidence suggesting that African countries have recorded substantial growth, particularly since the beginning of this century, although growth seems to have stalled in recent times. The irony is that this growth has not been accompanied by substantial development. For instance, the continent still has the largest number of people living in poverty; its institutions are still not robust enough; the economic structures of most of the countries are still dominated by primary production (agriculture and mining) and rudimentary services, and the technological gap between Africa and the rest of the world is not only large but it is widening.

This year’s conference would create a platform to explore the interplay between political economy and development in Africa, with a view to unravelling, at least part of the reasons why Africa has not been able to register appreciable development despite the improvement in growth performance since the beginning of this century. The conference would build on the platform established at the 2018 AREF Conference and hope to cement a space for discussion on the political economy of development in Africa.

In the traditional manner of a major international conference, the AREF 2019 Conference is organised around a keynote address and a roundtable discussion on the issue. The keynote address delivered by Professor Chibuzo N. Nwoke, Vice-Chancellor of Odudua University, highlights the need to consider the idea of independent development and self-reliance in Africa, given that Western conceptions and strategies of development have failed. He argues that Africa’s development must be conceived by Africans to have a human focus and concern for wellbeing. In Day 2 there is a round table discussion with Dr Bob-Miliari, Prof Alagidede and Dr Mensah, and Prof Obeng-Odoom as the moderator. The panel talks about the AREF network and the political economy of Africa’s development, and then zooms into the role of AREF in relation to some of the pertinent issues surrounding the political economy of development. In Day 2 a round table discussion with the Director for the Centre of Culture and African Studies at the Kwame Nkrumah University of Science and Technology, Dr Bob-Miliari, the Academic Director of Wits Business School, Prof Imhotep Alagidede and the Director of Training and Research at AREF, Dr Jones Odei Mensah, moderated by the Editor of AREF, Prof Franklin Obeng-Odoom. The panel examines the theme of the conference and the role of the AREF network in providing a platform for scholarly and policy engagement on alternative paths to Africa’s current development track.

Following the keynote address and round table discussion, the 5 parallel sessions per time slot covers a wide range of debates, such as Economic Growth and Development; Development and Financial Inclusion; Industrialisation and Poverty; foreign direct investment and Infrastructure Challenges. Within these themes, the almost ninety papers to be presented will focus on a wide range of debates on the interface between institutions and economic growth, the place of entrepreneurship and innovation in an inclusive process of economic development, asset pricing and returns, financial sector development and liberalisation, monetary policy, education and leadership and natural resource management.

In addition, the Editor-in-chief of the Research in International Business and Finance (RIBAF) presents a seminar on how to publish in high impact journals and the mechanics of avoiding desk rejections. Continuing in the tradition of the 2018 AREF Conference, the A.K. Fosu prize will be awarded to recognise high quality research presented at the annual 2019 AREF conference. This highly competitive award is made to the author(s) of the paper judged by the editors of AREF to be the best presented at the conference. The A.K Fosu prize was initiated by organisers of the AREF conference to honour the contributions of the great economist and academic leader, Professor Extraordinary Augustin Kwasi Fosu.

The Wits Business School has played host to the AREF Conference for two years in a row. Wits is recognised internationally as a leading research university and WBS continues to sculpt global leaders. The AREF team would like to thank the Marketing and Communications team, the Finance and Catering departments of the Wits Business School; the AREF Consult, and the Nile Valley Consult for the excellent support in all stages of planning the conference.

I wish you a productive conference and an enjoyable stay in Johannesburg.

Jones Odei Mensah, PhD
Conference Chair
Submission and Review Process

All submissions to the AREF conference were subjected to a double blind peer-review process by experts in the academy, according to the *African Review of Economics and Finance* journal refereeing standards. All manuscripts were subjected to an editorial pre-screening process by the Editors of AREF to assess suitability for the conference. The editors desk rejected papers when there were significant problems. Papers not desk rejected were then reviewed by members of the AREF international faculty or a chosen reviewer by the Editors. The review process followed a number of criteria, including: relevance of the paper to the conference themes, relevance to the audience, relevance to policymakers, contribution to scholarship, originality and rigour of the analysis. Reviewers were from the following countries: United Kingdom, United States of America, Austria, Finland, South Africa, France, United Arab Emirates, and Ghana. 102 papers were submitted, of which 88 were accepted for publication in the proceedings, i.e. 86%.

**Augustin K. Fosu Prize for Best Paper**

The A.K. Fosu prize was awarded to recognise high quality research presented at the annual AREF conference. This highly competitive award was made to the author(s) of the paper judged by the editors of AREF to be the best presented at the conference. The A.K Fosu prize was initiated by organisers of the AREF conference to honour the contributions of the great economist and academic leader, Professor Extraordinary Augustin Kwasi Fosu (http://isser.edu.gh/index.php/senior-members/30-prof-augustin-k-fosu).

**Eligibility:**
- The award was open to all conference participants, however, interested delegates needed to apply specifically and indicate whether they wanted their paper(s) to be considered for the award.
- Papers were subjected to the normal African Review of Economics and Finance peer review process.
- Papers deemed publishable by the panel of reviewers were presented to the team of AREF editors.
- The award winners were selected by a vote of all the editors based on the review reports and a further assessment by the editors themselves.
- The Executive Director of the African Finance and Economics Consult informed the award recipient of the outcome.
- The award was given at the AREF Conference.

**Benefits:** Award winners were given a cash amount (USD 300 and USD 100 for 1st and 2nd prize winners, respectively), an award certificate, and an opportunity to develop the paper further for publication in AREF.

**Award Winners:**

**1st Prize Winners**

Abdul-Aziz Iddrisu  
Paper Title: Does high public debt level constrain the interest rate setting behaviour of the South African Reserve Bank?

Callaghan and Rubina Jogee  
Paper Title: Deindustrialisation and Poverty: Evidence from Income and Regional Country Panel Testing

**Runner-up**

Raphaël Roudaire and Abdallah Zouache  
Paper Title: The French economists and the colonization of West Africa in the French economic reviews (1880-1920)
Scientific Committee

Imhotep Paul Alagidede
University of the Witwatersrand

Franklin Obeng-Odoom
University of Helsinki

Koen Smet
WU Vienna, Austria

Vishnu Padayachee
University of the Witwatersrand

Abdulla Zouache
Sciences Po

Waseem Mina
United Arab Emirates University

Ambe Njoh
University of South Florida

Jones Odei Mensah
University of the Witwatersrand

Gideon Boako
Office of the Vice President, Republic of Ghana

George Bob-Milliar
Kwame Nkrumah University of Science and Technology

Amin Karimu
University of Ghana

Ferdi Botha
University of Melbourne

Muazu Ibrahim
University for Development Studies

Collins Ntim Gyakari
University of Southampton
Conference Track Chairs

Regulation, Compensation and Labour Conditions
Franklin Obeng-Odoom
University of Helsinki

Institutions, Trade and Market Integration
Kofi Kamasa
University of Mines and Technology

Risk and Bank performance
William Kavila
Reserve Bank of Zimbabwe

Poverty, Income Transfer and Inclusive Growth
Tendai Gwatidzo
University of the Witwatersrand

Microfinance, SMEs and Entrepreneurship
Anokye M. Adam
University of Cape Coast

Expenditure, Oil Shocks and Exchange Rate
LMM Hewitt
University of Johannesburg

Entrepreneurial self-efficacy, Small Businesses and Revenue Mobilisation
Joyce Toendepi
University of Johannesburg

Macroeconomic Policy and shocks
Eric Schaling
Wits Business School

History and Public Sector
George Bob-Milliar
KNUST

Financial sector development and inclusion
George Tweneboah
Wits Business School

Foreign Direct Investment, International Trade and Environment
Amin Karimu
University of Ghana

Land, water resources and Food Security
Sunday Osahon Igbinedion
University of Benin, Nigeria

Labour Markets
Thomas Hastings
Queen’s University Belfast

Commodity Prices, Exchange Rate and Stock Market
Amiena Bayat
University of the Western Cape

Digital Business, Intelligent Transport System and M&A
Euphemia Godspower-Akpomiemie
Wits Business School

Globalization and Business Process Outsourcing
Geoff Heald
Wits Business School

Financial Markets and Institutions
Godfred Amewu
Ghana Institute of Management and Public Administration

Gender Economics and Labour Markets
Aylit Romm
University of the Witwatersrand

Agriculture, Natural resources and Environmental Economics
Lydia Kwoyiga
Technische Universität Dresden

Learning, NGOs and Innovative Financing Models
Albert Wort
University of Johannesburg
Credit Ratings, Firm Performance and Growth
Anokye M. Adam
University of Cape Coast

Trade, Capital Flows, and Financial Integration
Nubong Gabila Fohtung
North West University

Quantitative Modelling
George Tweneboah
Wits Business School

Firm Performance and Corporate Governance
Jawad Syed
Lahore University of Management Sciences

Accounting and Finance
Jepchoge Lucy Rono
Moi University

Modelling asset returns and Price dynamics
Adeola Oyenubi
University of the Witwatersrand

Development Finance
Micheal Kofi Boachie
University of Cape Town

Energy, Environment, Climate Change and Migration
Dambala Gelo
University of the Witwatersrand

Marketing
Jenika Gobind
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Full Papers and Abstracts
Public-Private regulation and the role of (transnational) worker agency in upholding labour standards: the case of South African wine

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Abstract
The paper adds to the growing body of work focussed on the role of labour and state forces in developing global production networks (GPNs). Taking the case of wine production in South Africa, the article discusses organised labour’s ability to encourage progressive labour institutions and the realisation of rights at the local level. This is achieved through a focus on labour’s relational agency. Through campaigning at the international level, workers are shown to place associational pressure on both private and state regulators to deliver improved labour standards at the local level. In doing so the GPN framework is shown to provide not just a useful framework for exploring the agency of lead firms, but also the role of workers in improving access to institutions and working standards commonly denied by states and corporations.
The measurement of Decent Work in South Africa: A new attempt at studying quality of work

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Abstract

The debate on decent work, a term coined by the ILO, has often been left to negotiations between trade unions and business, while different elements of decent work have been studied across a range of disciplines. Unions have habitually aspired to ensuring workers receive decent wages and work decent hours, although a thorough understanding of what exactly a comprehensive definition of decent work encompasses has not been pursued, and thus measurement thereof has not been possible. Furthermore, given the high unemployment rates in South Africa, the focus of employment related studies and policy debates have often been on how to create more jobs, with the quality of those jobs being a secondary consideration. Despite this, the ILO provides some guidelines on what should be used to measure decent work. The few studies which have attempted the measurement of decent work have used the ILO’s measures as a point of departure, although due to data availability have only managed to measured decent work on a small scale. Though these studies have proven useful, it does not provide guidance on how decent work can be measured at a larger scale using nationally representative data; meaning that findings of such studies are unlikely to inform the broader policy debate around decent work. The purpose of this study was to construct a decent work index, using an iteration of the South African Labour Force Survey (LFS) Data. This was useful firstly to identify measures which currently exist in secondary data and which can be used to inform studies and policy decisions around decent work. Secondly, it was also beneficial in identifying shortcomings in relation to the use of the LFS to measure decent work. Using sub-major (2-digit) occupation groups as units of analysis, the study found that there is an expected pattern around how occupations measure in relation to their degree of ‘decency’, meaning that higher paid professionals tend to have more decent occupations compared to low-skilled workers in elementary occupations. However, the higher up the occupational ladder the occupation is, the lower they will score in terms of certain indicators, such as decent working time, and combining work, family, and personal life. The best ranked occupations are thus amongst technicians and associate professionals, rather than professionals and managers. Furthermore, the study found that occupation groups often perform differently when the indicators which make up the decent work index are viewed individually rather than a composite index. This thus requires some engagement with different aspects of decent work in relation to different occupations and a more nuanced debate around the definition of decent work, rather than the assumed benefits which have often been pursued by interest groups such as labour unions.
Impact of Compensation Practices on Employee Motivation; Evidence from Banking Industry

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Abstract

Employee compensation practices are generally practiced all around the world by the organizations specifically in regions like Europe and Americawhich results in the organization development and progress. These compensation practices are the reasons for the employees to work whole heartedly and not just work as a duty in their certain roles. The basic salaries for the employees push these employees to work in the organization as a duty but when certain incentives are given to the workers related to the extra salaries or related to other incentives. In this research, the quantitative methods were used which focuses on collection of data in the form of numbers and statistics. Using questionnaires, selected employees of Pakistani banks, the data was collected and analyzed according to their responses. In this case, there were 145 employees chosen out of a population of 1800 employees using non-probability random sampling technique. Moreover, these selected employees were handed over the questionnaires in order to record their responses. For analysis purpose, reliability and validity of data was checked before applying ANOVA as statistical technique. The analysis and comparative result clearly predicted that there is no significant relationship between annual salary raise and employee motivation which shows that bank employees are not motivated with the annual salary raise but on the other hand it was found that there is a positive relationship between basic salary, health plan, retirement plan and employee motivation.
Determinants of institutional quality in the Southern African Development Community (SADC) region: A panel data analysis

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Abstract

Institutional quality has increasingly become popular in academic research - this follows the impact institutions have on macroeconomic performance of economies. Thus, understanding institutions and the factors that influence their quality is crucial for the implementation of policies that help build better institutions. This paper sought to identify and examine key determinants of institutional quality in the SADC region by using a panel data set covering the period 2007 to 2017.

The fixed effects Generalized Least Squares model was used and the findings suggest that education, trade openness, GDP per capita growth and property rights yield positive and statistically significant coefficients in relation to institutional quality - while natural resource availability is negative and statistically significant.

These findings have significant implications for policy makers in the region – for instance, the focus could be on fostering investment in higher levels of education which could enhance both the cutting-edge capacity and the dynamic efficiency of institutions in the region. Secondly, ensuring property rights protection particularly foreign investors’ rights. The focus should be on controlling strategic raw materials and energy supplies in the region to avoid exploitation so that the region can prosper through and ultimately have more efficient institutions in place.
Resolving the dilemma of Africa’s institutions of Integration

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Abstract
The pursuit of Africa’s unity and the integration of the continent has been accompanied by the creation of a number of institutions that are called upon to play a major role in the promotion of the further integration of the continent. These are the institutions identified by article 7 of the Abuja Treaty (1993) as the organs of the African Economic Community, which include: (a) The Assembly of Heads of State and Government; (b) The Council of Ministers; (c) The Pan-African Parliament; (d) The Economic and Social Commission; (e) The Court of Justice; (f) The General Secretariat; and (g) The Specialized Technical Committees. When the Organisation of African Unity (OAU) became the African Union in 2001, these organs became known as the organs of the union with a few new more additions. According to article 4 of the Constitutive Act of the African Union, the organs of the union shall be: (a) The Assembly of the Union; (b) The Executive Council; (c) The Pan-African Parliament; (d) The Court of Justice; (e) The Commission; (f) The Permanent Representatives Committee; (g) The Specialized Technical Committees; (h) The Economic, Social and Cultural Council; (i) The Financial Institutions; While these institutions are foreseen as part of the continental integration project, not all of them have been completely set up or are fully operational. However the role that they are expected to play in the continent’s integration project has been clearly articulated in a number of policy documents.
Which is more accurate, RCA or RNCA?

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Abstract

“Trade can make everyone better off” (Mankiw, 2004, fifth principle of economics). Throughout decades, economists in trade literature try hard to analyze trade and its benefits all over the world. Many trade theories have been evolved, and they are mainly categorized in classical, neo-classical and modern trade theories. Comparative advantage, as a classical theory of trade, is one of the cornerstones in international trade literature, where countries specialize in products that have been produced at lower costs compared to other countries. In 1965, Bela Balassa creates a measure for Comparative Advantage called Revealed Comparative Advantage (RCA). When RCA is less than one; therefore, the country has comparative disadvantage. On the other hand, when it is greater than one; therefore, country has comparative advantage (Fertő & Hubbard 2003; Hoen & Oosterhaven 2006; Serin and Civan 2008; Yeats 1992; Yu et al. 2009; Laursen 2015; Seyoum 2007; Ahmed et al. 2017; Yasmin and Altaf 2014; Leishman et al. 1999; Beyene 2017; Startiene and Remeikiene 2013). On the other hand, Laursen (2009) questions the statistical validity of Balassa index, hypothesizing that RCA is not a normalized index, which will always lead to biased results, especially, if testing stability of the index. The research will investigate the validity of Laursen hypothesis through testing RCA and RSCA for 119-product categories Egypt’s trade in, along with exploring the differences in stability testing between two indexes. Besides, the detailed patterns of trade the results will provide by analyzing RCA, it will also fill in an original gap in the literature between RCA and RSCA, especially in case of Egypt, which is a developing country.

Keywords: RCA, RSCA, Ricardian model of comparative advantage, Stability, Normalization, Symmetry.
Quantifying the Loss on Banks’ Returns Arising From Financial Technology Adoption: An Asymmetric GARCH Approach to Value-at-Risk

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Abstract
The global structural transformations arising from financial technology adoption has raised serious concerns on what constitutes its riskiness to banks and the economy at large, especially with its attendant technological unemployment. Therefore, the ongoing debate in economic and financial literatures whether and to what degree will financial technology adoption emit risk to bank profitability and growth is examined in this study. The trade-off analysis and a family of symmetric and asymmetric GARCH approach to Value-at-Risk (VaR-GARCH) based on the camel and neoclassical growth theories were used to determine potential risk and estimate the conditional variance of bank and output returns in a panel of thirty-four African countries. The Kupiec log likelihood ratio test and mean relative scaled bias used to evaluate the models’ accuracy and efficiency levels respectively found that the best model to estimate the conditional variance of bank and output returns are the exponential GARCH (1,1) and the GJR-GARCH (1,1) respectively with student-t distribution. The Value-at-Risk estimates revealed that the worse expected loss on banks’ and output returns in Africa due to FinTechs adoption will not exceed 3.01% and 11.54% respectively at 95% confidence interval. Therefore since the VaR value of output returns is far greater than the VaR value of bank returns, it implies that FinTechs emit risks to other sectors of the economy other than the banking sector; hence the study recommends a comprehensive and an overall improve performances in every sectors of the economy through collaboration with FinTechs companies.
Systemic risk and the presence of foreign banks in Emerging Markets

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Abstract
This paper aims to examine the banking and economic factors that influence systemic risk in emerging markets’ banking sector when foreign banks are present. Furthermore, to establish which elements of systemic risk are undiversifiable at the economic bloc level. GMM panel models are used to analyse a sample of 19 emerging markets countries which are also grouped into their emerging markets economic blocs including CEE, BRICS, MIST, MINT and Latin American. The results show that banking characteristics (liquidity and size) and economic characteristics (inflation, government debt to GDP and lending rate) impact significantly on country level systemic risk when foreign banks are present. Also, the presence of foreign banks reduces the potency of host macro-prudential policy which leaves systemic risk unhedged. At the economic bloc level, the presence of foreign banks causes liquidity shortages in host banking markets that is not diversifiable mainly if triggered by a substantial increase in nonperforming loans or equity divestment. The findings imply that, if systemic risk within host emerging markets bloc/country becomes unhedged due to economic pressures from their foreign banks affiliated with them or their home economy, it raises banking costs to customers. However, an increment in banking costs within host banking markets from emerging economies is known to counter financial inclusion policies currently encouraged by the global banking community as a measure to limit money laundering.
Abstract

This study sets out to confirm whether economic growth in Nigeria was pro-poor; that is, to determine whether economic growth resulted in significant reductions in poverty across Nigeria. The Growth Incidence Curve (GIC) was used to determine if the economy experienced pro-poor growth or not from 2010 to 2013. This study assessed wave 1 (2010–2011) and wave 2 (2012–2013) of the General Household Survey-Panel (GHS-Panel) dataset to determine the pro-poor growth rate for the six geopolitical zones and the rural and urban areas of Nigeria. In general, the results show unequal and limited rates of pro-poor growth in the geopolitical zones and urban and rural areas and does not support the conclusion that growth in Nigeria was pro-poor for most regions during this period.

JEL Classification: O12, O43, O44, O47, O55

Keywords: Poverty, Economic growth, Growth Incidence Curve (GIC), Pro-poor growth, Income poverty, Nigeria

1. Introduction

Successive Nigerian governments have attempted at reducing poverty. In 1972, the Nigeria Accelerated Food Production Programme (NAFPP) and the Nigeria Agricultural and Cooperative Bank (NACB) were initiated. The NAFPP programme was meant to assist in funding agricultural and rural development programmes. Operation Feed the Nation (OFN) was launched in 1976 to support youth involvement in farming. The Green Revolution Programme was introduced in 1979 with the main aim of reducing importation through large-scale mechanised farming. In addition, the National Directorate of Employment (NDE) was established in 1986 to ensure a reduction in unemployment, especially among youth. This scheme included providing loans to the youth and organising training for youths in entrepreneurial skills. It has been noted that the programme failed because of inadequate funding (Adeyeye, 2000; Aigbokhan, 2000).

The People’s Bank of Nigeria and Community Bank of Nigeria were introduced in 1990 to ensure access to credit facilities for less privileged people (Ayoola et al., 2000; Oyesanmi, Eboiyehi & Adereti, 2006). The Poverty Alleviation Programme (PAP) was established in 1999 to create
200,000 jobs annually. The programme failed due to a lack of focus on the objectives of the programme. The National Poverty Eradication Programme (NAPEP) evolved from PAP in 2001 to provide a new and improved framework for alleviating poverty. NAPEP was set up to alleviate poverty by improving people’s access to social services. However, studies have indicated that, like most of its predecessors, its impact was not felt (Aigbokhan, 2000; Ajakaiye & Adeyeye, 2001; Odozi, Awoyemi & Omonona, 2010; Oyekale, 2015).

The plethora of anti-poverty programmes and policies over the years in Nigeria appears to have been intended to be pro-poor, yet poverty remains a serious problem. According to the Nigerian National Bureau of Statistics (2010), poverty is most obvious in the northern part of Nigeria with the highest rate in Sokoto state, a poverty rate of 86.4 percent. The North East and North West zones of Nigeria have poverty rates of 77.7 percent and 76.3 percent respectively, compared to the South West zone with a 59.1 percent poverty rate. The poverty headcount in Nigeria rose from 27.2 percent in 1980 to 65.6 percent in 1996. The rate then declined by an annual average rate of 2.1 percent to 54.4 percent (Nigeria Poverty Profile, 2010:12).

The size of Nigeria’s population makes it difficult to alleviate poverty by directing strategies at the national level, rather than basing strategy in the zones. Due to data limitations, it has been difficult to assess the impact of the more recent poverty intervention programmes, although recent improvements in welfare indicators have been recorded. For example, the proportion of underweight children in Nigeria fell from 30 percent in 2004 to 25 percent in 2007 and 23.1 percent in 2008. A significant improvement was recorded in the infant mortality rate, which declined from 110 deaths per 1,000 live births in 2005 to 69 deaths per 1,000 live births in 2013. This means that about one in 15 Nigerian children dies in its first year, and one in every eight does not survive to its fifth birthday. Infant mortality declined by 26 percentage points over the last 15 years, while under-5 mortality declined by 31 percentage points over the same period.

Understanding the complex poverty situation in Nigeria necessitates an investigation into the trends of poverty and inequality in the six geopolitical zones to determine whether government policies were successful in reducing poverty in the country. Therefore, this study addresses the following research question: Was economic growth in Nigeria pro-poor between 2010 and 2013?

2. Literature Review

The pro-poor growth theory stresses that growth should be a means through which the poor can achieve greater capabilities in order to more actively participate in economic activities (Kimenyi, 2006). Growth can be said to be pro-poor if the income of the poor grows more rapidly than the income of the whole population. According to Anderson and White (2000), pro-poor growth happens when the income growth rate of the poor is greater than that of the non-poor. Kakwani and Pernia (2000) state that pro-poor growth is determined by comparing changes in inequality that accompany changes as a result of growth. Ravallion and Chen (2003) use the mean growth rate of income of the poor to determine pro-poor growth. Pro-poor growth also considers the speed by which poverty is reducing in a society. There will always be pro-poor growth when growth is measured, except in situations where the income of the poor is falling or stagnant which leads to an increase in poverty (Cord, Lopez et al., 2003). The faster pro-poor growth accelerates, the faster income poverty falls.
There is no denying that economic growth can aid poverty reduction, but reducing poverty does not guarantee economic growth. It is of no importance how much income is generated by a country but what is more important is how the money has been distributed among the populace in the society. If growth is not evenly distributed across the population, especially when it favours the richest people, the resultant effect is the persistent increase in inequality and poverty. Therefore, to achieve a reasonable reduction in inequality, the poorest of people in society must experience more growth. Therefore, in order to achieve pro-poor growth and inequality reduction, the distribution of growth should favour the bottom end of the income distribution than the non-poor.

2.1 Growth Incidence Curve

According to Chronic Poverty Advisory Network (CPAN, 2016) the Growth Incidence Curve (GIC) is a graphical technique that shows how different percentiles of a population benefit from growth during a certain period. The comparison of the pre and post-growth distribution of the same quantiles determines the GIC. In other words, it is a way of re-ranking the income of people with consideration of the mobility of income as it affects post-growth income with regard to social welfare. Therefore, initial and terminal income matter in determining the GIC. These make it possible to plot the income growth rates against the quantiles of the initial distribution and to derive the dominance criteria, which generalise the standard growth incidence curves (Bourguignon, 2010).

According to Hoogeveen and Özler, (2006) growth Incidence Curves are being used more to define the distributional effects of growth. This is achieved by plotting the mean growth rate of real income in a population against income quantiles. A downward-sloping GIC shows that the growth contributes to equalising the distribution of income, while an upward-sloping GIC depicts growth that leads to unequal income distribution. The shape of GICs may be diverse and it is possible to compare different GICs to know which is ‘better’ than another. According to Ravallion and Chen (2003) and Son (2004) by comparing the first-order dominance and the second-order dominance approach to terminal distribution of income, it is easy to determine which GIC is better than another. The first-order dominance is indicated when the GIC of a growth curve spreads above another growth curve, while second-order dominance requires the mean growth of the poorest in a growth comparison or the cumulative GIC to be larger than others.

Furthermore, Hoogeveen and Özler, (2006) note that the GIC makes it easy to compare the income of people who initially were not in the same position. With the cumulative GIC, the difference between the people whose initial income is among the $p$ poorest and the income of the $p$ poorest of people in the terminal distribution is determined. The individuals are not necessarily the same people (Bourguignon, 2010).

3. Data and Methodology
This study set out to determine if economic growth in Nigeria is pro-poor, that is, to determine whether economic growth in the study period led to a significant reduction in poverty. Due to the multidimensional nature of poverty, the concept of pro-poor growth determines the proportion of the income or of the resources of the state that contributes to improving the living standards among the poorest of people in the society. Growth Incidence Curve (GIC) is used to determine the ‘pro-poorness’ of growth by considering the changes in the distribution of the income indicator. The value of using the GIC is that it provides a graphical representation approach to pro-poor growth determination.

3.1 Study Area

Nigeria has over 180 million people, which makes it the country with the highest population in Africa. In terms of land area, it is the fourth-biggest country in West Africa after Niger, Mali and Mauritania, with a total land area of 923,768 km².

Nigeria is largely a monoculture economy, with crude oil accounting for over 99% of her export revenue and 85% of government revenue (Ajibola and Olusegun, 2016, p 1). The focus on crude oil by the Nigerian government dates back to the early 1970s when there was an oil boom. Politically, Nigeria is a federal state, which is divided administratively into six geopolitical zones, each made up of several states. The zones group states that have common history, culture and ethnic groups. The location of the states within the six zones (regions) can be seen on the map of Nigeria below.
3.2 The Data Source

This study examines whether growth has been pro-poor in the six geopolitical zones of Nigeria and rural and urban areas to determine whether Nigeria has experienced pro-poor growth between the periods 2010 to 2013.

The data used for the study is secondary data and is drawn from the Nigeria General Household Survey-Panel (GHS-Panel) data. Bill and Melinda Gates Foundation (BMGF) and the World Bank (WB) sponsor the GHS-Panel. The survey is carried out by a partnership between the Nigerian National Bureau of Statistics (NBS), the National Food Reserve Agency (NFRA) and the Federal Ministry of Agriculture and Rural Development (FMA&RD). The GHS-Panel is a national representative dataset with cross-sectional survey of 22,000 households out of which 5,000
households were considered for the panel component. It is representative of the six geopolitical zones and the rural and urban areas.

The GHS-Panel has three waves of data: wave 1 (2010–2011), wave 2 (2012–2013) and wave 3 (2015–2016), which were each carried out in two periods (post-planting and post-harvest).

The survey adopts probability sampling to determine its sample frame. In probability sampling, the elements in the population all have an equal chance of being selected as a sample (Turner, 2003). The sampling method adopted has a great influence on the representativeness of the sample and the results. The GHS-Panel study is a representative dataset for the whole country, the geopolitical zones and rural and urban areas.

The survey adopts a two-stage sample method. The first sample selected is the Enumeration Areas (EAs)/ the Primary Sampling Units (PSUs). The Households selection (HHs) constitutes the Second stage/ Secondary Sampling Units (USUs).

3.3 Limitations of Data

After a thorough review of the datasets of the three waves, some limitations were encountered which warranted the choice of using post-harvest datasets from wave 1 (2010–2011) and wave 2 (2012–2013), for reasons explained below.

3.3.1 INCOMPLETE FILES AND MISSING VARIABLES

Initially, the study intended using the datasets in the three waves (2010–2011; 2012–2013; 2015–2016) in both post-planting and post-harvest, but it was discovered that the household expenditure and household assets data were missing for post-planting and post-harvest in wave 3 (2015–2016). Furthermore, it was discovered that the datasets for health and remittances were completely missing in post-planting wave 1 (2010–2011) and the remittances dataset was not available in post-planting wave 3 (2015–2016). Also, there was an aggregate consumption file for wave 3 but the file did not have a household identifier (hhid) and individual identifier (indiv). As such, it was difficult to merge the aggregate consumption wave 3 file with aggregate consumption for wave 1 and wave 2 and other files. These constraints led to the study using the datasets available in post-harvest wave 1 (2010–2011) and wave 2 (2012–2013).

In spite of these and other challenges with the datasets, the post-harvest datasets for the two waves (wave 1 and wave 2) which were used for the purpose of this study are nationally representative and effectively suited to the purpose of the research.

3.4 Model Specification to Determine Pro-Poor Growth, Using Growth Incidence Curves

According to Ravallion and Chen (2003, p 94), let $F_t(y)$ represent the cumulative distribution function (CDF) of income (or expenditure), where income is less than $y$ at date $t$, in reference to the population. The income of the quantile is as below where the CDF is inverted at the $p$th:

$$y_t(p) = F_t^{-1}(p) = L_t^{*}(p) \mu_t \quad (y_t(p) > 0)$$

Equation 3.1
where \( L'_t(p) \) is the Lorenz curve (with slope \( L'_t(p) \)) and \( \mu_t \) is the mean. Allowing \( p \) to vary from 0 to 1 will result in a version of Pen’s parade formula called ‘quantile function’ (Moyes, 1999). When two dates are compared, \( t' \) and \( t \), the growth rate in income of the \( p \)th quantile is \( g_t(p) = \frac{\gamma_t(p)}{\gamma_{t-1}(p)} \cdot 1 \). In addition, allowing \( p \) to vary from 0 to 1, this makes \( g_t(p) \) to determine the growth incidence curve (GIC). Reference to Eq. (3.1) that:

\[
g_t(p) = \frac{L'_t(p)}{L'_{t-1}(p)} (\gamma_t + 1) - 1
\]

where \( \gamma_t = (\mu_t / \mu_{t-1}) - 1 \) is the growth rate in \( \mu_t \).

3.5 Measuring Pro-Poor Growth

Several axioms are reported by Ravallion and Chen (2003, p 95) regarding the need to be we can assume that the rate of pro-poor growth must satisfy the conditions below:

**Axiom 1:** The poverty measure should be in line with the change in poverty, such that when there is a positive (negative) rate of pro-poor growth, it means a reduction (increase) in poverty.

**Axiom 2:** The poverty measure embedded in the measure of pro-poor growth should satisfy the standard axioms for poverty measurement.

Considering the axioms identify by Zheng (1993) from which the Watts index emerges as a distinctive poverty measure, the Watts index is written in terms of the quantile function as below by changing the variables:

\[
W_t = \int_0^{H_t} \log \left[ \frac{z}{y_t(p)} \right] dp
\]

Equation 3.3

Differentiating with respect to time gives:

\[
\frac{dW_t}{dt} = \int_0^{H_t} \frac{d\log y_t(p)}{dt} dp = \int_0^{H_t} gt(p) dp
\]

Equation 3.4

(note that \( y_t(H_t) = z \)), i.e. the area under the GIC up to the headcount index gives (minus one times) the change in the Watts index.

When we divide all by \( H_t \), Eq. (3.4) this stimulates the measure of the rate of pro-poor growth by the mean growth rate for the poor: \( \int_0^{H_t} gt(p) dp / H_t \).

4. Results and Discussion

Pro-poor growth is analysed by zone and rural and urban areas with Growth Incidence Curves (GIC) for the periods 2010–2011 (wave 1) and 2012–2013 (wave 2).

It should be noted that the first-order dominance condition is achieved when the GIC is above zero (0) for the annual growth rate. This shows an unequivocal fall in poverty. In addition, where there is a downward-sloping GIC (negative slope), this means that the benefit from growth to the poor is more when compared to the non-poor. On the other hand, if the GIC is upward-sloping (positive slope), it means the richest people benefit more than the poorest in society.
Figure 4.1 below shows the GIC of the North Central zone of Nigeria from 2010 to 2013. It was observed that the 10th percentile up to 80th percentile benefitted from growth in income expenditure. The annual mean growth rate is -0.45 percent, while the pro-poor growth rate is 1.10 percent. Hence, since the pro-poor growth rate is higher than the annual mean growth rate, the growth rate in the North Central zone of Nigeria has been pro-poor between wave 1 and wave 2.

In figure 4.2 below, it is observed that the GIC lies below zero, which portrays unambiguous increases in poverty in the North East zone. The GIC is upward-sloping (positive slope), meaning that the very rich benefitted more from growth than the poor. The increase in inequality from 0.35 to 0.36 from 2010 to 2013 in the North East zone also supports the finding. This is not unexpected as the zone has been devastated by attacks by Boko Haram, it has experienced unrest, the education levels are low, it is not industrialised and it is rural in setting and mostly agrarian. The growth in the mean for the North East zone is -7.39 percent and pro-poor growth is -10.50 percent. Hence, growth has not been pro-poor for this zone.
In figure 4.3 below, it is observed that the GIC for the North West zone lies below zero, which shows an unambiguous increase in poverty. This is not unexpected as the zone has a low education level, is not industrialised, and is rural in setting hence mostly agrarian. The growth in the mean for the North West zone is -10.97 percent and the pro-poor growth rate is -14.68 percent. Hence, growth has not been pro-poor for this zone. The increase in inequality from 0.32 to 0.33 in this period also support the non-pro-poor growth observed.
Figure 4.3: Growth Incidence Curve (GIC) for the North West Zone

Source: Own calculations using the General Household Survey (GHS-Panel) 2010–2011 and 2012–2013

Figure 4.4 below, largely shows poor income growth. This is due to the fact that the majority of the youth in this zone lack formal education and are predominantly active in the informal sector, and as such, growth is very slow in the zone. The rate of pro-poor growth for the South East zone is -8.56 percent. The growth in the mean for the South East zone is -7.68 percent. Hence, growth has not been pro-poor for this zone.
In figure 4.5 below, the GIC shows that the bottom 25th percentile had below zero (negative) growth in income. In addition, the GIC curve was upward-sloping (positive slope) meaning the very rich in the South benefitted from growth. This is the zone accounting for more than 90% of the revenue of the country. The crude oil that provides the bulk of the national income of the country is extracted from the zone. The annual mean growth rate for the South South is 0.41 percent in the period, while the pro-poor growth rate is -1.64 percent. Hence, the growth rate in the South South zone of Nigeria was not pro-poor between waves 1 and wave 2.
In figure 4.6 below, it is observed from the GIC that the bottom 20\textsuperscript{th} percentile in the South West zone up to the 90\textsuperscript{th} percentile benefitted from growth in income expenditure in the zone. This GIC depicts a situation where in as much as the poorest people in the society benefitted from growth in income expenditure, the richest people in the society benefitted more from growth in income expenditure. This is partially as a result of the high entrepreneurial activities in this zone, where almost every household conducts some form of business alongside their formal jobs. The zone is industrialised and services oriented. The annual mean growth rate for the South West zone is 13.00 percent, while the pro-poor growth rate is 11.45 percent. Hence, the growth rate in the South West zone of Nigeria was pro-poor relative to other zones but less than the annual mean growth rate between wave 1 and wave 2.
In figure 4.7 below, it is observed that most of the GIC for the rural areas lies below the zero line, and that the pro-poor growth rate is -5.82 percent (negative). This is due to the lack of economic activities in rural areas, which are largely attributed to the predominance of agriculture, low levels of human capital development, lack of access to industry and basic amenities. These factors encourage the migration of large numbers of people into the densely populated urban areas. The mean growth rate for the rural sector is -3.06 percent (negative). When comparing this with the pro-poor growth rate, we see the deepening of poverty in this region. Hence, growth has not been pro-poor for the rural sector.
In figure 4.8 below, the GIC shows that the annual growth rate in the mean for the urban sector is 0.15 percent, while the pro-poor growth rate is -1.79 percent. Hence, the growth rate in the urban sector in Nigeria was not pro-poor between wave 1 and wave 2.
5. Conclusion

Considering pro-poor growth in the geopolitical zones and rural and urban areas of Nigeria, it has been observed that, for the most part, growth has not been pro-poor in Nigeria. The only two zones with pro-poor growth in Nigeria are South West, with a pro-poor growth rate of 5.82 percent and North Central, with a pro-poor growth rate of 1.10 percent. The pro-poor growth in these two zones are not representative of Nigeria as a whole since the majority of the poorest people in the country did not have the benefit of pro-poor growth in the study period.

Therefore, the study’s finding in response to the question – “Has economic growth in Nigeria pro-poor?” – is unambiguously no! In fact, growth in Nigeria has not been pro-poor in the period studied. For growth to become pro-poor in Nigeria, i.e. for the poor to benefit from growth more than others to a significant and sustainable extent, the Nigerian government must institute pro-poor policies, and put in place mechanisms to implement the policies to ensure that the poorest of society are prioritised in every decision made by the government in fostering growth and improved living standards in Nigeria. However, given Nigeria’s high rates of corruption at all levels of government, this might prove to be a very difficult thing to do.
References


Global Value Chain Participation and Inclusive Growth in selected African Countries

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Abstract
Global value chain participation (GVC) has been identified as one of the means by which African countries can achieve inclusive growth, given that it offers an easy way to access the world market with its huge potential. GVC is claimed to affect inclusive growth directly when the poorer segment of society gets employed in such productive activities and indirectly through economic growth. This study, therefore, investigated this claim by estimating the effects of GVC participation on inclusive growth, analyzed the effects of the components of GVC participation on inclusive growth, and explored the pathways through which GVC affect inclusive growth in selected African countries. Using a panel framework with the inclusive growth measure proposed by Anand, Mishra and Peiris as the dependent variable and the main independent variables of interest as the measures of GVC participation, the study finds GVC participation as a significant driver of inclusive growth in the selected African countries. Coming from a low and the downstream end of international supply chain involvement, this study recommends that the selected African countries should pay much more attention to its development in order to realize its full potential.
The causal effect of income on household energy transition: Evidence from a regression discontinuity analysis

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Abstract

Much of the existing literature contends that household income is a key determinant of the household energy transition towards clean modern fuels. Yet the causal connection between income and fuel choice is difficult to pin down, given the obvious endogeneity bias that may arise from reverse causality and omitted (unobserved) confounding variables that are correlated with both income and energy use. We exploited exogenous variation in household income resulting from a unique natural experiment in South Africa- age discontinuity in eligibility for Old Age Pension (OAP) benefit- to identify the causal effect of income on fuel choices. Using a regression discontinuity design with categorical outcome, we find that household’s energy choices do respond to changes in income. In particular, we find strong evidence that additional pension income for an elderly person encourages his or her household to shift towards greater electricity use, and to decrease use of both biomass and other traditional fuels. This result remains generally consistent when we disaggregate the results into three major energy services – lighting, heating and cooking – for which these fuels act as substitutes. Moreover, our analysis of the effect of the income transfer on conditional energy demand indicates that consumption of electricity and other energy sources increases overall, suggesting that energy use is a normal good. Overall, our study presents the first causal evidence of the role that income plays in the hypothesized climb up of the energy ladder, in the context of an important and populous middle-income country.
The needs and challenges of SMEs in the City of Johannesburg: A focus on the Entrepreneurship Ecosystem

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Abstract
Entrepreneurship ecosystems have increased in popularity as an approach to fostering more entrepreneurial activity and, hence, spurring economic growth. This research was a propagation of this phenomenon within the context of Africa and South Africa, focusing more specifically on Johannesburg.

The purpose of the study was to explore the state of the City of Johannesburg’s entrepreneurship ecosystem and better understand the gaps and weaknesses that cause the ecosystem not to function optimally. Drawing from Daniel Isenberg’s entrepreneurship ecosystem framework as a theoretical foundation, a framework was developed to better understand the entrepreneurship ecosystem of Johannesburg by mapping the needs and challenges of entrepreneurs.

Primary data was collected through a survey which was administered across the city’s seven regions. This was a cross-sectional, quantitative study with a sample of 1099 entrepreneurs. Data analysis included aggregating and analysing the data through descriptive statistics, simple observation, comparison and pattern recognition.

The study findings showed through the map of the City of Johannesburg’s entrepreneurship ecosystem that the issues faced by entrepreneurs across different regions are not different by much and that there is relative homogeneity between the different regions. The key challenges (in no specific order) were access to markets, equipment, and suppliers and the critical needs identified were investors, suppliers, and entrepreneurship education.

After mapping the challenges and needs of entrepreneurs to the ecosystem framework, it was evident that the three entrepreneurship ecosystem domains which represent the most significant challenges and needs of entrepreneurs in the City of Johannesburg were access to markets, finance and human capital.

This study’s findings have practical and theoretical implications. First, the city can develop their own entrepreneurship ecosystem framework using Daniel Isenberg as a foundation and map the needs and challenges to the framework in order to focus resources to the right ecosystem domains for a functional ecosystem and consequently for economic growth.

Keywords: Entrepreneurship ecosystem, Complex theory, Entrepreneurs’ challenges, Entrepreneurs’ needs
A Critical review of business incubators and their role in creating entrepreneurial leaders

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Abstract

Despite the prevalence of business incubators as platforms through which new ventures can be technically and financially supported, there is controversy on the extent to which a one-size-fit approach to business incubator support (financial, technical, Human Resources and marketing support) can be applied to all emerging ventures. More so, the exact value addition of these platforms or institutions is yet to be fully explored. The Global Entrepreneurship Monitor 2017/2018 reveals that the South African Entrepreneurial Activity is at its highest level since 2013 (4.1 percent points higher than in 2016). The ultimate growth and sustainability of new ventures is vital for the economy as it contributes to increased employment and higher consumer spending. A list of 58 business incubators (2019) in South Africa that emerging ventures can choose from has been published. This paper seeks to explore the critical role business incubators play to assist entrepreneurs to grow their business and in doing so enable them to become entrepreneurial leaders. A qualitative deductive research approach was followed. The primary applied research method was a desk top research exploring peer reviewed journal articles, scanning government, global and local reports on the state of SMEs and incubators in South Africa. Three well known business incubators were visited. Secondary data findings revealed more than 20 business incubator models. Different types of business incubators identifies are state-owned; private sector; university driven and mixed ownership types. One business incubator operating model does not necessarily fit all emerging ventures or addressing their unique needs. It is recommended that business incubators clearly state conceptualise their own operating model, their value-add to prospective emerging entrepreneurs and to be clear whom their emerging new or existing venture target market is. Emerging entrepreneurs should have access to knowledge to assist them to choose a business incubator fit for their purpose to enable them to become entrepreneurial leaders. Future research should focus on mapping a cohesive map of business incubators, their characteristics, services they offer, target market and most of all, a clear record, after the incubation period, of sustainable entrepreneurs who emerged as entrepreneurial leaders within their respective industries.
Microfinance and Financial Inclusion in Africa

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Abstract
We document the current state of the microfinance sector in Africa and examine how it might help bridge the financial development gap using data from the microfinance information exchange (MIX) and the World Bank’s global financial inclusion (FINDEX) databases, as well as reviews of pertinent literature and government reports. Also, the authors make recommendations not only on how to improve existing microfinance institutions but also on how best to utilise the sector, alongside mainstream financial institutions and markets, for better financial development outcomes. Among other benefits, our documented insights provide useful guides for fostering financial inclusion in the continent. The motivation of the study is that although Africa has taken some strides to deepen and improve its financial institutions and markets, most Africans still lack access to formal financial services and, thus, rely instead on the ill-equipped informal financial services sector. However, observers and stakeholders such as researchers, development agencies and creditors, have suggested and pushed microfinance as a credible and sustainable complement to the below-strength mainstream financial institutions and markets, in addressing Africa’s financial exclusion.
Household Engel Curve Analysis in Nigeria for Food, Health, Education and Non Food Expenditures

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Abstract
The objective of this paper is to analyse household consumption expenditure share in Nigeria for food, non-food, health and education. The paper uses the General Households Survey (GHS) dataset for wave1 and wave2 developed by the Nigeria Bureau of Statistics (NBS). In order to analyse the household expenditure share of four categories of household’s expenditure comprising food, non-food, health and education, the paper estimated the Working-Leser Model using the OLS. The result show that; food expenditure accounts for the largest share of household expenditure in Nigeria in both wave1, with wave1 having the significant increase. While on the other hand household expenditure on health, education and non-food expenditure have the lowest share of the total household expenditure in Nigeria. The policy implication of these findings is that the proportion of what the households spend on food is very high which indicates an increase in the level of poverty. Also the finding suggests that health and education cannot be assumed to be high-priority components of household expenditure in Nigeria, as education, health and non-food expenditure account for an insignificant share of the household total expenditure.
Crude oil shocks and stock returns in African stock markets

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Abstract
In this paper we investigate the impact of crude oil shocks on selected African stock markets using a Structural Vector Autoregressive model and a two-state regime Markov-switching framework on monthly data from January 2000 to July 2018. Countries selected are classified into oil-exporting (Nigeria, Tunisia, and Egypt) and oil-importing (Botswana, South Africa, Kenya, and Mauritius). We find that oil supply shock is statistically insignificant for all countries with the exception of Kenya; oil demand shock is positive in at least one regime for all countries and oil specific shock is statistically significant for oil exporters with Nigeria having a negative impact on their stock returns, Tunisia having a negative and positive impact at different regimes and a positive impact for Egypt. For oil-importers, oil specific shock has a positive impact on the stock returns of all countries except for Kenya. The findings from this study has important implications for investors whose portfolios may comprise of assets from African stock markets and crude oil. Given the importance of oil in the global market one would typically avoid equities that suffer from its shock. This study provides the indicators to inform that decision.
Exchange Rate Volatility and Tax Revenue Performance in Sub-Saharan Africa

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Abstract
Efforts to spur growth in sub-Saharan Africa has been intensified amid structural and institutional constraints. Tax revenue, the chief source of funding for developmental purposes in the sub-region remains low and unstable. In fact, the sub-region finds it difficult generating tax revenue up to 20 per cent of GDP. One factor that has not caught the attention of policymakers in terms of its impact on tax revenue performance is exchange rate volatility. Using macro-data spanning 1984 to 2017 for 21 countries, the study provides empirical evidence from a dynamic heterogeneous Autoregressive Distributed Lag technique to show that exchange rate volatility is deleterious to tax revenue performance. Further, the study shows an exchange rate volatility pathway to tax revenue performance through trade liberalization in sub-Saharan Africa.
The Ghana Revenue Authority and VAT: silver bullets or wasted efforts?

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Abstract
This study examines the impact of the formation of the Ghana Revenue Authority (GRA), and the implementation of VAT on domestic resource mobilization efforts in Ghana, from 1983 to 2016 using ARDL bounds test. The results show that, the two reforms did not significantly improve revenue productivity in Ghana. In the case of the VAT, its implementation generally negatively impacted on domestic resource mobilization at various levels. The GRA did not have any significant impact on revenue growth. Resourcing GRA and improving its autonomy could help raise more tax revenues. Important lessons for tax reforms are discussed in the paper.
The mediating effect of entrepreneurial self-efficacy on business experience and performance of women-owned enterprises

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Abstract
There are many studies that investigated the performance of women owned enterprises with different findings. Some scholars suggest that businesses that are owned and run by women entrepreneurs do not perform well in comparison to their male counterparts. While others suggest the existence of women entrepreneurs that possess both experience and the necessary skills will lead to ventures that perform well irrespective of their gender. The purpose of this study therefore was to investigate the extent to which entrepreneurial self-efficacy (ESE) mediates the relationship between business experience and performance of women-owned enterprises in South Africa. A quantitative method was adopted to collect primary data and the research design was cross sectional. Multiple regression was employed to analyse data of 122 women entrepreneurs. The findings showed that the level of business experience of women entrepreneurs is high but the level of entrepreneurial self-efficacy was not convincingly high. Nevertheless, it was evident that there was a relationship between the two constructs. One finding that was interestingly against conventional wisdom was that business experience did not significantly influence financial performance and growth. There was no evidence of a mediating effect of entrepreneurial self-efficacy on business experience and performance.
A shift towards small business oriented economic policy for sustainable development in South Africa: A theoretical perspective

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Abstract

The purpose of this study is to assess the potential state of the small business sector in South Africa as an alternative orientation to grow the domestic economy vis-à-vis FDI oriented development path. The study is motivated by the realisation that despite emerging global evidence that small business underpin economic growth and provide a sound basis for the attaining sustainable development goals, South Africa continue to take a foreign direct investment-oriented (FDI) growth path by premised on attracting multinational companies (MNCs) to build its economy. To answer the research question, this study adopted a literature review methodology. Findings of the study postulate that in as much as big business-oriented development approach positively impact on macro-economic indicators such as gross domestic product (GDP), such positive outcomes do not establish a sustainable development framework in the absence of equitable redistributive mechanism that allows for mass participation in the economy. Thus, without prejudice to multinational companies (MNCs) and their contributions, this study advocates for sustainable economic development policy shift towards supporting small business growth in South Africa given their impetus to stimulate broader economic participation among the citizens in a way that directly address socioeconomic challenges such as inequality, high unemployment rates, poverty and social instability present in the country.

Key words: foreign investment, large business, small business, sustainable economic growth

1. Introduction and background

In contrast to emerging global trends suggesting small business sector growth underpins sustainable development ambitions, developing countries continue to court multinational companies (MNCs) as part of foreign direct investment (FDI) to grow their economies. Literature posits that attracting foreign direct investment (FDI) is the preamble of most economic policies drawn by developing countries’ (Adams, 2009; Haskel, Pereira & Slaughter, 2002) because these countries believe FDI has the impetus to facilitate the achievement of socioeconomic goals (Ayanwale, 2007; Herzer, 2015). Examples of incentives these countries offer to attract MNCs as FDI proxy include offer generous tax and financial incentives (Kamara, 2013) In South Africa, government economic policy initiatives such as the Growth, Employment and Redistribution (GEAR), Accelerated and Shared Growth Initiative for South Africa (AsgiSA), New Growth Path (NGP) (Masipa, 2018:1; Jeppesen & Barnes, 2011) all show affinity to foreign investors attraction.
believing that this will enhance economic growth, create jobs and supplement domestic expenditure. However, available evidence (Dzansi, 2004; Kloppers & Kloppers, 2009; Chimucheka, 2013) attest that in South Africa FDI has fallen short of creating adequate jobs, higher employee wages, job security, social stability, equal access to and fair distribution to resources and income to citizens given massive levels of poverty and unemployment in the country. Perhaps it is important to state that propensity to be FDI oriented in South Africa is a recycled theme since the attainment of political freedom, even if its impact has taken long to be justifiable in an era of a perpetual state of underdevelopment in the country. In one sense, this trend is not accidental. Like most other African countries, colonial ties and the influence of global financial and development aid institutions such as the World Bank and apparent lack of trust in home-grown solutions seemingly set the development path for South Africa. Thus Fieldhouse (2006) is correct in proclaiming that governments of less developed countries like South Africa fall captive to external influences because they might not have the sophistication (or perhaps the patriotism and concern for public welfare) which might enable them to judge whether the costs of providing conditions attractive to MNCs will outweigh the direct economic benefits their countries might obtain and above all, to determine the other non-economic considerations specific to the less status which outweigh benefits provided by MNCs. Thus, in the ensuing FDI discourse, the negative impact of external investments to local economic agents such as small medium and micro enterprises (SMMEs) and the standards of living outcomes is understated.

In light of the above fact that MNCs as FDI proxy have not shown to be an effective catalyst for development in South Africa, this study aims to argue for SMMEs as an effective alternative path towards attaining holistic development outcomes beyond narrow economic focus. In making this call, we agreeable with Kumah and Omilola (2014), a UNDP sponsored research output entitled Small business is big business: A UNDP Perspective on SMME Development in South Africa. In that study the authors’ state that faced with a host of incurable socioeconomic challenges such as slipping rates of economic growth, persistent structural constraints, including high inequality, high unemployment and sluggish demand South Africa needs a radical economic structural transformation underpinned by the small business sector at the centre because of its ability to establish an economic trajectory that is inclusive, sustainable and equitable (Kumah & Omilola 2014:3). Thus this study can be viewed as adding insight into why there is need to consider the small business development path as an alternative route.

1.1. Statement of the problem

Arguably, whereas for a variety of reasons, FDI inflow into Africa has proved elusive (Adeola, 2017:47) believing that this will enhance economic growth, create jobs and supplement domestic expenditure. However, available evidence (Dzansi, 2004; Kloppers & Kloppers, 2009; Chimucheka, 2013) attest that in South Africa FDI has fallen short of creating adequate jobs, higher employee wages, job security, social stability, equal access to and fair distribution to resources and income to citizens given massive levels of poverty and unemployment in the country. Perhaps it is important to state that propensity to be FDI oriented in South Africa is a recycled theme since the attainment of political freedom, even if its impact has taken long to be justifiable in an era of a perpetual state of underdevelopment in the country. In one sense, this trend is not accidental. Like most other African countries, colonial ties and the influence of global financial and development aid institutions such as the World Bank and apparent lack of trust in home-grown solutions seemingly set the development path for South Africa. Thus Fieldhouse (2006) is correct in proclaiming that governments of less developed countries like South Africa fall captive to external influences because they might not have the sophistication (or perhaps the patriotism and concern for public welfare) which might enable them to judge whether the costs of providing conditions attractive to MNCs will outweigh the direct economic benefits their countries might obtain and above all, to determine the other non-economic considerations specific to the less status which outweigh benefits provided by MNCs. Thus, in the ensuing FDI discourse, the negative impact of external investments to local economic agents such as small medium and micro enterprises (SMMEs) and the standards of living outcomes is understated.

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invest in foreign lands not to better the welfare conditions in the host nation but to exploit as much as possible for the betterment of their home countries. These realities prompt a need to adopt a for a stronger national development policy shift targeting the promotion of local economic potential. According to Taiwo and Olayemi (2015), studies conducted in sub-Saharan Africa assessing the causal relationship between FDI and economic growth have produced mixed results, between no and bidirectional causality. Gohou and Soumaré (2010) also mention the assumption that economic growth hinged on attracting MNCs is a good proxy for welfare development has been challenged. In that debated context thus, an alternative to an FDI-oriented development policy is warranted.

The research question, therefore, is: what evidence would justify a policy shift towards small business support to steer the development path in South Africa?

To answer this question, this study will theoretically review the impact of FDI in the country and then turn attention towards highlighting the positive contributions of SMMEs to development issues as espoused by Seers (1979) and Ahmed (2007) in South Africa. The rest of the paper is include research design, literature review, and discussion and conclusion sections.

1.2. Research design

1.2.1. Method of study

This study is a non-empirical research based on a thorough review of literature. From a broad range of literature consulted, 50 sources with relevance the research question about the FDI and the impact of MNCs in developing economies, how small business contribute towards addressing development matrices, and conceptualising the meaning of development were selected for inclusion in this study.

Table I. Sources included in this study

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<th>Type of Source</th>
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<tr>
<td>Conference papers</td>
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<td>Institutional publications/Reports</td>
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Table I. Sources included in this study

The inclusion criteria considered both local and global literature and used key phrases such as “impact of MNCs in Africa, impact on FDI in developing economies, MNCs and development, and the contribution of small businesses in socioeconomic development” to generate relevant literature from online sources and library book indexes.

1.2.2. Research theoretical issues:
This study applied the dependency theory of development. According to Adams (2009:180), the dependency theory predicts that FDI inflows may slow growth and produce greater levels of income inequality. As literature will show, the predictions of the theory are evident in most developing countries, including South Africa economic growth indices are low despite liberalisation efforts to attract FDI (Adeola, 2017:47) and income inequality is among the highest in the world.

**Small business:** While defining SMMEs differs according to region, country or even individual researcher’s preference it is potentially true all SMMEs have the size of a street vendor to enterprises employing less than 200 people (Tustin, 2015:79). This study adopts Tustin’s view as its operational definition of small business. We contend this provides a basis to account for the contribution of centres of economic activity which are otherwise neglected by formalised and regulatory based small business definitions.

**Multinational Corporation (MNC):** An MNC is a “firm that owns or controls income-generating assets in more than one country” (Fieldhouse 2000:167). This definition implies the firm has established a presence in South Africa, but has its parent company in another country. Thus for this purpose of this study MNCs is a proxy for FDI and are used interchangeably dependent on context. Theory supports a view that MNCs go pursue opportunities outside their country for satisfying their profit and growth aspirations such that their commitment to local development concerns is limited.

2. Literature Review

2.1. What is development?

A universal conception of development is elusive, with general ideas alternating between an economic and a multidimensional perspective, which see development as beyond the economic domain (Adah & Abasilim, 2015:276). This jockeying pattern is as historical as it is recent. In the late 1970s, Seers (1979) defined development by posing questions such as; what is happening to poverty, unemployment and inequality. Later on Ahmed (2007) proclaimed development as a measure of the general improvement in the material, social and psychological conditions of a given human society. In agreement with Ahmed, Oghator and Okoobo (2000) had earlier stated that development goes beyond the increase in per-capita income or economic growth to include sustainable outcomes linked to raising the living standard. It seems the definition of development has looped towards a broader interpretation with realisation that there is more to people’s quest for happiness than simply having access to monetary resources. Thus progressive development theorisation of development has begun to account for other non-monetary human needs such as religious freedom and human rights in measuring development. By default therefore Ahmed’s (2007) and Oghator and Okoobo’s definitions are more applicable to the scope of South Africa’s development dimensions. South Africa grapples with a host of socioeconomic problems from 28% level of unemployment, the highest level of inequality in the world, low export capacity, crime, global indebtedness, high incidences of HIV/AIDS, political uncertainties, racial tensions and poor service delivery marked by protests and strikes. These indices suggest a state of
underdevelopment rebutting claims by Mosikari, Nthebe and Eita (2018:3) that FDI has bequeathed capabilities to meet sustainable development goals in the country.

In light of the foregoing, our working definition of developments in this study stresses a welfare approach to include measures of access the political, social, racial religious and cultural elements that improve human life experiences. In our view, this conceptualisation of development brings coincides consistent with the broader meaning of sustainable development.

2.2. MNCs and development in South Africa.

Up to a certain point, it is hard to dispute the positive contributions of MNCs in the South African economy. Large foreign firms are responsible for modern technological transfer, job creation and supporting integrating the local economy with the global network (Taiwo & Olayemi, 2015). Additionally, as a form of FDI they supplement domestic savings, enhance operational efficiency of local industry, develop and support local suppliers, as well as create opportunities for upgrading human resource skills (Dupasquier & Osakwe, 2006; Anyanwu, 2006). They improve consumer welfare by introducing better and cheaper products in the market and sharpening competition (Rugraff & Hansen, 2009:16). Rugraff and Hansen (2011) as well as Blomström and Kokko (1998) also state that MNCs effect positive externalities to the local economy through spillovers. However, a conceptual interpretation of the spillover theory suggests MNCs underinvest in direct impact projects to communities hoping to do so through the diffusion of their operational and technological advantages, some of which may not be accessible to everyone. In any case, all developing countries have played host to MNCs for generations, yet the postulated impacts are still largely theoretical. To this end, it is apparent that the spillover model has limited impetus to deal with development issues in unsophisticated and non-industrialised communities in developing nations.

In their study of MNCs employment potential in Brazil, Botelho and Pfiste (2011:217) found that although MNCs are vital sources of income and development, their employment generation potential is not proportional to their size. This conclusion stems from observing that in 2008, although 420 MNCs out of the world’s top 500 had affiliates in Brazil, the total net effect of all amounted to only 2% of all jobs created. Similarly, in South Africa large firms have not been able to create jobs proportional to their size. Instead the current is job shedding through retrenchments and firms closures (Du Plessis, 2016), the result of which employees will seek self-employment opportunities to survive. Thus beyond being an alternative economic development strategy, a policy shift towards small business growth is a curative approach to failures by the FDI oriented strategy to deliver on key development matrices- poverty, unemployment; inequality; general upliftment in the material, social and psychological conditions.

Taiwo and Olayemi (2015:74) also state poverty-related social challenges evident in South Africa scare foreign investment. In our view, the authors insinuate that security of potential economic returns rather than problem solving is the preoccupation of an FDI or MNC oriented development policy in contrast to a small business orientation, which, from a survivalist perspective is necessity driven. Additionally, on analysing the potency of FDI as a trigger for sustainable economic growth Msuya (2007) found evidence suggesting FDI contributes to economic growth only when the host
country has reached a developmental level capable of absorbing the advanced technology that it brings. On the contrary, a quick introduction of MNCs into the economy before local industry achieves requisite technological capabilities is devastating as evident in the faltering South African textile and clothing industry. Jeppesen and Barnes (2011) investigated the demise of this industry and found that equipped with outdated and low technological advancement capacity, the industry needs to have acquired a certain level technological progress and a good knowledge of external markets before it could be exposed to foreign competition. From this perspective because FDI impact demands a certain level of technical competency absent in most developing economies, its suitability to stimulate development is highly compromised.

Regarding upholding human rights in developing countries, MNCs have not scored any better. In South Africa, the tragic Marikana Mine incident is symbolic of how MNCs can trade off human rights to protect their business interests (Bond, 2014). Some research also indicates FDI presence has promoted gender discrimination through heavy industrialisation that favour the employment of men compared to women. For example, Barriento, Kabeer and Hossain (2004:8) investigated the impact of FDI on women emancipation as a developmental outcome and found, in some cases that the presence of heavily industrialised and technologically driven MNCs reduced women’s job opportunities because men dominate science and technology. In contrast, small business gender based data show more women dominate the sector albeit its low impact potential at a unitary level. Incidentally, employment data from foreign-owned companies dominated Johannesburg Stock Exchange (JSE) show less than 30% of women occupy executive positions (Business Engage Association NPC, 2017), with Ntim and Soobaroyen (2013) reporting the average board having only one female (10%). Arguably, the equity ownership structure of these firms reveals inequality between black and white races. Thus, claims of middle-income national development status (Jeppesen & Barnes, 2011) based on pure economic indices that musk non-economic indices as above, exaggerate the impact of MNCs towards the realisation of sustainable development objectives in the country.

2.3. SMMEs and development: a shift from an FDI oriented policy paradigm.

An important dimension of the small business sector in relation to sustainable development is its ability to address other non-economic development matrices in ways MNCs cannot. This is because when talking about small business human non-economic outputs such as facilitating social harmony, community cohesion, family lifestyle and local opportunities dominate the discourse. Thus within the definitional uncertainties the small business sector act in ways consistent with development as a construct beyond economic development. Spence (2016) alludes to the fact that small business possess welfare distributive capacities large business do not have because they embed community welfare as one of the core reasons they exist (Spence, 2016) in business social responsibility terms. Essentially, to the extent the small business sector impact on human welfare, we argue that ‘growth’ per se, more accurately in economic parlance, is not development, because there can be development (improvement in human life experiences like social harmony) without growth (GDP figures) because GDP growth unaccompanied by unequal distribution of income simply creates more inequalities as evident in South Africa. Like Oghator and Okoobo (2000) we thus conceive economic development only as one among many
values of human progress and find problems with an FDI-oriented policy framework focused only on narrow economic indicators.

According to the South African Competition Commission (2013:07), about 99% of the firms in the country are small contributing 53% to both employment and GDP. Mahembe (2011) posit small business serve as the backbone of “economic industrialization”, while Zeka (2011) submits in South Africa SMMEs have remained resolute in improving economic growth, create jobs, improve quality of life and stabilise the social and political structure of the economy. Similarly, Kloppers and Kloppers (2006) reckon the small business sector is an important path towards poverty alleviation and serve as an essential link towards sustainable development. Abor and Quartey (2010) report that in South Africa small business account for an estimated that 91% of the formal business entities. Concurrent global data also show the small business sector dominate the world business stage. Ayyagari, Demirgüç-Kunt, and Maksimovic (2011) estimate more than 95% of firms across the world are small businesses, contributing approximately 60% of private sector employment. In the Asian region, Japan has the highest proportion of the small business population at more than 99% of its total firm size (Edinburg Group Report, 2012:8). By implication, all these studies contend the realisation of development goals in South Africa and other countries rely much on the small business sector than large business, most of which are foreign-owned.

Mitchell (2013:27) also conducted a study in South Africa and vouch for a small business orientation based on government and large business failure to address the socioeconomic ills facing the country and create a racially diverse economy. Machirori and Fatoki (2013:115) points out that large firms have been unable to solve major economic problems and their commitment to improving the welfare of the citizens is suspect. For example, in the mining sector where foreign firms are dominant, Coleman (as quoted in Mail & Guardian, 2010) states this sector has generated social squalor conditions for communities, with executives getting all the money and the workers struggling to survive”. Similarly, Du Plessis (2016) reports massive retrenchment exercises this sector leading to joblessness and increased incidences of poverty and social decay. Studies also show large firms lag behind addressing issues of transformation (Sanchez, 2011) thus maintaining inequitable structures inherited from apartheid in workplaces.

In contrast the works of Dzansi (2004) reveals small business sector bring life to rural communities, spur growth of social and economic activities, link rural areas with urban areas and through corporate social responsibility, activities serve as a magnet for social cohesion. In a country classified as one of the most economically unequal societies in the world (World Bank, 2016), with high income, disparity between the rich and the poor, small business create a channel for the poor to access income and cushion themselves from falling into the poverty trap. Conscious of conflicts for jobs between the nationals and foreigners, Fatoki and Chiliya, (2012) assert promoting the small business sector through entrepreneurship avoids the conflict and thereby enhance social stability.

A review of the 18 United Nations sustainable development goals (Assembly, 2015) suggests MNCs violate or neglects to address 17 them, except profit aligned industrialisation and economic growth themes. As a result, in poor nations, development themes such as gender equality and women’s empowerment, food security and nutrition as well as creating peaceful and non-violent
societies and capable institutions remain muted from the development framework hinged on MNCs attraction.

However, a proposition towards a small business-oriented development policy does not impute MNCs are wholly detrimental to the local economy. To the contrary, development theory suggests FDI, through its spillover effect can only make meaningful contributions to development in situations where the local industry is alive (see Jeppesen & Barnes, 2011; Msuya (2007). MNCs also gain foreign currency through exports. Thus while a short term perspective might suggest dumping an FDI oriented policy worsens the welfare conditions in developing countries, a long term view anticipates that growing the local industry ensures a positive synergy between incoming foreign investment and local firms.

Most of the giant corporations that dominate the landscape of the emerging global economy began as small businesses (Acs, Morck, Shaver & Yeung, 1997:7). In expressing this view, the authors’ intimate that if small business are well supported, they could survive and assist in addressing some of the developmental challenges on a larger scale. Additionally, most MNCs that dominate the global economy originates in continents outside Africa suggesting that such economies set up effective policies and programs that acknowledge the importance of investing in local productive capacity. In that sense, South Africa could do well to follow that trend.

3. Discussion

While MNCs have long been courted as conduit for development in poor countries, anti-development issues such as environmental abuse, human rights abuses, creating ghost town, instigating political instability, and acting as foreign government proxies to influence local policymaking and stifling local industries stand out as their notable contributions to local communities. Newell and Frynas (2007:672) adds that in developing economies some large multinational corporations (MNCs) end up acting like de facto governments because they influence government policy. The Gupta family links and the state capture allegations in South Africa amplify Newell and Frynas observations. In light of these negative traits, Abor and Quartey (2010:18) posit small business may well be a countervailing force against the economic power of larger enterprises. This is because the small business have no interest and capacity other than to pursue socioeconomic objectives directly related to their immediate survival and serving local communities.

In addition, although claims could also be advanced that FDI have contributed to economic growth, the results have not been the broad-based, equitable and resulted in the reduction of poverty and entrenching economic sustainability as evident in South Africa. In South Africa access to both social and economic resources is still determined by race and class privileges shaped from colonial years and MNCs networks play a huge role in defending the status core.

4.1. Conclusion
This article has reviewed theory and empirical literature on FDI and small business in view of how they could affect development in South Africa. Our view is towards adopting a policy shift towards small business oriented economic policy for sustainable development in the country. Development theory and its concomitant studies offer only persuasive evidence on the extent to which FDI does positively on development in less developed economies, but only in economic terms. Our contention is that FDI is a route for foreign firms to maximise profits and not develop local communities, thus are unsuitable for South Africa’s sustainable development aspirations, which go beyond economic growth or per capita income alone but include attainment of racial, political, social, cultural, religious freedoms given the history of the country.

References


Kamara, Y.U., 2013. Foreign direct investment and growth in Sub-Saharan Africa what are the channels. Available at: 


Mitchell, B., 2013. The Role of networks in mobilising capital in different ethnic groups in South Africa a mixed embeddedness approach to entrepreneurship, Barcelona: Doctoral Thesis Department of Business Economics Universitat Autonoma


South African Competition Commission 2013 Report


Monetary Policy and Macroeconomic Instabilities: Application of Heterogeneous Agents' DSGE Model for Ghana

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Abstract

The role monetary policy in macroeconomic stabilization remains an all-time research problem for central banks, particularly in developing economies as they are confronted with relatively large and recurrent macroeconomic shocks entirely different from their developed counterpart. In line with the growing empirical literature, the objective of this study is to develop and estimate DSGE model with Bayesian techniques for monetary policy analysis using Ghanaian data. The study also seeks to determine the most appropriate monetary policy rule for developing African economies, like Ghana. Afterward, the model with appropriate policy rule is used to determine the dominant macroeconomic shocks to inflation, output and interest rate as well as ascertaining whether policy response to shock are consistent with economic theory. The following empirical outcomes are worth highlighting. The study identifies forward-looking monetary policy as the most appropriate policy rule in the context of Ghana. We also find that shocks that are relevant for output are price mark-up shock, labour supply shock, monetary policy shock, productivity shock and foreign inflation shock. This suggests that monetary policy still matters for output growth in Ghana even the short-to-long run. However, we detect exchange rate shock and price mark-up shock as the dominant determinants of inflation, while price mark-up shock, domestic monetary policy shock and government spending shock are major drivers of domestic interest rate. Monetary policy responses to macroeconomic shocks are found to be broadly consistent with economic theory, as contractionary (or expansionary) stance follows macroeconomic shocks that tend to exacerbate (or dampen) aggregate demand pressures. The empirical results also show evidence that positive government-spending shock crowds-out private consumption and investment. By implication, upholding exchange rate stability alongside fiscal prudence is very critical for achieving the broad macroeconomic objectivities in Ghana.
Does high public debt level constrain the interest rate setting behaviour of the South African Reserve Bank?

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Abstract
Constraints exerted on interest rate setting behaviour of central banks is well acknowledged in the literature. However, the nature and extent of such constraints is largely unexplored empirically. The only study in the literature failed to provide confidence intervals for the threshold estimate, a limitation that raises concerns of precision of such an estimation for the purposes of policy. We modify a Taylor rule to account for debt constraint on interest rate setting behaviour of the South African Reserve Bank, relying on the sample splitting and threshold estimation technique that delivers confidence intervals devoid of nuisance parameters observed in other threshold techniques. We find that the policy response to inflation gap in the high debt regime (above the estimated threshold debt to GDP ratio of 34%) is substantially constrained. The extent of inflation accommodation is even more pronounced on the back of a challenging growth trajectory. We discuss key policy ramifications.
Investigating the Structural Stability of the Theoretical Money Multiplier Model in Lesotho: A Flexible Least Squares Approach

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Abstract
This study investigated the structural stability of the theoretical money multiplier model for Lesotho using Flexible Least Squares (FLS) and monthly data from 2010M1 to 2018M12. FLS results indicate that the Ordinary Least Squares (OLS) solution for the money multiplier model is not robust to a relaxation in the assumption of time-invariant coefficients. Conversely, empirical evidence reaffirms the prior belief of slow coefficient evolution in the country’s money multiplier model. The study recommends for there to be allowance of even small amounts of coefficient time variation in the specification of the money multiplier model for Lesotho. This will lead to reductions in explained variance emanating from the measurement equation.
What monetary policy rule best characterize the behaviour of Bank of Ghana?

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Abstract
We study the monetary policy behaviour of the Bank of Ghana using the Taylor rule. We examine whether an augmented linear and nonlinear Taylor rules with exchange rate best characterize the monetary policy behaviour using sample splitting and threshold estimation techniques. Asymmetric reaction to inflation gap is found when inflation falls below or exceeds our estimated optimal threshold of 15.3%. The Bank of Ghana is not responsive to output gap and exchange rate on either side of the threshold in the setting of policy rate. Importantly, we find that the monetary policy behaviour of the Bank of Ghana is far from the linear characterization and parametrization so common in the literature. Surprisingly, we find a considerable accommodation of inflation by a central bank that is supposed to be targeting inflation. We question the logic behind the prevailing upper and lower bounds given the evidence to the contrary. A number of policy paths are chatted for monetary policy effectiveness under a targeting regime.
Currency Crisis, Debt Trap, Budget Deficit Financing, and Inflation: Evidence from the Political Economy of Finance in Zimbabwe from the Turn of the Millennium to the November 2017 Coup (and Beyond)

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Abstract
Zimbabwe’s financial has since 2000 been at a crossroads. Few areas of Zimbabwe’s post-2000 political economy of finance have lacked academic scrutiny. However, the confluence of currency crisis, debt trap, budget deficit financing, and inflation, and how and why the four have since then dialectically influenced each other in many ways, has had surprisingly little attention since the turn of the millennium. This article is a welcome attempt to fill this epistemic gap. Many previous studies conducted on the subject focused, separately, on either of the four foregoing elements of Zimbabwe’s chequered political economy of finance after the turn of the millennium, not on how they relate, interact with or influence each other. The article locates the current Zimbabwean financial crisis in its historical context. Document analysis of government official documents and analysis of video data and excerpts of the interviews of public officials, notably from the Ministry of Finance, central bank and Parliament’s Public Accounts Committee, were done. The study established three major findings competing for dominance yet related in many ways. First, public financial indiscipline that caused financial mess was (and still is) a regime survivalist strategy against threatening regime change forces emanating from both within and without. Second, it was a sanctions-bursting strategy. Third, it is a subtle tool for elite private accumulation of public resources by way of manipulating public financial systems to their favour.
The French economists and the colonization of West Africa in the French economic reviews (1880-1920)

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Abstract
This paper deals with the French colonization in West Africa, and its analysis by the French economists between 1880 and 1920 in three of the leading economics journals, the Revue d’Economie Politique, the Journal des Economistes and L’économiste Français. We look at how the economists conceived and considered colonization, and participated to the colonial debates on West Africa. The initial approach is thus to identify the actors of the colonial economics debate on West Africa. Famous contributors appear, and the name of Charles Gide comes automatically when one thinks of the Revue d’Economie Politique; Gustave De Molinari is associated with the Journal des Economistes, and Paul Leroy-Beaulieu becomes the editor of L’Economiste Français a few years after the death of its founder, Jules Duval and stands like the major contributor on West African topics. But we are also interested in revealing the position of less famous economists and of high civil servants, publicists, soldiers, engineers or writers of parliamentary reports. The first contribution of our paper is to reveal that the colonial economic debates are derived from racist and racialist foundations, whatever the traditions the economists belong to. Then the second contribution is to highlight the ambiguous position of liberal economists on the role of the State in the colonization of West Africa -either in the social cooperative tradition or in the liberal one- on the main economic topics discussed in the pages of these journals: trade, administration as a whole, and public works. Finally this paper also reveals the position of economists on private initiatives: the free companies and especially the role dedicated to the chartered companies.
Are there Limits to Government Debt Sustainability? Empirical Evidence from Sub-Saharan Africa

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Abstract
The historical events of debt defaults and debt relief has shown the market reaction for debt sustainability in developing countries. In this paper we thus, aim to estimate the state contingent debt limits and provide insights in assessing debt sustainability in SSA. First, we employ a threshold model to estimate an endogenous government debt limits given the markets assessment of the probability to default. Secondly, we feed the debt limits in the primary balance reaction function to growing debt to establish the presence of “fiscal fatigue” property at high debt levels. Our paper thus, combines the primary balance reaction function with the market interest rate reaction to determine the growing debt and the debt limit beyond which debt cannot be rolled over. Our study is applied to selected SSA countries over the period 1995 – 2017. In fact, our framework illustrates the state contingent nature of debt limits and therefore the vulnerability of governments to a surging debt that prompts them to change macroeconomic conditions in relation to market reactions. The findings in this paper will have important policy implications for fiscal policy and debt sustainability for both developed and developing countries.
The concurrent effect of financial development and trade openness on private investment in India

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Abstract
This paper examines the role of financial development and trade openness in promoting private investment in India. We use data, 1960-2013, from the World Development Indicators database. After checking the time series properties of the data, we apply ARDL estimation technique to investigate the impact of the concurrent existence of financial development and trade openness on private investment. The results show that financial development and trade openness are important determinants of India’s private investment, both in the long run and the short run. However, the impact of the interaction between financial development and trade openness on private investment is significantly negative. Therefore, we conclude that care should be taken in the design of policies that allow for the coexistence of financial development and trade openness if India aims at promoting private sector investment for job creation.
On The Elasticity, and Buoyancy of Tax Systems in Ghana: Evidence from a Divisia Index Approach

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Abstract

This study explores the buoyancy, and elasticity conferring nature of tax systems in Ghana. We use the Divisia index approach and employ the ARDL model as our estimation technique. We find that, taxes in Ghana are both buoyant and elastic. But growth in tax revenue is largely driven by automatism and not discretionary measures. We advocate for the minimal use of discretionary measures to raise tax revenues as their impact on revenue generation is low. Lessons for tax reforms are discussed in the paper.
Banking Industry Response to Competition from the Financial Inclusion Paradigm in Africa

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Abstract
The recent paradigm shift from microfinance to financial inclusion has created conditions that have facilitated the expansion of financial services to a large number of previously unbanked clients. As a result, the market for low-income earners and poor households has emerged as a strategic market niche for commercial banks. However, the impressive growth in the size of donor-supported microfinance institutions (MFIs) has increased competitive pressure on the banking industry in the provisioning of financial services in the low-income market segment. Accordingly, this paper aims to examine the banking industry’s response to competition from MFIs, due to intermediation activities attributable to financial inclusion project in Africa. To do this, we compare how changes in MFIs market power affects bank loans to households and SMEs. We propose to use a sample of 20 countries in Africa and our sample period is between 2010 and 2017. We expect that our results will help policymakers to achieve the objectives of financial inclusion in markets that are experiencing increased competition for low-income earners.
Getting the most out of a collaborative Social System Structure in South Africa

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Abstract
This paper draws from research that applied Systems Thinking to the development of suitable social structures that may aid social learning within a South African context. The South African social system is rigid and top-down. Communities use protest as a bottom-up form of participation to control the lack of procedural clarity that hinders sustainable social transformation. A qualitative research approach was adopted using Grounded Theory methodology to investigate the social system structure in South Africa. A total of 35 participants were interviewed. It was found that the South African social system structure is characterised by a lack of openness, inflexibility, non-adaptability and an inability to learn. Based on the findings, recommendations will be shared on the validity of an appropriate social system structure for South Africa that may facilitate stakeholder/citizen participation in social transformational activities.
Analysing Foreign Direct Investment in Namibia: The Nature and Determinants of Spillovers

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Abstract
This study aims to provide evidence on FDI spillovers for Namibian firms in both the manufacturing and services sector using conventional and new measures of spillovers. The study also aims to identify the foreign firm and host country characteristics that determine these spillovers. The benefits of FDI to domestic firms encompass technology and knowledge diffusion through two main spillover channels; horizontal and vertical. While literature has attempted to measure FDI spillovers, evidence is focused on few horizontal spillover channels such as share of output and employment. However these do not represent the universe of spillover channels and disregard other horizontal spillover channels such as access to export markets, access to technology, innovation and gender differences in employment. The two sectors will largely differ with regards to competitive structures and sales, linkages created in the host country, the type and sophistication of technology they introduce, intensity and characteristics of labour. Moreover, gender differences arise with regards to investment in training and development, knowledge transmission and skill levels which is expected to result in differences in spillovers. Further, there is scarcity of evidence on vertical spillovers. In addition, there are sectoral differences in spillovers due to the different dynamics in the manufacturing and services sector in how they operate, yet existing evidence is dominant for the former. While there is evidence that spillovers vary in size and magnitude between countries, the determining factors of spillovers, such as foreign firm characteristics and host country characteristics are yet to be determined. Namibia provides an insightful context to study due to its unique geographical and economic characteristics as well as its policy environment. Data from the World Bank Enterprises Survey on Namibia for the periods 2006 and 2014 is used to compute relevant indicators on horizontal and vertical spillovers. Both OLS and IV 2SLS regression models are estimated on the determinants of FDI spillovers. The findings reveal strong horizontal spillovers through the female employment, market-access effects, innovation and technology diffusion channels. Backward linkages are stronger than forward linkages yet have declined over the years. Overall, spillovers for the manufacturing sector are stronger than the services sector. Determinants that show consistent relationships with spillover include the sector, firm age, access to finance and transport. Foreign ownership only shows a relationship with the innovation and technology spillovers.
The political economy of Africa’s integration, the continental Free Trade Area and Africa’s developmental regionalism paradox

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Abstract
This paper argues that the creation of Africa’s Continental Free Trade Area would run the risks of being caught up in Africa’s contemporary paradox of developmental regionalism. By a paradox of developmental regionalism the paper is making reference to the underlining assumption within Africa’s regionalism that makes the pursuit of collective development as a central objective. This has the built in assumption that the pursuit of integration and development are not inconsistent objectives to be pursued together. This paper argues that it is not always the case and that Africa’s pursuit of developmental regionalism as currently conceptualized needs to be revisited to make it more realistic by building cooperation incentives that will pull their member states towards cooperative developmental behaviour, rather than assuming that this would be the natural outcome of progress commitments towards linear stepwise ‘vinerean’ economic integration as per the Abuja Treaty. The reality is Africa’s economies are at different levels of development and need a different combination of incentives in their pursuit of development. A number of African countries also share a similar natural resource endowments and their patterns of trade predisposes them to compete for access to global markets rather than cooperate. This paper thus argues that the predisposition of African countries to compete rather than cooperate requires a reconceptualization of Africa’s developmental regionalism model and approach to integration. This is one amongst several lessons that ought to be gathered from Africa’s first half century of integration to make up the building blocks of the construction of the Africa Continental Free Trade Area (ACFTA). The paper therefore makes recommendations of the lessons that African integration needs to learn from its first half century of integration and from the integration experiences of other regions like the European Union in order to increase the prospects of the success and implementation of the ACFTA as a priority project that aims at addressing Africa’s developmental challenges.
The Impact of Trade and Transport Services on the Environment in Africa

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Abstract
This study investigates the impact of trade and transport services on the environment in Africa. Secondary data for 21 countries spanning 2000 and 2014 were used and analysed using POLS, FE, RE and PMG. These techniques revealed diverse results. The Hausman test was used to decide between FE and RE in the study. The Hausman test accepts the FE result. The POLS reveals that trade and growth reduces degradation in Africa, while transport services in the export and import sector and energy consumption increases degradation. The FE result shows that, trade, energy consumption and growth increases environmental degradation in Africa, while transport services in the import and export sector reduces environmental degradation in Africa. For the PMG result, findings show that in the long-run, trade, transport services (export and import), energy consumption, and economic growth increase degradation in Africa. In the short-run, trade and transport services in the import sector reduce degradation, while transport services in the export sector, energy consumption and economic growth positively impact on environmental degradation in Africa. The study concludes a mixed effect of trade and transport services on the environment in Africa. A major recommendation is that more energy efficient technologies should be used in Africa to meet the sustainable environment goal and this can be done by reviewing trade policy to encourage inflow of improved technology into the economies.
Valuation of water purification services of forests: Panel data evidence from South Africa

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Abstract
Water quality amelioration is one of the key ecosystem services provided by forests land use in the catchment areas of water supply systems, yet the magnitude of this service remain poorly understood in developing countries. In this study, we applied random effect models and least absolute shrinkage and selection (LASSO) regression method of machine learning to South African panel data to estimate the causal effect of natural forest cover on municipalities’ water treatment cost. We controlled for a range of confounding covariates including other land cover variables such as wetlands, plantation forests, grassland, woodland etc. Moreover, the LASSO_based instrumental variable (IV) method allowed us to simultaneously account for model uncertainty surrounding variable selection and endogeneity bias. Our results showed significant and robust evidence that natural forest reduces water treatment costs at the intensive margin. Specifically, estimates from our preferred models indicated model indicated that the marginal benefit of increasing forest cover is R310.63 /ha/year. Additional analysis showed that an elasticity response of water treatment cost to natural forest area is 0.02%. Our findings suggest that the opportunity cost of natural forest conversion into alternative land uses is higher than what has been previously considered in the South African policy arena when the value of forest’s water purification service is taken into account. Overall, we provide useful information for the design and evaluation of land use-based policies that aim at ameliorating municipalities’ drinking water quality and the attendant reduction in its treatment costs.

Key words: Water purification service, Forest, Machine Learning, South Africa

JEL Classification; Q51, Q57

1. Introduction
Although handful of prior studies have estimated the value of water purification service of forest land use, there is a dearth of such evidence in developing countries. This is more so in all of Africa, where forests losses are pervasive at a higher rate than is the case in the rest of the world and where the larger proportion of the population still lacks access to clean water. The present study is set out to respond to this paucity in literature. In effect, we estimated the value of the water quality amelioration service of forests by analyzing variations in the costs of supplying
potable water as a function of variations in natural forest cover within the catchment areas of water treatment plants in South Africa.

The majority of the world’s population obtains their drinking water from reservoirs or directly from rivers (Dudley and Stolton, 2003). Both the quality (purity) and quantity of this water is influenced by land cover and land uses within the catchment areas of these rivers as well as other factors such as underlying geology and point-source pollution. Water quality directly affects human health where people collect their own water, or affects the costs of treating water to an acceptable standard by water supply authorities (Postel and Thomson, 2005).

The hydrological and ecological literature suggests that forests and freshwater systems interact in several ways (Noordwijk et.al, 2018; Vose et.al, 2011). _Inter alia_, forest areas within watersheds generally result in higher quality of water than alternative land uses do; agriculture, industry and settlements are likely to increase the amounts of pollutants entering headwaters (Dudley and Stolton, 2003). Hydrological studies have confirmed that catchments with well-managed natural forests almost always provide higher quality water (less sediment and fewer pollutants) than water from other catchments (Carlson et al. 2014). Forests have an extensive root network and the capacity to generate porous and filtering soils (Abildtrup et al. 2013). Recycling, especially of nitrogen and phosphorus, is important. Nitrate levels are lower under forest cover than agricultural land (Jussy et al., 2002). Similar results are also observed for various pollutants (e.g., pesticides) (ibid).

In developing countries, the progressive loss of natural forest from catchment areas carries risks for human health and welfare through lowered drinking water quality, or through higher water supply costs that may burden poorer populations in particular (Postel and Thomson, 2005). Developing country cities suffer from a complex crisis of lowered water quality arising from the conversion of forests into agriculture and settlements (ibid). Contaminated water supplies have short and long-term health consequences including infant mortality, loss of work time and productivity and on already over-stretched health services within these cities (Dudley and Stolton, 2003). The poorest urban dwellers that do not have access to treated water bear the brunt of the problem.

Developed countries have largely responded to water quality problems arising as a result of land use changes by turning to increasingly sophisticated technological treatment processes to remove algae, pathogens and other contaminants from raw water sources of diminished quality (Postel and Thomson, 2005). They have invested billions of dollars in the construction and upgrading of water treatment plants to maintain the quality standards of public water supplies (ibid). In some countries, water utilities spend substantially higher sums on water treatment chemicals every year than the cost of investing in protecting lakes and rivers from pollution in the first place using techniques such as conservation of forest land (Postel and Thomson, 2005).

In particular, investing in protection of watersheds may provide a cheaper alternative. This ties in with growing concerns over high rates of deforestation and forest degradation, and the threats to forest ecosystem services in developing countries (Vincent et al., 2016).
However, the effect of land cover on drinking water treatment costs will need to be convincingly demonstrated in order for water utilities to invest in watershed management programs. Although, numerous hydrological studies have investigated the relationship between forest cover and water quality, only a handful of studies have focused on evaluating the value of forests in purification of water for human consumption. Within the latter category, a body of early empirical studies confirmed that when source water is cleaner, operating cost of water treatment plants is lower (Forster, Bardos, and Southgate, 1987; Holmes, 1988) and utilities use only simpler treatment processes and thereby avoid large capital costs (Barten and Ernst 2004; Postel and Thompson 2005; Gartner et al. 2013; Spiller et al. 2013). Recent examples of this literature are Sthiannopkao et al. (2007) and Abdul Rahim & Mohd-Shahwahid (2011) both of which found that operating costs were lower in months when source water was cleaner. The evidence that runoff from forests tends to have lower concentrations of suspended solids than runoff from other land uses (Bruijnzeel 2004; Carlson et al. 2014) implies that forests provide an economically valuable water purification service (Brauman et al., 2007).

Another body of literature has focused on directly measuring the effect of land uses, as opposed to water quality, on water treatments cost. This included two short panel data studies (Forster et al. 1987; Dearmont et al. 1998), neither of which exploited the panel structure to control for unobserved effects. As such, identification of the effect of forest cover on water treatment cost in these studies has been poorly achieved. A close but different study was Moore and McCarl (1987), which examined the effect of soil erosion on water treatment cost.

Abildtrup et al. (2013) and Fiquepron et al. (2013) have extended this literature by applying advanced cross-sectional econometric analysis (GMM and IV), which afforded them better identification strategies. However, rigorous panel data studies have since been carried out by Vincent et al. (2016), These papers have extended the previous literature by controlling for factors that confound the identification of the effect of forest cover on water treatment cost.

Using a fixed effects model, Vincent et al. (2016) reported that a 1% increase of virgin forest and logged forest reduces water treatment cost by 1.16% and 0.85% respectively. Abildtrup et al. (2013) employed a combination of instrumental variable (IV) methods and generalized method of moments (GMM) within a spatial econometric approach and confirmed a significant negative effect of forest on water treatment costs. Although they did not find evidence of spatial spillovers concerning the management regime, they found that factors related to the scarcity of resources in neighboring water services had an impact on water treatment costs. The GMM analysis of Fiquepron et al. (2013) showed that forest cover has a positive effect on raw water quality compared to other land uses, with an indirect impact of lowering water prices for consumers.

The present study set out to contribute to this small, but growing body of empirical studies. We measured the effect of land use on costs of water treatment to infer an economic value for this positive externality of natural forests in South Africa. While the prior studies have improved our understanding of the economic values of forest cover in terms of water purification, a few empirical uncertainties remain.

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1 For review of detailed identification problem of this previous literature see Vincent et al. (2016).
In their analysis, Vincent et al. (2016) selected treated water volume, rainfall and two land use types; virgin forest and logged forest as controls that drive variations in water treatment costs. They applied a fixed-effects panel model to control for the presence of treatment plant (TP) specific and catchment-specific as well as time specific unobserved heterogeneity, which represents one of the key strengths of their analysis. To control for endogeneity related to time-varying heterogeneity, they used panel fixed effects (FE) and IV models in which the volume of water treated (endogenous variable) was instrumented by its lagged values. Abildtrup et al. (2013) selected a broader set of controls spanning demographic variables (water user density, number of municipalities served by the water supply service (WSS) and number of users served by the WSS) aggregate categories of land use types; agriculture, forest, urban(settlement) and other land use, organizational variable of whether WSS management is delegated to private operation, technological variables; number of water intake sources, type of intake (drilled, well and source-spring or not) and altitude differential between the municipality and the water intake sources. In the analysis, they accounted for both the endogeneity problem and spatial autocorrelation by a procedure based on IV and GMM, which estimates parameters in three stages. Likewise, Fiquepron et al. (2013) controlled for land use aggregates; forest, culture(cereal crops), grass and other land uses (vine, arboriculture and market gardening), water volume as well as demographic and organizational variables in their analysis of the effect of forest on water quality and price. They used a GMM as an identification strategy for the estimation of parameters.

The applications of these methods (FE or IV or GMM) allowed the authors to make causal inferences about forest effects on water treatment cost. However, although these studies discriminated between competing models, they rarely did variable/model selection in a systematic way.

Specifically, researchers engaged in unsystematic searches of possible model specifications regarding functional form, set of control or instrumental variables and distributions of residuals. Specifically, as a standard practice, these researchers first selected a model from the space of all possible models and then proceeded as if the selected model had generated the data, ignoring uncertainty in the model selection step (Moral-Benito 2015). Such practice is likely to result in overconfident, fragile, and sometimes even contradictory conclusions (Chen et al., 2018).

We typically encounter model uncertainty in cases where there is no explicit theory to identify what determinants should be included in the estimation, or when available theories allow several extensions to the specification—a phenomenon Brock and Durlauf (2001) call “open-endedness” of theories. Thus, in open-ended economic applications in which we relate a set of land uses and other environmental variables to water treatment costs, there are few structural assumptions to guide the choice of functional form, control variables and distributions of residuals. An important uncertainty in such cases pertains to finding the set of covariates appropriate to explain the variation in the response variable (water treatment cost).

In our analysis, we initially performed series of specifications (Hausman test, likelihood ratio test, heteroscedacity test, serial correlation test, cross-sectional correlation test and time fixed effects tests) to select among alternative panel data models that better fits our data. However, there is no guarantee that the results of these tests would help us select controls that are most relevant. Moreover, these models may not fully address endogeneity arising from possible correlation
between volume of water treated and the error term, the latter of which may drive both the cost and volume variables. To overcome these uncertainty, we applied regularized linear regression method of machine learning. Specifically, drawing on recent advances in statistics and econometrics, we used a two-step method of Least Absolute Shrinkage and Selection (LASSO) regression following (Belloni, Chernozhukov, & Hansen 2014; 2016 and Chernozhukov et.al, 2015) as a practical solution to the problem of variable/model selection.

In addition to this methodological extension of related applied literature, we provide the first econometric evidence of the causal effect of forest on water treatment cost in South Africa, a country that has seen a growing water crisis currently. To our knowledge, this study represents the first panel-based ecosystem service valuation study in all of Africa, where forests losses are pervasive at a higher rate than is the case in the rest of the world and where the larger proportion of the population still lacks access to clean water. Unlike previous studies, we disaggregated land use into a larger number of subcategories, which allowed us investigate how a specific type of deforestation (i.e., conversion of natural forests to specific other land uses) affects the service.²

The paper is structured as follows. In the next section, we outline econometric issues of our study, specify and discuss relevant models that handle these issues. We then present a description of our data and the study context. In the subsequent section, we present the results and discussion of our study. Our results provide strong evidence that avoiding conversion of natural forest into non-forest land use reduces municipal water treatment costs. In the final section, we conclude the paper.

2. Econometric framework

In this section, we present the econometric framework that we implemented to estimate the effect of forest cover on water treatment costs. We draw on the theory of using cost functions to value environmental inputs (McConnell and Bockstael 2005). This theory helps us to specify a structural relationship between forest cover and water treatment cost.³ Our analysis was based on the following generic specification of fixed effects model;

$$\ln(c_{it}) = \delta + \ln(l_{it})\alpha + \gamma \ln(q_{it}) + \ln(x_{it})\beta + z_i\theta + \epsilon_{it}$$

where $\ln(c_{it})$ is water treatment cost, $l_{it}$ is a matrix of land cover/land use variables, $q_{it}$ is treated water volume (quantity produced), $x_{it}$ is a matrix of other controls, the elements of which are time-varying, $z_i$ is a matrix of observed control variables that are time-invariant but vary across TPs, $\epsilon_{it}$ is a composite error term comprising TP-specific unobserved heterogeneity $\mu_i$ (such as water-

² We are grateful to the first reviewer for bring up these points, the consideration of which has fundamentally improved the motivation of our study.
³ For deeper exposition to this framework, we refer our readers to Vincent (2011) and Vincent et al. (2016).
catchment’s average slope, edaphic and geological factors, water-catchment size and TP management efficiency), time effect, \( \omega_t \) and the conventional white noise error term \( \vartheta_{it} \). Hydrologically sensitive areas (Walter et al., 2000), slope and soil erosion (often related to higher level of phosphate; Yu et al., 2016) are among major factors determining water and yet among unobserved heterogeneities in our study.\(^4\)

At least two econometric problems are evident with (1). First, we face the dilemma of which subset of \( l_{it}, x_{it} \) and \( z_i \) to include in the regression and model specification that will best fit our data. Although economic intuition/theory as well as existing hydrological literature may suggest a set of variables that might be important to be used in (1), they generally don’t identify exactly which variables are important or the functional form with which variables should enter the model.

Our inability to identify the subset of explanatory variables and model specifications that best fit our data makes inference based upon the chosen model less certain, and potentially inaccurate, as estimates may well depend on the particular model considered. An important model uncertainty in our case is the one that pertains to model selection among \( 2^k \) possible models when \( k \) variables are available for inclusion; importantly some of them being environmental variables (land use and rainfall variables).\(^5\) Ordinarily, this presents us with a difficult choice of either using too few controls, in which our model suffers from omitted variable bias or using too many variables, and the model will suffer from overfitting. When faced with such dilemma, researchers traditionally choose a set of controls from a potentially vast set of variables available in the data as well as interactions and other transformations of these regressors.\(^6\) The eventual selection of variables (models) are based on the ad hoc sensitivity analysis in which a researcher reports results for several different sets of controls to show that the parameter of interest that summarizes the effect of the variable of interest is insensitive to changes in the set of control variables (Belloni et al., 2012). Moreover, in selecting variables that enter the model, researchers traditionally include all available variable (“kitchen sink” approach) or employ stepwise regression of progressively including or dropping variables in which the decision to include or drop a variable is guided by \( t \), \( F \) and adjusted \( R^2 \) statistics. However, these methods are widely recognized to perform poorly (i.e., over-fitting the data, selecting no optimal models, inflating \( R^2 \) etc.)(Thompson, 2006).\(^7\)

Our second problem is that endogeneity may arise from correlation of \( q_{it} \) with \( \vartheta_{it} \). There are reasons to believe that elements of \( \vartheta_{it} \) may drive both \( q_{it} \) and \( c_{it} \) as both of latter involve choices of TP managers.

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\(^4\) Hydrological sensitive area is a relatively small portion in the watershed which contributes actively to runoff (Qiu, 2009). It is a saturated area in the watershed such that runoff is independent of rainfall intensity and this hydrological process is called variable source area hydrology (Walter et al., 2000).

\(^5\) We specifically lack theoretical guidance or useful representation of structural assumptions prevails for inclusion of environmental variables.

\(^6\) The number of regressors increases if we account for non-linearity, interaction effects, parameter heterogeneity, spatial & temporal effects

\(^7\) Note that iterative testing procedures, such as these ones, typically induce pre-testing biases and hypothesis tests often lead to many false positives (Ahrens et.al, 2019).
Several methods can be used for resolving the econometric problems outlined above. Within Bayesian tradition, Bayesian model averaging and Bayes factor can be applied to address the problem of model uncertainty. On frequentist/classical front, thanks to the seminal work of Tibshirani (1996), recent years have seen proliferation of interest within economics and allied fields in application of machine learning in general and regularized regression method in particular. While regularized linear regression method is one of many methods in the toolbox of machine learning, its primary purpose is prediction. However, recent theoretical work by Belloni et.al, (2012 & 2014), Belloni et.al, (2016) and Chernozhukov and Hansen, (2015) have shown that these methods can also be used in estimation of structural models. More importantly, they can be used to select appropriate set of control variables and instruments from a large set of putative confounding factors and, thereby, improve robustness of estimation of the parameters of interest in structural models (Belloni et.al, 2016 and Ahrens et.al, 2019). Particularly, these studies proposed Lasso, a widely used form of regularized regression method, both as an estimator of regression functions and as a model selection device.

In this paper, we followed Belloni et.al, (2014) and Chernozhukov and Hansen, (2015) to resolve model selection problems and for identification of structural parameters. Lasso-based procedures in Belloni et.al, (2014) involves two different variable selection steps followed by a final estimation step to determine both which instruments and which control variables to use.

In the first step, it selects control variables that are useful for predicting conditionally exogenous variable of interest (e.g. treatment variable). In fact, this step helps to insure validity of post-model-selection-inference by finding control variables that are strongly related to the treatment and thus potentially important confounding factors. In the second step, the algorithm selects additional variables by selecting control variables that predict the outcome variable. This selection is expected to help us capture important elements in the equation of interest, ideally helping keep the residual variance small, as well as providing an additional chance to find important confounds (Belloni et.al, 2014). However, the key assumption here is that lasso estimator should achieves a sparse solution, i.e., most coefficients are set to zero in both of these steps. In the final step, the algorithm estimates the coefficient of variable of interest (commonly treatment variable) by the linear regression of outcome variable on the treatment and the union of the set of variables selected in the two variable selection steps.

Chernozhukov et.al (2015) slightly extended this estimator to cater for the model in which the variable of interest is endogenous. The new estimator, commonly referred to as CHS, and

---

8 The strength of regularized regression as a prediction technique stems from the bias- variance trade-off (Ahrens et.al, 2019).

9 For ease of exposition, it is important to note that, much like OLS, Lasso for regression coefficients by minimizing the sum of the usual least squares objective function. However, it impose a penalty for model size through the sum of the absolute values of the coefficients to achieve a sparse solution, i.e., most coefficients are set to zero.
accommodates both a large number of controls and a large number of instruments. CHS, rather than using the lasso-selected controls and instruments in a post-regularization OLS estimation, it uses the selected variables to construct orthogonalized versions of the exogenous and/or endogenous causal variables of interest and to construct optimal instruments from the lasso-selected IVs. The orthogonalized versions of these variables are based either on the lasso or post-lasso estimated coefficients; the post-lasso is OLS applied to lasso-selected variables (Ahrens et al., 2019).

In our application, we considered treated water volume as an endogenous variable and instrumented it by its second lagged value and lagged values of other controls (rainfall and land use controls). The lasso-based IV analysis helped us determine the set of relevant control variables and instruments to use in our estimation of the effect of forest land use on water treatment cost.

3. Data and methods

We used an annual panel data set spanning 2008-2015 years. The data was drawn from three different sources: water treatment costs, rainfall and land cover. We obtained TP-level data on treatment cost, treated water volume and water treatment plant (TPs) size from three South African Water Boards; Umgeni Water Board, Overberg Water, and Amatole Water (Nahoon). All the costs were expressed in the South African currency, the Rand (1USD ~ 13 South African Rand). We used the South African GDP deflator to convert it to 2008 price levels. We excluded five TPs with unreliable/incomplete information, which left us with 14 TPs. In fact, the exclusion of TPs with incomplete information is in keeping with practice in previous literature (Vincent et al., 2016, Holmes 1988 and Piper, 2003).

Rainfall data were obtained from the South African Weather Service (SAWS). Spatial extrapolations of monthly rainfall and temperature from weather stations across the country were used to develop spatial estimates of total rainfall and average temperature for each year in the panel data time series at a national scale. The corresponding weather data were then extracted for the catchment areas of each of the 14 TPs created using ArcGIS 9.0.

National land cover/land use (LULC) data were obtained from GeoTerralmage for 1990 and 2014. The 35 LULC categories were grouped into seven categories of natural cover - indigenous forest, woodland, thicket, grassland, low shrubland, wetlands, water bodies and five categories of transformed cover - perennial crops, annual crops, plantation forest, bare (bare ground, mining) and built (settlements, urban), and their areas were extracted for the catchment of each TP. The 1990 and 2014 datasets were created from satellite data using identical methods so that they are directly comparable. These were used to estimate land cover for the intervening years using linear interpolation. Whereas other datasets exist, e.g. for 2009, these are not directly comparable and could not be used. Obviously the interpolated estimates are subject to measurement error.

Note also that unlike traditional IV methods, instrument selection procedures do not require the identity of these “important” variables to be known a priori, as the identity of these instruments will be estimated from the data().
(Vincent et al., 2016). Although this may bias our results, there is no obvious reason to believe that the measurement errors would be systematic and hence drive the bias in a particular direction; instead it yields conservative parameter estimates (ibid).

Table 1 presents descriptive statistics for the variables we used for the analysis. We aggregated thicket, low shrublands, waterbodies and bare lands into one natural cover category of land use as each of them represent only smaller percentage of catchment areas. We denoted this new category as “other natural”.

On average, grasslands make up 23% of the catchment areas of treatment plants, while indigenous and plantation forests make up 1% and 11%, respectively. Settlements and subsistence farming make up 11% and 1%, respectively. The last column of the table shows that grassland area has seen the largest variation over time in absolute terms than other land cover types, whereas the area under orchards has remained relatively stable. Both natural forest and plantation forest areas have changed only slightly over time in relative terms.

Catchment area also varies a great deal across TPs. Water treatment cost, our dependent variable, and mean annual rainfall both had high coefficients of variation (CV) of 34.3% and 34.5%, respectively, and the volume of water treated had the largest within variation, with a CV of 83.6%. The high variability in these data points to the need for careful choice of econometric models.

Table 1. Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD Overall</th>
<th>SD Within</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP capacity (Mm³)</td>
<td>105.5</td>
<td>3.0</td>
<td>615</td>
<td>176.2</td>
<td>0</td>
</tr>
<tr>
<td>Volume treated (Mm³)</td>
<td>825 055</td>
<td>713</td>
<td>12 200 000</td>
<td>2 248 896</td>
<td>690 027</td>
</tr>
<tr>
<td>Chemical costs (R/m³ year)*</td>
<td>3 028 518</td>
<td>145 753</td>
<td>16 500 000</td>
<td>3 733 481</td>
<td>1 039 012</td>
</tr>
<tr>
<td>Rainfall (mm/year)</td>
<td>260</td>
<td>20</td>
<td>568</td>
<td>139</td>
<td>89.8</td>
</tr>
<tr>
<td>Catchment area (ha)</td>
<td>99 513</td>
<td>356</td>
<td>224 749</td>
<td>79 391</td>
<td>0</td>
</tr>
<tr>
<td>Natural forest (ha)</td>
<td>992.8</td>
<td>0</td>
<td>2 582.9</td>
<td>921.3</td>
<td>21.5</td>
</tr>
<tr>
<td>Wetland (ha)</td>
<td>2 110.3</td>
<td>0</td>
<td>7 706.4</td>
<td>2 698.9</td>
<td>76.4</td>
</tr>
<tr>
<td>Woodland (ha)</td>
<td>1 205.7</td>
<td>0</td>
<td>5 465.4</td>
<td>1 404.6</td>
<td>77.6</td>
</tr>
<tr>
<td>Grassland (ha)</td>
<td>22 941.3</td>
<td>0</td>
<td>99 293.4</td>
<td>32 810.1</td>
<td>550.2</td>
</tr>
<tr>
<td>Plantation forest (ha)</td>
<td>11 005.4</td>
<td>0</td>
<td>57 033.5</td>
<td>14 875.2</td>
<td>104.6</td>
</tr>
<tr>
<td>Orchard (ha)</td>
<td>636.0</td>
<td>0</td>
<td>8 032.1</td>
<td>2 056.1</td>
<td>5.7</td>
</tr>
<tr>
<td>Subsistence (ha)</td>
<td>1 387.7</td>
<td>0</td>
<td>5 472.2</td>
<td>1 772.1</td>
<td>84.7</td>
</tr>
<tr>
<td>Settlements (ha)</td>
<td>10 476.8</td>
<td>0</td>
<td>46 294.7</td>
<td>15 414.8</td>
<td>64.8</td>
</tr>
</tbody>
</table>
4. Results and discussion

4.1 Effects of Land Use on Treatment Cost

Table 2 presents parameters estimates of alternative models; traditional random effect models without land use controls, traditional fixed effect model with land use controls other than forest land use and lasso-based IV models. Before presenting these results, we discuss about results of various specification tests (Hausman test, likelihood ratio test, heteroskedasticity test, serial correlation test, cross-sectional correlation test and time fixed effects tests). The Hausman test failed to reject the null hypothesis that the preferred model is random effects model ($\chi^2(2) = 1.37, p = 0.5045$) for the model that doesn’t include the full set of land use controls. However, the test rejects the null hypothesis in favor of fixed effect model that include the whole set of land use controls ($p = 0.0181$) suggesting that the use of random effect model is not appropriate specification to analyze the data. The Wald test confirmed the presence of time fixed effect in our data ($F = 4.71, p = 0.004$). Pasaran CD test for cross-sectional dependence (measure of spatial correlation) fails to reject the null hypothesis that residuals are not correlated across water treatment plants (TPs) ($p = 0.59$).

As is commonly the case, our data is clustered suggesting that error terms of regression models are correlated within clusters. In clustered data, inference is often based on a cluster-robust variance estimator or CRVE. However, when the number of clusters is small, the standard error is down-ward biased and t-tests based on CRVE tend to over- severely reject the null hypothesis. This appears to be precisely the case in our data with the number of cluster as small as 14 clusters. To overcome this problem, we employed the wild cluster bootstrap (WCB), which leads to much more reliable inferences when there are few clusters (Cameron et al. 2008, Davidson and Webb, 2014, MacKinnon and Webb 2017b and MacKinnon and Webb 2018). We presented the results of this analysis as a robustness check in Table 4 in appendix 1.

In what follows, we present estimates of alternative models. Because necessarily exclude one land-use share for statistical reasons in all our models, we interpret land use’s coefficients as their effects on water treatment cost at the intensive margin between a land use included in the model and the excluded land use.\(^{11}\) Columns (1), (4), show results from traditional models respectively with the first three including only forest as a land use control and the last model including the full set of land use controls. Although results for all these land use types are of interest in their own right, we limit our discussion to results for natural forest and plantation forests. The estimates from the baseline fixed effect model (Column 1) suggests that a one percentage point increase in natural forest’s land use within a catchment area reduces water treatment costs by R-1,560.

\(^{11}\) We thank the first reviewer for suggesting this interpretation.
per year on average. The estimates from random effect model (Column 2) model suggests that a one percentage point increase in natural forest’s land use within a catchment area reduces water treatment costs by R1,514 per year on average, which is in the same order of magnitude as in the first model’s estimate. At mean values of forest land use in our sample (992.8 hectares), this suggests that a hectare increase in natural forest cover within the catchment area reduces water treatment cost by R152.50. For the robustness check, we also estimated the same model with Newey standard error (Column 3), which yielded somewhat lower estimate of natural forest coefficient, but smaller standard error.\textsuperscript{12} It appears that the latter model would understates the significance of the effect of natural forest land use on treatment cost as both its coefficient and the ratio of the coefficient to the standard error are smaller compared to that the RE model. Coming to the third model (Column 4), we see that the effect of natural forest land cover increase to R10,744 when we control for other set of land use controls and TP’s fixed effect.

Moreover, estimates of this model show that, with the exception of woodland and natural forest land covers, rest of the land uses appear to have no significant effect on the water treatment cost. However, these results may not be believable due to possibility of spurious inclusion of irrelevant variables.

We now return to presenting results from machine learning analysis based on lasso-based IV estimations\textsuperscript{13}. Because this models are superior to traditional RE and FE models in terms of model selection and identification of structural parameters, our discussion of parameters of interests is based on the estimates of this models.

\begin{table}[h]
\centering
\begin{tabular}{lcccc}
\hline
Variables & FE-no controls & RE-no controls & Newey & FE_Full Control & LASSO_IV \\
\hline
n_forest_share & -1,560*** & -1,514*** & -1417.079 *** & -10,744*** & -3,084*** \\
 & (497.1) & (497.8) & (469.206) & (3,171) & (880.3) \\
wet_share & 3,164** & & & & \\
 & (1,225) & & & & \\
orchard_share & -245,268 & & & & \\
 & (249,864) & & & & \\
settlmnt_share & 33,936 & & & & \\
 & (43,452) & & & & \\
grass_share & -3,091 & & & & \\
 & (16,688) & & & & \\
subsistence_share & 397,046 & & & & \\
\hline
\end{tabular}
\caption{Results from alternative panel data models}
\end{table}

\textsuperscript{12} Note that Newy SE estimate is roust to heteroscedastic and auto-correlated error term of MA(q). Thus, deviation from MA(q).autocorrelation of error term may not guarantee robustness SE.

\textsuperscript{13}Both lasso and postlasso estimators selected lagged volume as the only optimal instrument and the weak identification tests rejected the null hypothesis that the selected instrument is only weakly correlated with the endogenous regressors (optimal Post-Lasso F stats (cluster-robust)=55). Moreover, the super score test shows that the orthogonalized version of the endogenous variable (treated water volume) and exogenous variable are not correlated structural error term (p = 0.05).
Column (5) present estimate of lasso-based IV estimator where water catchment area is included and TPs fixed effect is not accounted for. This model selected lagged volume as the only optimal instrument and natural forest, rainfall and plant size (TPs) as controls. These outcome suggests that non-land use variables are more important in explaining variation in water treatment cost than land use variables. We augmented the selected controls by plantation forest variable although the latter is in the set of penalized controls. With model uncertainty addressed, we now return to presenting the attendant estimates of structural coefficients.

The result from this analysis shows that a one percentage point increase in natural forest cover within catchment area leads to a reduction in water treatment cost by R3,084/year. At mean values of forest land use in our sample, this suggests that a hectare increase in natural forest cover within the catchment area reduces water treatment by R310.63 per hectare/year. It should however, be noted that as the location of the water intakes are on reservoirs for our TPs, these estimates doesn't encapsulate the full effect of natural forest cover on water treatment cost; they rather represent the lower bound of such effects.

Although lasso-based IV specification is our preferred model, it should however, be noted that marginal effects of natural forest are not directly comparable across our across these three specifications. To be specific, the marginal effect of natural forest is defined the same in the RE

---

14 Note that the lasso algorithm doesn’t penalize endogenous variable (in our case; volume of treated water). Moreover, we report that Wu-Hausman test of water volume endogeneity rejected the hypothesis that water volume is exogenous ($F = 4.7, p = 0.08$)
and Newey models as they exclude the same set of land use controls. However, the marginal effect of natural forest across these two models combined, fixed effect model and lasso_based IV model should be interpreted differently, because the excluded land use differs across these three specifications. In effect, the estimated the intensive margins differ across these set of models and should be accordingly. Note also that robustness test of wild-bootstrap test suggest that these intensive margins are statistically significant (see Table 4 in appendix 1).

4.2 Effects of Water Volume, Rainfall and Plant Size

As expected, the volume of treated water had a statistically significant positive effect on water treatment cost, as was also found by Vincent et al., (2016), Forster et al. (1987), Holmes (1988), Murray and Forster (2001) and Piper (2003). Its coefficients are of similar order of magnitude across the models, but a slightly smaller coefficient obtained in lasso_based IV analysis.

The effect of rainfall is positive and statistically significant as is the effect of TP size. Vincent et al. (2016) interpreted the positive sign of the rainfall coefficient to imply the net effect of soil erosion over dilution effect. However, in this study context, where runoff is captured in reservoirs, the effect is more likely to be a result of higher sediment and nutrient loads being carried into the reservoirs in high rainfall years. As expected, this effect was not linear, and its quadratic term yielded a statistically negative coefficient.

Unlike previous studies based on TPs fixed effect analysis, the random effect analysis allowed us to capture the effect of TPs capacity. The effect is largely stable across alternative specifications (both traditional random effect and machine learning models). Obviously this estimate captures the scale of TP size.

4.3 Land Use Elasticity of water Treatment Cost

In keeping with existing literature, we also estimated log-log (non-linear) model to ascertain the elasticity of treatment cost with regard forest land use change.\textsuperscript{15} Table 3 presents the results of this analysis.

<table>
<thead>
<tr>
<th>Variables</th>
<th>FE</th>
<th>Lasso_IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln_forest</td>
<td>-0.284*</td>
<td>-1.549***</td>
</tr>
<tr>
<td></td>
<td>(0.132)</td>
<td>(-4.473)</td>
</tr>
<tr>
<td>Ln_plantation</td>
<td>0.00348</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0208)</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{15} Note that log-log or double-log model provides us with direct estimates of the elasticities of the independent variables unlike log-linear models presented in Table 2.
Consistent with the results of linear panel data analysis of preceding section, we here again see that many of the land use variable appear to have zero effect (statistically insignificant effect) on water treatment cost. Moreover, natural forest land use continued to have significant and negative effect ($p = 0.056$) on water treatment cost. However, this effect is weakly significant in fixed effect model (see Column 1). A stronger effect emerged when we simultaneously accounted for model uncertainty and endogeneity of treated water volume (see Column 2). When expressed in terms of elasticity, the estimate from our preferred model of lasso_IV, shows that a 1% increase in natural forest leads to a water treatment cost saving by 0.02%. More tellingly, this effect obtains if conversion of natural forest into non-forest, non-grassland land uses is avoided. Lasso_IV estimate indicates that grassland is an important non-forest land use that significantly increase water treatment cost. In terms of empirical regularity, our elasticity estimate falls within range of water treatment elasticity estimates, the detailed review of which was presented in Price and Heberling (2018). Our estimate appears to be lowest compared to the existence evidence, but somewhat closer to recent estimate of 0.056% by Faria-Lopes (in press) in Spain.

16 In terms of semi-elasticity, which facilitates comparison to other published evidences (Vincent (2016), avoiding the conversion of natural forest land use into non-forest, non-grassland land use reduces water treatment cost by 1.5%.

17 The estimate on forest land use is interpreted as intensive margin. As our model exclude all other land uses, but grassland, it estimated the average effect of increased forest relative to all those excluded land uses instead of just a single land use.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-value</th>
<th>z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln_wetland</td>
<td>-0.364</td>
<td>(0.875)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ln_volum</td>
<td>-0.0102</td>
<td>(0.0236)</td>
<td>0.124***</td>
<td></td>
</tr>
<tr>
<td>ln_waste</td>
<td>0.239</td>
<td>(0.225)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lnpermanent</td>
<td>0.167</td>
<td>(0.771)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ln_grass</td>
<td>0.801</td>
<td>(1.133)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ln_subsistence</td>
<td>10.31*</td>
<td>(5.573)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ln_Woodland</td>
<td>-0.218***</td>
<td>(0.0578)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ln_rainfall</td>
<td>0.180*</td>
<td>(0.0941)</td>
<td>-0.357*</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>10.50***</td>
<td>(0.509)</td>
<td>13.35***</td>
<td></td>
</tr>
</tbody>
</table>

$\sigma_u = 1.472$

$\sigma_e = 0.385$

$\rho = 0.935$

Observations | 112
Number of wtp id | 14

Robust z-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1
Returning to non-land use variable, Lasso IV estimate shows that the volume of treated water has positive and significant effect. This effect appear fall within the range of estimates from US studies of 0.66 to 0.96 (Forster et al. 1987; Holmes 1988; Dearmont et al. 1998; Murray and Forster 2001; Piper 2003). Compared to linear model analysis, the effect of rainfall here is negative and significant. We also find that the scale effect, as measured by the estimate of TPs size coefficient, continued to positive and significant.

Overall, the direction of the effects of land use variables remained consistent across alternative model specifications signifying the robustness of our results. Moreover, the estimates of the water quality amelioration effect of natural forests is largely consistent with evidences from existing literature in terms of the direction (-) and statistical significance. Our results still lend support to empirical regularity that posits natural forest as having a less-than-proportional effect on treatment cost (see Price and Heberling 2018 and Vincent et al., 2016 for detailed review).

However, our results should be interpreted within the following caveats; our data were limited by a small sample size of 112 observations and that may undermine the precision of the reported estimates. Despite this limitation, our study provides useful information for the design and evaluation of land use-based policies that aim at ameliorating municipalities’ drinking water quality and the attendant reduction in its treatment costs.

5. Conclusion

As for any area of land, the land in water supply catchment areas is in demand for a variety of land uses other than being left in its natural state. However, the market fails to allocate catchment land use efficiently due to the presence of externalities and improper incentives. Key examples of such externalities are the effect of upstream land use on downstream water quality, and the effect of untransformed land areas in ameliorating such anthropogenic impacts, which market prices fail to reflect. For the most part, the presence of these externalities leads to undervaluation of maintaining natural forest cover, and overvaluation of land uses such as agriculture and settlements. Lack of information on the full range of impacts of alternative land uses poses a significant policy challenge to correct market failures in land allocation within water supply catchment areas.

In this study, we estimated the value of upstream forest cover by estimating variations in drinking water treatment costs as a function of variations in natural forest cover within water supply reservoir catchments in South Africa. We applied both fixed effect models and lasso_based IV method of machine learning to panel data to identify causal effect of natural forest cover on water treatment cost. In our analyses, we controlled for a range of confounding covariates including other land cover types such as wetlands and planation forests. In addition to identification of parameter estimates, our lasso_based IV model approach allowed us to account for model uncertainty surrounding variable selection and the subsequent model specifications.

Our analysis showed significant and robust evidence that natural forest cover reduces water treatment costs at the intensive margin. Specifically, results from our preferred model indicated that the marginal benefit of increasing forest cover ranges is R310.63 /ha/year. Moreover, additional analysis indicated an elasticity response of water treatment cost to natural forest cover change to be 0.02%. These are the estimated values of just one of the many services provided
by catchment forests. Overall, these results point to greater opportunity cost of natural forest conversion into alternative land use than what is commonly believed in the South African policy arena.

6. References


Faria-Lopes et al., in press. Surface vs. groundwater: The effect of forest cover on the costs of drinking water. Water Resource Econ. doi: https://doi.org/10.1016/j.wre.2018.06.002


Appendix 1

Table 4. Robustness checks for models in Table 2 and 3: bootstrap t-statics and 95% interval estimates
<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficient estimate and bootstrapped t-statics</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FE_w/t land use controls</td>
<td>-1.546*** [-2674, -514.4]</td>
<td>(-2.929)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-2.929)</td>
</tr>
<tr>
<td>FE_Full controls</td>
<td>-10.744*** [-18342, -3368]</td>
<td>(-3.388)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-3.388)</td>
</tr>
<tr>
<td>Lasso_IV</td>
<td>-3060.923*** [-5011, -1269]</td>
<td>(-3.615)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-3.615)</td>
</tr>
<tr>
<td><strong>Table 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FE_Full controls</td>
<td>-0.2837* [-.9678, -0.0067]</td>
<td>(-1.9987)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.9987)</td>
</tr>
<tr>
<td>Lasso_IV</td>
<td>-1.5488*** [-2.379, -0.7575]</td>
<td>(-4.472)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-4.472)</td>
</tr>
</tbody>
</table>
Informal water suppliers in peri-urban areas of the Techiman municipality of Ghana

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Abstract
There is continuous expansion and growth of urban and peri urban areas in sub-Saharan Africa with projections indicating that this will double especially between the years 2000 and 2030. Some peri-urban areas such as those in the Techiman municipality of Ghana are experiencing this trend. Nonetheless, the spate of growth of these areas outstrips the supply of utilities such as water by conventional water distribution networks. As a result, some areas have little or no public provision. It was estimated in 2008 that only 30% of the urban population in the country had access to piped water in their dwelling, plot or yard. In order to address the water supply challenge, places with favourable hydrological settings are witnessing the emergence of informal water suppliers as “gap fillers” or “pioneers”, providing water services as either independent or dependent of the formal sector. Noteworthy, however, some of the existing studies in their discussions about informal water suppliers in peri-urban areas lump them together, without considering the source of the water. This study differs, in that, it specifically examines the evolution and features of informal water suppliers whose source is groundwater. Additionally, it attempts to understand the nature of informality of these suppliers and the possibility of formalisation. The paper is based on a descriptive, exploratory study using the case of mechanised borehole operators and water users. The findings showed that in some peri-urban areas in the Techiman municipality, informal groundwater suppliers emerged through private individual initiatives as ways of addressing the poor coverage of conventional water supply network. Peri-urban dwellers who could afford the cost of mechanised boreholes contracted a registered driller to drill boreholes in their dwelling units which provide in-situ water and utilities to others. They are mostly pioneer water suppliers in some of the areas. They are informal by nature because they are largely independent of the formal sector and their water enterprises do not possess licences. Some form of formalisation has taken place already because the boreholes are registered with the Municipal Assembly, nonetheless, efforts to formalise further should only focus on improving water quality monitoring for consumption and also promote sustainable Abstraction.
Enabling Trade across Borders and Food Security in Africa

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Abstract
This paper examines the role played by removing trade-related barriers in improving food security in Africa. To control for endogeneity, the paper employs the first-difference instrumental variable estimator on 45 African countries over the period 2006 - 2015. The results reveal that poor trade facilitation – as seen in burdensome documentations, lengthy export and import times as well as high export and import costs – exacerbates food insecurity. In particular, poor trade facilitation is significantly associated with increments in the prevalence of undernourishment and depth of food deficit (access), declines in dietary energy supply adequacy (food availability) and access to sanitation facilities (utilization). Access is found to be the worst affected pillar of food security, followed by availability and utilization. Reducing delays in exporting and importing to ensure timely delivery of food products from external markets promises to be the most effective trade facilitation reforms to enhance food security in Africa.
Financial Predictors of Employees' Intention to Retire: A Case of Public Universities In Kenya

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Abstract
This study focused on establishing a better understanding of the financial factors influencing an employee’s intentions to retire. The study is grounded on the rational choice theory. Applying an exploratory research design, stratified Sampling was used. The sample size was computed using Cochran’s formula. The sample used was 384 employees. Data was collected through a questionnaire by drop and pick after at least 5 days to respondents. Analysis was done using descriptive statistics, Pearson Moment correlation and Factor Analysis by Extraction method, principal component analysis. The results indicate that own investments has a positive relationship ($r=0.182$, $p<0.01$) with an employee’s intentions to retire. This implies that financial factors have an influence on predicting intention to retire. This is affirmed by the revelation of statistical significance. The study recommends that employees to have own investments such as shares, real estate and other property if they intent to retire early.
Anxiety in Ghana: Are Unemployed People More Afflicted?

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Abstract

According to World Health Organization reports, in 2007, approximately 652,166 Ghanaians were living with various degrees of Psychological disorder of some forms, and globally one in four people are expected to experience psychological disorders at some point of their lives. The economic and psychological consequences of unemployment have been examined by scholars. In particular, research has shown that unemployment hurts people’s psychological well-being. However, these studies are largely done within developed country contexts. In Ghana, burgeoning unemployment has led to the formation of a graduate unemployed youth association. This study therefore contributes to the extant literature by examining its effect on anxiety. Using data from Round 2 and 3 of the Afrobarometer Survey in Ghana, our results from ordered probit model revealed that part-time and full-time employees who were looking for a job were significantly more likely to suffer psychological distress or anxiety contrary to a replete body of evidence from prior studies that the unemployed are significantly more likely to suffer psychological distress. Additionally, we did not find any evidence for gender differences in the effect of unemployment on mental health.
On-boarding the after thought

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Abstract
Human Resources often ignores the very essential on-boarding process, that for many newly appointed employees, is a vital form of support that enables the effortless transition into an organisation. This paper focused on the challenges faced by newly appointed employees who had not undergone on-boarding at their respective organisations. A qualitative methodology was relied on and semi-structured interviews were conducted with 18 purposively selected newly appointed employees who had not undergone on-boarding at their respective organisations. Findings indicated that participants felt less engaged and their time to integrate or better referred to as employee ramp-up was longer than the individual who did undergo some form of on-boarding. Participants also indicated that the lack of on-boarding somewhat defeated the requirements determined during probation and thoughts of regret and helplessness forced newly appointed employees to question the decision to change jobs. Implications for Human Resource (HR) practitioners is to priorities employee onboarding and to investigate creative methods of ensuring employee engagement and retention. Recommendation that emerged, was a need for HR practitioners to consider providing on-boarding in smaller sessions thus enabling newly appointed employees to fully integrate into the organisation in manageable steps. The one limitation that was raised during the study was the need for a wider sample and consensus. Hence, a quantitative study that is far-reaching and demonstrative of a larger population may be considered for future studies.
Commodity Prices: Evidence from Nigeria and South Africa

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Abstract

In recent time, measuring the predictive ability of the Phillips curve has generated concern in theory and practice. Plethora of studies have produced different results but the most striking one was the conclusion of Stock and Watson (1999) which suggested that the traditional Phillips curve provides the best forecast for inflation and that using commodity prices and other macroeconomic fundamentals may not provide a better forecast for inflation than the traditional Phillips curve, however still gives room for the use of other economic activities to be used to forecast inflation. Given this conclusion, it is pertinent to compare the forecast performance of the traditional Phillips curve and the performance of the supply side Phillips curve which comprises of commodity prices in a bid to confirm and re-examine the conclusion of Stock and Watson (1999). In this study, we model the forecasting accuracy of the Phillips curve with commodity prices, taking clue from Nigeria and South Africa experience using monthly data from January 1980 to December 2017. A multi-predictor framework was adopted and this was done by augmenting the demand side Phillips curve with symmetric and asymmetric commodity prices changes. The Non-Linear Autoregressive Distributed Lag model was used to disaggregate commodity prices into positive and negative changes in commodity prices and the Westerlund and Narayan (2014) technique, which allows for the effect of persistence, endogeneity and conditional heteroscedasticity effect in the predictive model. Also, we follow the linear multi-predictor set-up by Makin et al. (2014) which is an extension of the bivariate predictive model of Westerlund and Narayan (2014). Foreshadowing our main results, the study showed that despite the fact that the underlying predictors of inflation exhibit persistence, endogeneity and conditional heteroscedasticity effects which can influence the forecast performance, this study demonstrated that inflation is better modeled with the proposed multi-predictor model and this suggests that commodity prices are significant in the predictive model for inflation, having established that the multi-predictor model gives the best forecast, therefore amidst all the competing multi-predictor commodity prices outperforms all other variants both in the in-sample and out-of-sample forecasts. Thus, policy makers should consider commodity prices in the forecast of inflation when using the Phillips curve framework.
Dynamic linkages among commodity prices, exchange rates and stock markets:
Evidence from Selected Sub-Saharan African Countries

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Abstract
Oil prices are thought to have direct effect on other commodity prices followed by indirect effect through the exchange rate channel. In return governments impose taxes and levies to manage the effect of commodity prices on exchange rates in the economy. In this study we analyse the relationship between global prices of precious metals, crude oil, exchange rates and the stock market in South Africa and Nigeria. We therefore utilise daily data for crude oil, gold, platinum, wheat, rice, exchange rates and stock markets from 2000-2018. To examine the dynamic contemporaneous linkages, we use the DCC-GARCH models and the lead lag linkages using symmetric and asymmetric non-linear causality tests. The findings of the study will have important policy implications for investor on diversification of investment portfolios. At the same time academics and policy makers will benefit on dynamic policy making in both economies in the face of commodity prices and stock market volatilities and containing exchange rates fluctuations using commodity prices as instruments.
Commodity Prices and Potential Growth in Ghana

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Abstract
We provide a multivariate measure of the output gap that filters out the impact of commodity booms for Ghana. A surge in commodity prices temporarily boosts output, and so is likely to push up estimates of potential growth from a univariate filter to unrealistic levels, thereby resulting in an underestimation of the output gaps during the upswing of the commodity cycle. The results show that commodity prices have been an important factor explaining deviations of activity from sustainable levels. The timely consideration of these factors is important for the calibration of the monetary policy stance and the prevention of pro-cyclical fiscal policy.
First and second level Digital Divide in sub-Saharan Africa: a cross country analysis

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Abstract
The Organisation for Economic Co-operation and Development (OECD) defines the digital divide as "the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access and use of Information Communication Technologies (ICTs). The digital divide or digital inequality is a growing phenomenon that has been on an increase. The literature on the digital divide distinguishes between three levels of the divide, namely first level (access), second (usage) and third level (outcomes). Earlier research on the extent of the digital divide was primarily focused on the issue of access or the first level digital divide. The first level of the digital divide is characterized by a binary view and is mainly concerned with the issue of access, internet access and more recently mobile phone access. While there have been notable developments on the universal access of the internet globally, many developing and undeveloped countries still lag behind in as far internet access is concerned. Subsequently, there has been momentum on the research focusing not only access, but uses of ICT or second-level digital divide. Most of the research on the first and second level of the digital divide has been primarily conducted in developed nations. As such there is a paucity of evidence on the extent of the different levels of the digital divide in developing countries such as sub-Saharan Africa. There has also been a lack of standardized measures of the digital divide. To date, the lack of standardized measures of digital divide has impeded progress in bridging the digital divide. The aim of this paper is to analyze the extent of the first and second level digital divide in sub-Saharan countries. Using the data from Afro-barometer, a survey conducted across African countries. The findings suggest that most African countries are still entombed on the first level of the digital divide, although there has been an increase in access to ICT particularly internet and mobile phone diffusion, universal access has not been achieved. Access and usage of the internet have increased in most African countries, albeit slow. Further research on the drivers of the digital divide in Africa is needed in order to understand the contextual and socio-economic factors driving the digital divide.
Demand-side Management Interventions: A Solution to Traffic Congestion Problems

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Abstract
The existing road infrastructure is failing to meet the demand for travel resulting from additional cars on the road network. The infrastructure deficit coupled with the infrastructure funding gap exacerbates congestion on the highways. Although supply-side management efforts are being implemented, these measures alone are not adequate in solving congestion problems. The study probes whether demand-side management (DSM) interventions are a viable policy option. The cost of investing in a selected compendium of DSM interventions is analyzed and the resultant paybacks valued. A DSM value analysis framework with well-defined parameters and benchmarks to assist decision makers with urban traffic congestion management is developed as a contribution to the body of knowledge.
Examining the Influence of Working Capital and Free Cash Flow on Acquisition Deals by Emerging Market Acquirers

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Abstract
This study investigates the influence of working capital and free cash flows of emerging market acquirers on their mergers and acquisitions (M&As) transactions to determine if they motivate these acquirers’ to undertake M&A deals. We use a cross-section of 160 listed firms selected from ten emerging market countries spanning the period of 2004 to 2013. Using the probit regression technique, the study finds that, working capital positions of acquirers from the emerging markets are less likely to drive them to undertake acquisition deals. However, the total assets and ROAs representing these acquirers’ sizes and profitability levels respectively are rather more likely to motivate them to execute acquisitions transactions, all other things being equal. No evidence was found for the acquirers’ level of financial leverage and Tobin’s Q as having any influence on their acquisitions decisions. The free cash flows of these firms were also found to be more likely to influence them on their acquisition decisions. The acquirers’ total debt and profitability levels are also more likely to have influence on their M&A pursuits under the free cash flow analysis but same cannot be said for their total assets and Tobin’s q. As a policy recommendation, firms in the emerging markets should develop guidelines on the use of their free cash flows so that managers do not misuse these funds on investment projects that will not create value for shareholders. Firms should realise that, their FCFs compared to their working capital positions are more likely to influence their investment decisions such as M&As. Therefore, proper policy measures should be put in place to regulate how they are utilized, since they remain a potential revenue source to support their future investment decisions.

JEL Classification: C35; G3; G34.

Keywords: Working capital; Free cash flow; Mergers and acquisitions; Probit regression; Emerging markets; Synergies.

1. Introduction
M&A activities some time ago concentrated on strategic transactions involving integration and diversification (Sagner, 2007). In recent times, however, the goal of the M&A game is focused more on either gaining balance-sheet assets, particularly due to hoards of underperforming cash or to improve on the acquired company’s working capital management. This appears to be a complete departure from the way firms and investment bankers perceive potential M&A companies to be, and this raises concerns about what is going on in the markets. For instance, lately companies are being accused of having in excess of about $1 trillion working capital “sitting”
on their balance sheets which is much larger than what is considered prudent (Rel Consulting, 2016). In some cases, it is suggested that firms may be reserving cash in anticipation of M&A activities (Rel Consulting, 2016, 2017). This leaves questions in the minds of many people and therefore, makes a case for investigations into the role firms’ working capital and their free cash flows may be playing in M&A transactions, especially deals involving emerging market firms as acquirers because of the increasing numbers in M&A deals by acquirers from the emerging markets (Bhagat et al., 2011; Hitt, Li & Worthington, 2005; Thomas, Eden, Hitt & Miller, 2007; Wright, Filatotchev, Hoskisson & Peng, 2005).

The present study therefore sets out to investigate whether working capital positions and the free cash flows (FCFs) of acquirer firms from the emerging markets encourage them to undertake M&A transactions or not. The study uses a cross-section of 160 selected listed acquirers from ten (10) selected emerging markets from 2004 to 2013 and employs the probit regression analysis. To the best of the researchers’ knowledge, no existing studies have investigated the influence of the above mentioned firm-specific variables (working capital and FCFs) on M&A transactions by emerging market acquirers. This study, therefore, contributes to the broadening of frontiers of drivers of M&As by acquirers from the emerging markets. The results of the study suggest that, working capital positions of emerging market acquirers are less likely to motivate them to undertake acquisition deals. The acquirers’ FCFs are, however, more likely to influence them to pursue acquisitions, all other things being equal.

The rest of the paper is organized as follows: Section 2 presents the background on the various drivers that motivate M&A transactions by emerging market acquirers. Section 3 is about the literature review (that is, both theoretical and empirical review as well as hypotheses development). Section 4 deals with methodology while 5 looks at results and discussions. The final section presents conclusions and recommendations of the study.

2. Background

2.1. Drivers of M&As by Emerging Market Acquirers

The growing body of finance literature examining drivers of M&As involving acquirer firms from the emerging markets does not appear to focus only on the known drivers such as diversification, synergy gain, empire building, hubris, tax incentives, increased technology, increased managerial skills, growth and being able to have access to new markets, but they also look at others like market power, stronger institutions, national pride and transactions cost as well (Lebedev et al., 2015).

Regarding emerging market acquiring firms, several factors have been suggested and highlighted in the literature as being key drivers of their M&As activities. Some of these factors include seeking of natural resources (Gaur, Kumar, & Singh, 2014), institutional reforms (Kim and Lu, 2013), stronger institutions (Meyer et al., 2009), latecomer disadvantages (Luo and Tung, 2007), seeking of various forms of synergies (Eden & Miller, 2004), filling of capability gaps (Cogman et al., 2015), for diversification and international expansion (Boateng et al. (2008), escaping from home competition (Hashim, 2012), and as a result of limitations of their domestic markets (UNCTAD, 2006).
From the above, it is clear that, there are many motives and factors that influence acquirer firms from the emerging markets to execute M&A deals as different scholars have highlighted above. However, the working capital positions and free cash flows available to these acquirer firms from the emerging markets have not received significant mentions and therefore appear to have been overlooked in the literature as far as drivers of their M&A deals are concerned. Unfortunately, however, reports by working capital management consulting firms such as Rel Consulting (2012, 2016, and 2017) and Ernst & Young (2017) accuse companies of having excess amount of working capital on their balance sheets. In certain instances, the reports suggest that, firms may be hoarding or reserving these excess cash with the expectation of pursuing merger and acquisition activities. For instance, Ernst & Young (2017) in their evaluation of working capital management performance of the leading 500 companies headquartered in India accuses them of having approximately $60 billion excess working capital. KPMG (2015) M&A outlook survey report also states large cash reserves as most probable M&A driving factor. Chance (2016) adds that, the number of transactions will likely increase due to the availability of about $1.3 trillion and other attractive deal financing schemes. These serve as motivation for investigation into whether working capital and free cash flows available to acquirer firms from the emerging markets may be playing any role in driving them into pursuing M&A transactions or not.

3. Literature Review

3.1 Theoretical review

The following theories are applied for this study to investigate whether working capital positions drive M&A transactions by emerging market acquirers, and further investigate if the free cash flows of these acquirer firms also influence them to undertake acquisition deals.

**Working Capital Management Theory;** this theory describes how working capital ought to be managed. It reveals the benefits regarding profitability, liquidity, solvency, efficiency and maximization of shareholders wealth which accumulate to the firm from properly managing its working capital (Brigham, et al. 1999; Gitman, 1997). It stresses that, working capital management involves choosing between having more liquidity and less profitability or vice versa. A firm’s liquidity is concerned with ensuring that it has sufficient financial resources to pay its maturing short-term obligations. Holding liquid resources is important to enable firms to continue their operations as inadequate liquidity can result in insolvency and eventual failure of the business (Dunn and Cheatham, 1993). Decisions that promote liquidity such as carrying high levels of current assets usually affect the profitability potential of the firm since funds would have been accrued to the firm earning either very low or negative returns (Bhattacharya, 2009). Liquidity in the form of working capital can help firms to execute acquisitions, because it can serve as a direct measure of payment or may be applied to settle interest on debt finance. This means that an increase in working capital should boost acquisition activities of firms. As a result, this study, hypothesizes that;

**H1:** Working capital positions of acquirers from the emerging markets are more likely to motivate them to undertake M&As.

**Liquidity hypothesis;** according to this hypothesis, the possibility of firms becoming targets in acquisitions transactions increases as their liquidity positions also increase (Song and
Walking, 1993). This is made possible since excess liquidity allows the acquirer to rely on the target firm’s own resources to finance the acquisition deal. Contrarily, the availability of liquidity to firms can have adverse effect on firms desire to achieve their objectives if the level of flexibility they have in using it is not managed well. The free cash flow hypothesis as advanced by Jensen (1986) suggests that, managers are potentially able to expand their firms beyond the optimal size or execute unprofitable projects if they are endowed with large amount of free cash. This is because excess cash reserves can be seen as accumulated free cash, and this may result in agency conflicts over the disposal of that cash. According to Harford (1999), when a company or a business entity accumulates cash in excess of what is considered normal for its operations within a time period, the possibility of it to engage in M&As is high. According to Shleifer and Vishny (1992), high cash reserves have motivated global merger transactions over the years, and that firms that have large free cash holding regularly undertake acquisition transactions even if they would destroy the value of shareholders. Following the discussions above, the researchers hypothesize that;

**H2:** Free cash flows of emerging market firms are more likely to motivate them to undertake acquisitions.

### 3.2 Empirical Review

Cash holdings are crucial for a firm’s financial flexibility. They allow a firm to take advantage of opportunities (or respond to threats) without the need to raise funds from external markets (Myers and Majluf, 1984). However, this same flexibility can worsen the agency conflict between managers and investors by decreasing investors’ ability to monitor the actions of managers (Easterbrook, 1984; Jensen, 1986). Managers in firms that have accumulated relatively high amounts of cash may be tempted to use that cash to maximize their own personal utility at the expense of shareholder value by “empire building” through acquisitions (Shleifer and Vishny, 1988).

A properly fashioned and implemented working capital management is anticipated to positively contribute to the value growth of a firm. Firms are expected to ensure that there is a balance between liquidity and profitability in the conduct of their business activities.

Several studies have empirically attempted to investigate drivers of firms’ acquisition decisions by considering the firms’ corporate liquidity. In their examination of firms from India, Kumar and Rajib (2007) found that acquirers had higher cash flow, higher book value, higher liquid assets and PE ratios. These acquirers tend to be bigger in sizes and have lower debt to total assets ratio relative to their target firms, while the target firms had lesser liquidity. Managers of firms having high levels of free cash flow, low financial leverage and high levels of current ratio may be encouraged to use these loose resources to finance investment projects including even those with negative NPVs, for instance purchasing another firm only for empire building reasons (Iyer & Miller, 2008; Kayo et al., 2010). Similarly, Erel et al. (2012) identify that, the probability for a firm to undertake M&A increases with a higher cash holding. A positive relation is also found between firms that have excess cash reserves and the possibility of entering into acquisition deal by Harford (1999) in which he ascribes the positive relationship to the existence of agency conflicts between shareholders and management.
Most of the above studies appear to focus on acquisition deals where the acquirer firms are domiciled outside of the emerging markets and have also ignored the role the firms’ working capital and free cash flows may be playing in motivating acquisition decisions by acquirers from the emerging markets. As a result, this study sets out to assist in addressing the paucity of literature on working capital and free cash flows as potential drivers of M&As by firms from the emerging markets. To the best of our knowledge, no studies have explored whether working capital positions and free cash flows of acquirers from the emerging markets influence their decisions to undertake M&A transactions. This study again departs from previous studies on drivers of M&As by emerging market firms who largely rely on firms within one country which makes generalisation of findings and conclusions quite difficult. The present study considers firms from ten (10) different emerging market countries together for this investigation.

4. Research design and data
The study undertakes a cross-sectional analysis using probit regression technique. According to Brooks (2014), the probit model is well suited than the OLS if the dependent variable is binary and takes not more than two values, an example can be, one (1) if a firm executed M&A and zero (0) otherwise. This probit regression model employed in this study is estimated using the maximum likelihood estimation technique. This technique seeks to estimate the likelihood that a certain observation that has specific characteristics will find itself within one of the specific categories. Suppose a response variable \( Y \) is binary, it can have only two possible outcomes which we will denote as 1 and 0. \( Y \) for example, may represent M&A executed firms and non-M&A executed firms. We also have a vector of regressors \( X \), which are assumed to influence the outcome \( Y \).

Specifically, we assume that the model takes the form:

\[
\Pr(Y = 1 | X) = \Phi(\beta_0 + \beta_1 X),
\]

where: \( \Pr \) denotes probability that an event occurs (that is M&A) given the values of the \( X \) variables and \( \Phi \) is the standard cumulative distribution function (CDF). The parameters \( \beta \) are typically estimated by maximum likelihood. In Equation 1, if \( \beta_1 \) is positive, then an increase in \( X \) increases the probability that \( Y=1 \); if \( \beta_1 \) is negative, then an increase in \( X \) decreases the probability that \( Y=1 \).

4.1 Data
The study uses firm level dataset of acquiring firms from the emerging markets obtained from the Bloomberg terminal from 2004 to 2013. The main reason for the selection of the time period is the availability of data. Several countries in the emerging markets during this period also experienced a substantial rise in M&A activities because of implementation of various regulatory and structural reforms. The dataset consists of annual financial information such as working capital, free cash flows to the firms, financial leverage, Tobin’s Q, Total Assets, Total debt and records of M&A deals of acquiring firms from 10 emerging market countries of: South Africa, Brazil, Russia, Malaysia, Argentina, Poland, China, India, Mexico, and Chile. The country selection is basically motivated by availability of data. The records of M&A deals cover the date of announcement, the type of merger, public firms, mode of payment (cash, equity, or both); and the industry of the acquiring and target firms. For an acquiring firm to be included in the sample,
the firm must be listed on one of the exchanges in the 10 identified countries. Similar to Liu, Padgett and Varotto (2017), the study included only nonoverlapping deals. That is, we excluded acquirers that made multiple acquisitions within a year or consecutive years. Our final sample, therefore, is made up of 160 acquirer firms.

4.2 Model Specification
Similar to scholars like Andriosopoulos and Lasfer (2015) and Huang, Officer and Powell (2016), this study specifies a multivariate probit regression model as shown in equation (1) to investigate the objective of whether working capital drives M&As by emerging market acquirers as follows:

\[ DM&A_{Fi} = \beta_0 + \beta_1 WC_i + \beta_2 ROA_i + \beta_3 LOGTA_{si} + \beta_4 TQ_i + \beta_5 FIN_i + \varepsilon_i \] ……… (1)

where; DM&A is a dummy variable for mergers and acquisitions of firms, which is denoted by one (1) if a firm executed M&A and zero (0) otherwise. Our main explanatory variable for this study which we expect to be driving M&As transactions by emerging market acquirers is working capital of these acquirers represented by WC (working capital). This refers to a firm’s investments in both current assets and net working capital and is computed as the firm’s current assets minus its current liabilities. A priori, based on the financial theory, we expect that, WC will more likely drive M&As transactions by these acquirer firms. ROA, LTAs (total assets), TQ (proxy for firms’ growth opportunity) and FIN are the other control variables representing the firms’ return on asset (for profitability levels), total assets (proxy for firm sizes), Tobin q (proxy for firms’ growth opportunities) and financial leverage levels, respectively. \( \varepsilon_i \) and \( i \) denote the random error term and the cross-sectional dimensions respectively. \( \beta_1, \beta_2, \beta_3, \beta_4, \) and \( \beta_5 \) are the coefficients to be estimated.

Further to the above investigation, the study also tests the free cash flow (FCF) hypothesis to establish if it influences the acquirer firms to undertake acquisitions by stating the model below;

\[ DMA = \beta_0 + \beta_1 FCF_i + \beta_2 ROA_i + \beta_3 LTAs_{si} + \beta_4 TQ_i + \beta_5 DEBITT_{i} + \varepsilon_i \] ……………(2)

where DMA is the dummy for M&As and is one (1) if a firm engaged in acquisitions and zero otherwise. FCF is the main independent variable, which is defined as the amount of money left after a firm has satisfied all of its current operating and financing needs (Jensen, 1986) and calculated as;

\[ FCF = EBIT \times (1 - Tax) + Depreciation - Change in working capital - Cost of capital \] ……… (3)

where \( EBIT \) is earning before interest and tax. A priori, we hypothesise that free cash flow to emerging market acquirers is more likely to drive them into acquisitions. \( DEBITT, ROAs, TQ \) and \( TA \) are the control variables denoting the total debt, returns on assets, the Tobin’s q and total assets respectively.

In the footsteps of Goodman et al. (2013) and Sagner (2009) the following firm-specific annual financial variables; financial leverage, returns on assets (ROAs), Total assets (for firms sizes) and the Tobin q (for firms growth opportunities) were selected as potential M&A drivers in the
emerging markets. This study suggests that, changes in these variables have the effects of influencing firms’ investment decisions including those of M&As deals. Our main variable of interest for Equation (1) is the working capital of firms, which is measured as the natural logarithm of the difference between current assets and current liabilities while the main independent variable of interest for Equation (2) is the FCF which refers to a firm’s money remaining after taking care of all of its current financing and operating needs.

5. Results and discussion
5.1 Summary statistics
Table 1 presents the statistical summary of the variables considered in this study with 322 observations taken from 160 emerging market acquirer firms over the period of 2004 to 2013. The variation of the data set is minimal as reflected by the low standard deviation. The results show that the variables are fairly and normally distributed as indicated by the Jarque-Bera statistics and having a skewness around -1 and 1 is considered symmetric as well as Kurtosis around 3.0.

The average number of M&As executed by the firms is 0.5%, while the minimum (0.00) and maximum (1.00) do not indicate a wide spread of mergers and acquisitions transactions executed by firms in the emerging economies. The percentage of the firms’ working capital as a share of the various factors driving M&As they undertake shows an average value of 6.992% which is greater than the average number of M&As they undertake. The standard deviation is about 2.6%, suggesting that on average, working capital positions of the firms as a share of factors driving M&As in the emerging markets deviates from the mean by about 2.6%. The working capital (WC) shows huge disparities with the minimum been 0.00 compared to 13.2% as the maximum. The sizes of the firms have been very wide ranging from a minimum of (3.104) to a maximum of (15.85) with a mean of 6.992. This implies that the acquirers are of various sizes. Financial leverage, which measures the degree to which the firms use fixed -income securities such as debt and preferred equity to acquire assets is quite high, with a minimum of 4% and maximum of around 237% with a mean of about 83%. This suggests that, most of these acquirer firms are likely financing their M&As transaction with debt and are saddled with the payment of high interest which will adversely have effect on the bottom-line earnings per share. The ROAs also shows a minimum value of around 2.1% and maximum of 3.87% with a mean of 1.8%. This gives an indication of low returns on the assets of emerging market acquirers. With regard to Tobin Q which measures growth opportunities of these firms the difference between the maximum which is around 2.353 and the minimum of 0.458 is not that huge, suggesting some relatively similar growth rate opportunities for these firms.

Table 1: Summary Statistics

<table>
<thead>
<tr>
<th>MA</th>
<th>TSSETS</th>
<th>WC</th>
<th>ROA</th>
<th>FIN</th>
<th>TQ</th>
</tr>
</thead>
</table>

98
Table 2 shows the correlation matrix. The study observes that, a negative relationship exists between working capital and M&As executions. Regarding the explanatory variables of total assets, FIN (financial leverage) and ROAs (returns on assets), they are positively correlated with M&As. TQ (Tobin Q) is negatively related to M&As. The correlation table also provides evidence of a negative correlation between returns on assets on one side and working capital and the total assets on another. Analysis of the data shows Tobin Q having a negative relationship with both total assets and working capital. A further inspection of table reveals a positive relationship between Tobin Q and returns on assets while financial leverage on the other hand portrays a negative relationship with both Tobin q and ROAs.

<table>
<thead>
<tr>
<th>Correlation matrix</th>
<th>MA</th>
<th>TASSETS</th>
<th>WC</th>
<th>ROA</th>
<th>FIN</th>
<th>TQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASSETS</td>
<td>0.0956</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WC</td>
<td>-0.0196</td>
<td>0.8408</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>0.0003</td>
<td>-0.1433</td>
<td>-0.0473</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIN</td>
<td>0.0688</td>
<td>0.2552</td>
<td>0.1173</td>
<td>-0.2957</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>TQ</td>
<td>-0.0979</td>
<td>-0.0668</td>
<td>-0.0322</td>
<td>0.3989</td>
<td>-0.1155</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

5.2 Diagnostic Tests
In terms of validity, this study’s results meet the various requirements of the regression models as indicated in Panel B of Table 3. For the multivariate probit cross-sectional regression, the overall fitness of our model is good as indicated by the p-values of 0.3809 and 0.1207 respectively for both the HL test and Andrew test Statistic which are large, showing no evidence of poor fit, but it is good and specified correctly.
In addition, results for heteroscedasticity test confirms no presence heteroscedasticity as the p-value for this is roughly 0.9494, which gives little evidence against the null hypothesis of homoscedasticity.

5.3 Regression Results
5.3.1 Working Capital and M&As Transactions
The cardinal objective of this study is to investigate whether working capital positions of acquirer firms from the emerging markets drive M&A transactions they execute or not. Financial theory suggests that firms having excess working capital or cash reserves will potentially undertake investments even if those investments have a negative net present value (NPV) or destroy shareholders value.

The results of the study as set out in Table 3 provide far-reaching revelations and insights. We found the marginal effect coefficient for working capital which is our main independent variable of interest to be negative but statistically significant at 1%. This means that, working capital positions of emerging market acquirer firms are less likely to motivate them to undertake M&A transactions compared to other potential factors, all other things being equal. Inspection of Table 3 below shows that, a percentage change in the acquirer firms’ working capital positions decreases the likelihood of it to influence them to execute M&A transactions by 7.58 percent. This result fails to confirm hypothesis (H1) of this study that, emerging market acquirer firms’ working capital positions are more likely to influence them to undertake M&As. The meaning of the negative sign carried by the acquirers’ working capital marginal effect coefficient is that, an increase in the levels of these acquirers’ working capital positions dampens their appetite to undertake M&A transactions. The reason for this could be that, as the literature suggests, several emerging market firms are smaller in sizes compared to their counterparts in developed market and usually have limited access to capital markets and mostly depend on their limited internal resources, trade credits and short-term bank loans to make investments in account receivable and inventories which could be used for investment projects such as M&As (Chittenden, Poutziouris & Michaelas 1998). Another reason could be that, proper management of working capital is yet to gain the needed attention from the management of most emerging market firms. Thus, management of firms in emerging markets considers working capital less in their daily decision-making which accounts for the less likelihood of it to influence them to undertake M&A transactions. In addition, these acquirer firms may also have the majority of the components of working capital to be non-cash, in the form of inventory, trade receivables, and prepayments among others. Thus, the attention of management on non-cash item may be low and so are not considered in their decisions regarding the execution of M&As.

Moreover, the negative relationship between the acquirer firms’ working capital positions and their desire for M&As is also contrary to the predictions of the liquidity hypothesis, which holds that when corporate liquidity or working capital increases, it improves firms’ ability to execute acquisitions, since it can be directly used as a means of payment or can be used to pay for interest on debt finance. The negative sign of the working capital coefficient, however, suggests a contrary relationship between emerging market acquirers’ liquidity or working capital positions and M&As. The result again contradicts the views of Iyer and Miller (2008) and Kayo et al. (2010) that
managers of firms that have large amount of excess cash reserves, low financial leverage and high current ratio (CR) may be encouraged to make use of these available resources to finance investment projects including even those with negative NPV for the purposes of empire building.

Further, our result is contrary to the predictions of Chance (2015), KPMG (2016) and Sagner (2009) that the availability of large cash reserves in the form of working capital on balance sheets of firms would be one of the key factors that will drive future M&As. This result, however, suggests otherwise and that other factors may be responsible for driving firms including those from the emerging markets into acquisitions deals. The implication of this finding to managers of emerging market firms is that, since this study has identified firms’ working capital positions to be less likely to influence them to undertake acquisition deals, it is essential for firms that are cash-rich or have excess working capital to look out for other motivating factors that might encourage them to expand their activities through M&A route and never rush into merger deals, but in line with working capital management theory find better and efficient ways to utilise their liquid assets properly to realise more profits for their respective firms. Policy makers should note that, in a competitive world, efficient working capital management is important for all firm sizes operating in any part of the world (Akbar, 2014). Therefore, proper working capital management practices should be a relevant factor that should be considered by firms operating in the emerging markets.

Table 3: Probit Marginal Effects Results on Whether Working Capital Drives M&As Transactions

<table>
<thead>
<tr>
<th>EXPLANATORY VARIABLE;</th>
<th>PROBIT REGRESSION COEFFICIENTS</th>
<th>PROBIT MARGINAL EFFECTS AT MEAN</th>
<th>STANDARD ERROR</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL ASSETS</td>
<td>0.2255***</td>
<td>0.0898***</td>
<td>0.0674</td>
</tr>
<tr>
<td>WC</td>
<td>-0.1904***</td>
<td>-0.0758***</td>
<td>0.0613</td>
</tr>
<tr>
<td>ROA</td>
<td>0.1423*</td>
<td>0.0566*</td>
<td>0.0980</td>
</tr>
<tr>
<td>FIN</td>
<td>0.0828*</td>
<td>0.0329*</td>
<td>0.1945</td>
</tr>
<tr>
<td>TOBIN'S Q</td>
<td>-0.2708**</td>
<td>-0.1078**</td>
<td>0.1479</td>
</tr>
<tr>
<td>CONSTANT</td>
<td>-0.9230***</td>
<td>-0.3673***</td>
<td>0.4169</td>
</tr>
</tbody>
</table>
Notes: The table shows probit regression coefficients and their marginal effects on whether working capital drives M&As transactions or not. *, ** and *** represent 10%, 5% and 1% significance level respectively.

On the effects of the control variables on M&A executions, the result provides evidence of a marginal effect coefficient that is positive and significant at 1% for the acquirers’ total assets (proxy for firms’ sizes). This gives an indication that, a percentage increase in the sizes of these acquirer firms is more likely to influence these acquirers to engage in acquisition transactions, all other things being equal. Further, an inspection of Table 3 shows that, total assets representing sizes of emerging market acquirers are 8.98% more likely to drive M&A transactions these firms undertake. The meaning of the positive sign carried by the total assets’ coefficient is that, improvement in the sizes of these acquirer firms provides enough benchmark or source of motivation for them to undertake investment projects such as M&As for the purposes of growth and expansion. The reason could be that, since several firms in the emerging markets appear smaller in terms of their sizes compared to their counterparts in the developed markets (Akbar, 2014), firms in emerging markets make conscious efforts to invest more in their total assets for it to serve as springboard for them in transacting future investment activities. Additionally, the highly significant positive relationship between the acquirer firms’ sizes and M&A executions could also be explained to be in line with financial theory which suggests that, as firms expand in size through increase in assets, they tend to invest more in different areas including M&A executions. So, as a policy measure, managers of emerging market firms should take keen interest in putting measures in place to grow the assets base of their firms since they may serve as a motivating factor in taking investment decisions such as those relating to acquisitions. Further, consistent with the total asset management theory which talks about the acquisition, use, disposal and management of assets of a company properly in order to maximise profit, it is important for managers or policy makers and boards of companies to establish policies that will guide and regulate how emerging market managers utilise assets of their firms.

The marginal effect coefficient for growth opportunities as measured by the acquirers’ Tobin’s q is negative and statistically significant at 5%, implying that, emerging market firms’ expectations for growth and expansion is less likely to influence them to pursue M&A deals. Table 3 above indicates that, any additional improvement in the acquirer firms’ ability to grow or expand is about 11% less likely to influence these firms to execute M&A transactions. The explanation of the negative sign carried by the Tobin’s q coefficient which is a proxy for the acquirers’ growth opportunities is that, emerging market acquirers strategically may not want to grow and expand their businesses both domestically and internationally using the M&A route. This may be due to the fact that, several of them appear not to have gained the necessary exposures and experiences for the execution of internationalization strategy such M&As as literature suggests (Li, 1994;
Chang, 1995). Further, the negative sign possessed by the Tobin’s q coefficient appears contrary to theoretical expectations of the strategic re-alignment of changing environment hypothesis, which suggests that, generally, when the opportunity and ability for firms’ growth within a short period of time such as M&As are available to firms, slow organic growth strategies are not considered to be the best alternatives. This result, however, appears consistent with Margisiri et al. (2008)’s view that, when a firm’s operating capacity is high, it is not important for it to depend on external investments such as acquisitions to grow and expand because expansion through M&As actually will potentially make the acquirer firm end up paying more not only for the assets acquired but also expenses on integration. Despite its consistency with the assertion of Margisiri et al. (2008), the result broadly runs contrary to findings of other previous studies like Thanos and Papadakis (2012), who suggest that, firms have popularly adopted growth through M&As to achieve corporate growth and other corporate objectives. Further, it is inconsistent with the theory of market for corporate control which suggests that, in an efficient market, companies that are not performing well are more likely to become targets and have their assets transferred to some more capable hands unless they are able to acquire assets to improve on the level of their profitability. The inference therefore is that, financially strong and healthy companies are more likely to be active acquirers while the underperforming ones would be potential targets. Therefore, it is important for managers of emerging market firms not to limit their growth and expansion strategies to only internal processes where growth is achieved from within their own internal resources but consider other inorganic and fast growth strategies like M&As which have the potential to give them the necessary exposures and experiences to become global brands.

The marginal effect coefficient for returns on assets (ROAs) of the acquirers was found to be positive but statistically significant at 10%, indicating that ROAs of emerging market acquirers are more likely to play a role in motivating the acquirers to embark on M&A deals. However, the weakly significant positive relationship between the acquirers ROAs and their appetite for M&As could suggest that, the firms’ ROAs do not substantially contribute to influence them to undertake M&As compared to other motivating factors. The meaning of the positive sign carried by the ROAs coefficient is that, as the ROAs of these firms go up, their desire to pursue acquisition deals also go up which could impact positively on these firms’ performances especially on their profit (ROAs) levels. This positive relationship between the ROAs of the acquirers’ and execution of M&As could also mean that an improvement in the firms’ performances (in terms of increases in returns on their assets) gives them an indication that, they can adopt M&As as a strategy for value creation in terms of growth, expansion and improvement in profitability levels. Thus, they may consider M&As as a way to achieve synergistic and wealth effects to enhance shareholders value. This means that, the positive relationship between their ROAs and M&As makes these emerging market firms become interested in adopting M&As as a reliable growth strategy for realising more profits on their investments, a view which is similar to suggestions by Arikan and Stulz (2016), Leepsa and Misha (2012) and DeYoung, Evanoff and Molyneux (2009).

Our results also show that, the marginal effect coefficient for financial leverage is positive but insignificant indicating that financial leverage does not play any role in driving acquisition transactions by acquirer firms from the emerging markets. A meaning of the positive sign possessed by the financial leverage coefficient could be that several of these acquirers from the
emerging markets may have higher leverage levels which could affect their ability to finance expensive investment activity like M&As to improve on their values or wealth as the leverage hypothesis suggests. The result therefore is in sharp disagreement with what the leverage hypothesis predicts, that a firm’s value could be improved as a result of lowering the firm’s weighted average cost of capital (WACC) because such a decrease of the firm’s WACC may be realised through mergers and acquisitions (Pauser, 2007).

5.3.2 Diagnostic Tests
Our results from diagnostic tests as it is revealed in panel B of Table 4 below confirm that, the overall fitness of our model is good. This is based on the large p-values of 0.7277 and 0.4802 respectively for the HL and the Andrew tests statistic, suggesting no proof of poor fit. Rather, it is good, indicating that the model is appropriately specified. In terms of validity, it meets the various requirements of probit cross-sectional regression model used in this study.

The results for heteroskedasticity test also give support to no presence of heteroskedasticity as the p-value for this is roughly 0.7222, which gives little evidence against the null hypothesis of homoskedasticity.

5.3.3 Regression Results

5.3.4 Free Cash Flow (FCF) of Acquirers and M&A Transactions
Results from the present study as indicated in Table 4 below provide some interesting insights. They show that the marginal effect coefficient for FCF of the acquirer firms is positive and significant at 1%, implying that, FCF of the acquirers is more likely to influence their decisions to undertake M&As, all other things being equal. The positive sign possessed by the FCF coefficient means that, as the acquirer firms’ free cash flow increases, such firms are more likely to increase their appetite or desire to engage in M&As. The reason for this could be that, the free cash flow serves as a cheaper alternative source of finance for the emerging market acquirer firms’ investment activities. Another reason for the positive sign of the FCF coefficient and the execution of M&As could be that, due to weak corporate governance systems in most emerging market firms and the problem of agency costs, shareholders make sure that managers use the firms’ FCFs for investment projects with positive net present value that will enhance shareholders’ wealth otherwise they may be misused by managers for their own benefit as is suggested by the free cash flow hypothesis. This hypothesis suggests that, managers of firms with unused borrowing power and large free cash flows are more likely to undertake low-benefit or value destroying mergers (La Porta et al., 2000; Fuller & Blau, 2010). Thus, the presence of free cash flow may lead to inefficient asset utilisation as it allows managers to spend financial resources on activities that reduce shareholders’ wealth and generate more agency problems (Jensen, 1986).

Table 4: Probit Marginal Effects Results on whether Free Cash Flow Influences M&A Transactions by Acquirers from the Emerging Markets

| Panel A: Regression Results |  |  |  |  |

### DEPENDENT VARIABLE: (M&As)

<table>
<thead>
<tr>
<th>EXPLANATORY VARIABLES;</th>
<th>PROBIT REGRESSION COEFFICIENTS</th>
<th>PROBIT MARGINAL EFFECTS AT MEAN</th>
<th>STANDARD ERROR</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCF</td>
<td>0.0395***</td>
<td>0.0104***</td>
<td>0.0127</td>
</tr>
<tr>
<td>DEBTT</td>
<td>0.0253***</td>
<td>0.0691***</td>
<td>0.0776</td>
</tr>
<tr>
<td>ROA</td>
<td>0.0441***</td>
<td>-0.0074***</td>
<td>0.0093</td>
</tr>
<tr>
<td>TOBIN'S Q</td>
<td>0.4206</td>
<td>0.0047</td>
<td>0.0318</td>
</tr>
<tr>
<td>TOTAL ASSETS</td>
<td>0.7067</td>
<td>-0.0182</td>
<td>0.0568</td>
</tr>
<tr>
<td>Constant</td>
<td>0.2749</td>
<td>-0.1578</td>
<td>0.3631</td>
</tr>
</tbody>
</table>

**Panel B: Diagnostic Tests**

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Prob. Chi-Sq (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-L Statistic</td>
<td>0.7277</td>
</tr>
<tr>
<td>Andrew Statistic</td>
<td>0.4802</td>
</tr>
</tbody>
</table>

Source: Author’s Estimation, 2018, based on data collected

**Notes:** Table 4 shows probit regression coefficients and their marginal effects on whether free cash flow to firms drives M&As transactions or not. *, ** and *** represent 10%, 5% and 1% significance respectively.

In addition, the positive sign carried by the FCF coefficient is consistent with theoretical prediction that managers of firms that have substantial amount of free cash flow will be motivated to use this excess cash flow to undertake investment activities such as M&As or make a number of irrational expenses, some of them, however, prove to be unprofitable economically. This confirms our hypothesis (H2) of this study, which states that, free cash flow to emerging market acquirer firms is more likely to drive them to undertake acquisitions. Table 4, however, shows a likelihood percentage of 1% which is rather low suggesting that, with respect to emerging market firms, even though their FCF will more likely play a part in their M&A execution decisions, a greater percentage of their overall consideration before they undertake M&A transactions will depend on some other factors. More importantly, compared to the acquirers’ working capital positions, free cash flow available to these acquirer firms is more likely to influence their decisions to undertake M&As. This result appears consistent with studies by Alquist et al. (2014), who argue that acquisitions might be driven by liquidity of firms and benefit target firms due to lower financing costs. Further, the result finds some level of consistency with views expressed by Harford (1999) that, when a firm accrues more cash in excess of what is considered normal for its operations, the possibility of it to engage in acquisitions is high, suggesting that, firms with excess cash in the form of FCF will potentially engage in acquisitions compared to their peers who are limited in cash. The managerial implication for firms in the emerging market will be to develop policies on the use of free cash flow available to them so that managers in line with the managerial discretion and free cash flow hypotheses do not apply funds on investments that will not have negative effect on shareholders’ value. They should realise that, the findings of the present study compared to earlier one on working capital positions and M&As by acquirer firms suggests that, FCF more than
working capital is more likely to motivate them on their investment decisions including M&As. Therefore, there should be enactment of policies to regulate the use of FCF available to them since it remains one avenue which can serve as a backbone for their future investment decisions.

Turning to the controls, the marginal effect coefficient for total debt is positive and statistically significant at 1% suggesting that, debt levels of emerging market acquirers are more likely to influence their decisions to engage in acquisition transactions. The positive sign associated with the total debt coefficient means is that, as these acquirers’ debt levels increase, their desire to engage in acquisition deals also increases. This could be due to the fact that, emerging market firms with high levels of debt may decide to pursue M&As to create value for themselves and also improve on their leverage levels as suggested by the leverage hypothesis. This view is confirmed by Maloney et al. (1993) who suggest that firms with higher levels of pre-merger debt will be involved in better acquisitions because of agency benefits or monitoring benefits of debt, which increases their market value. This finding appears to support the theoretical prediction of Bruner (2004) that, managers of acquiring firms may create value by improving on their debt levels through M&As. Table 4 indicates that, a percentage change in the debt levels of these firms is about 7% more likely to influence their decisions to pursue M&As. This result broadly seems consistent with the findings of Meador, Church and Rayburn (1996) that, firms undertake mergers in order to gain advantages associated with financial leverage because assets of these firms usually serve as guarantees for long-term debt.

From the result, we find the marginal effect coefficient for returns on assets (ROAs) for the acquirer firms to be negative but statistically significant at 1%, implying that ROAs of the acquirers is less likely to motivate them to pursue M&A deals. The negative sign of the returns on assets coefficient means that, an increase in ROAs of these acquirers will dampen their desire to pursue investment projects such as M&As. This is because a firm’s performance in the form of profitability is not the only reason why managers pursue acquisitions. Managers also pursue M&As based on their self-interest, usually their compensation incentives. So, in most companies, firms' performance or performance of managers is tied to their incentive packages, which means that if a manager’s performance goes up, their compensation will go up. Therefore, the negative relationship between the acquirers’ ROAs and their M&A executions could mean that, the increase in ROAs is bringing in more compensation to managers which they may be satisfied with and therefore would not be motivated to pursue mergers. Table 4 reveals that, a percentage change in the ROAs of these firms, decreases the likelihood of it to influence them to undertake acquisitions by about 0.74%. This suggests that, if emerging market acquirers are able to put measures in place to improve on their ROAs, they can grow and expand their businesses organically without having to do so through the M&A route. The result appears inconsistent with Afande (2015)’s assertion that, generally, the desire of acquiring firms to increase their returns motivates them to expand geographically through mergers. It also sharply contrasts the views expressed by Stewart (1991) that, the ultimate driving factors behind M&As include the ability of firms to increase their financial performances (net operating profits), financial benefits by means of borrowing against the unused debt capacity of the seller or against a rise in the consolidated debt capacity.
Regarding the marginal effect coefficients for the acquirers’ total assets and the Tobin’s q, both are negative and statistically insignificant. This means that, they do not have any influence in motivating the acquirer firms to execute M&A transaction.

6 Conclusion and recommendations
Our results indicated that, working capital positions of emerging market acquirers are less likely to drive them into executing M&A transactions. However, the acquirers’ sizes and profitability levels (represented by their total assets and ROAs respectively) have a positive relationship with their acquisition transactions, suggesting that, they are more likely to influence them to pursue M&A deals. Therefore, improvement in the total assets and profit levels of these acquirer firms could assist them to execute M&As. The results also suggest that, the level of financial leverage of the firms is less likely to motivate them to undertake M&A deals.

Based on the findings from the free cash flows (FCF) of the firms and M&A executions, the study concludes that, the acquirers’ FCFs influence them to undertake M&As. Their debt levels and ROAs are also more likely to have influence on their acquisition decisions. However, the total assets and Tobin’s q representing their sizes and growth opportunities respectively do not in any way motivate them to execute M&As. The study, therefore, recommends that firm managers and other policy makers should enact policies that would ensure proper use of free cash flows available to them, so that they will be channelled to more rewarding investment projects. Further, firms should institute measures that will ensure that, the practice where firms keep free cash at the discretion of managers is avoided so that agency costs will be reduced.

References:


Deindustrialisation and Poverty: Evidence from Income and Regional Country Panel Testing

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Abstract
Theory suggests that manufacturing can have engine of growth effects in developing countries. Certain previous research findings suggest, however, that it is difficult for most economic effects to directly reduce poverty other than through the growth channel. With a special focus on African countries, this chapter seeks to test the poverty reducing effect of manufacturing’s share in gross domestic product in developing countries, using two stage least squares (2SLS). To do so, panel data for low- and mid-income countries is used, for the period 1977 to 2014. The penetration of the poverty reducing effect of manufacturing is tested across four poverty strata levels, using four measures of poverty. To investigate these effects at the deepest strata level of poverty, representing the poorest of the poor, the poverty gap measure, at $1.90 is tested. This is a measure of the depth of poverty. Poverty effects at the next strata level of poverty are tested using the $1.90 poverty headcount ratio, of the absolute proportion of a country’s population living below this daily income level. The third strata level is tested using the poverty gap, at $3.20 per day. The broadest measure of poverty is the headcount poverty ratio, at $5.50 per day. The relative depth of penetration of manufacturing’s poverty reducing effect is tested in four different samples, namely for low-income countries, mid-income countries, African countries, and sub-Saharan African countries, allowing for a comparative analysis. 2SLS results suggest that manufacturing has a U-shaped relationship with poverty. This suggests that countries with low levels of manufacturing may benefit disproportionately in reductions in poverty though industrialisation. This effect is significant across all poverty levels in low-income countries, but takes a linear poverty-reducing form, reaching only the broadest strata of poverty in mid-income countries. In African countries, manufacturing lifts people out of poverty at the deepest headcount poverty strata level of $1.90, whereas this only occurs at the shallowest tested level in SSA countries, at $5.50. These findings are taken to support Kaldorian arguments for the re-development of manufacturing as an important sector that can contribute to poverty reduction, particularly in low-income regions such as Africa.
Did Deindustrialisation cause Trump and Brexit?

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Abstract

Over the past two decades, growth in globalisation has declined, from its most recent high in 2006, to negative annual growth in 2015, the last year for which there is data. Current literature suggests that many of the world’s most industrialised countries are (along with most countries in the world) experiencing deindustrialisation, defined here as a sustained decrease in manufacturing’s output share of gross domestic product. What is seemingly not clear in the literature, however, is whether this continual global decline (which has occurred across the world, since the early 1990s), has caused a recent trend toward de-globalisation. De-globalisation is defined here as a declining trend in the growth of globalisation across the countries of the world.

In certain industrialised countries de-globalisation is seemingly characterised by a contemporary rejection of the principles of free movement of people and free trade. This paper argues that the sectoral influence of manufacturing may explain certain global changes in country-level globalisation. More specifically, it hypothesises that deindustrialisation may have resulted in a retreat from globalisation, or de-globalisation. To test this hypothesis, a world-wide sample of countries is tested, for the years 1970-2014. Ordinary least squares (OLS), simple fixed effects, instrumental variable fixed effects, dynamic fixed effects, and generalized method of moments (GMM) tests are applied. GMM results, for a sample of 123 countries, across the years 2000-2014, suggest that manufacturing’s share of gross domestic product, and its square, have a significant inverted U-shaped curvilinear relationship with total globalisation. The significance of this relationship is robust to the use of all the robustness checks (it is significant in all five types of tests). These results suggest that, as manufacturing initially increases, so does globalisation, until a turning point is reached, after which globalisation starts to decline. Most countries in the world have on average experienced a continuous decline in manufacturing share since the early 1990s and in industrialised countries this deindustrialisation began earlier, in the 1970s. This experience contrasts with the rise of a new Asian/Pacific centre of gravity in global manufacturing.

This chapter suggests that the curvilinear relationship between manufacturing and globalisation (which suggests that globalisation is lower for highly industrialised countries) accords with certain de-globalisation trends in industrialised countries. For example, current literature seems to suggest that these trends are reflected in the outcome of the 2016 Presidential election in the United States, the United Kingdom’s referendum vote to leave the European Union, and the current rise of populist anti-globalisation sentiment across Western Europe. Results suggest that manufacturing may have influenced globalisation, at least for the period 2000-2014. Building on other work, such as that by Ross and Voeten (who demonstrated the influence of the oil production sector on country-level globalisation), this study highlights the importance of sectoral influences, and specifically that of the manufacturing sector, in their influence on globalisation.
Results support Kaldorian theory that predicts that the development of a country’s manufacturing sector can be a causal driver of important economic outcomes. Implications and recommendations are derived from a comparative analysis of groups of countries, by income and region, with a special focus on African economies.
Understanding the Complexity of Offshore Outsourcing

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Abstract
Offshore outsourcing also referred to as global outsourcing is a practice that has been in existence for some time now. The growth of offshore outsourcing has occurred due to increased completion among companies and countries at large. This article aims to; examine what client firms outsource, evaluate offshore outsourcing trends, identify challenges and risks encountered in offshore outsourcing and examine the significance of offshore outsourcing for developing nations. This study adopted a critical analysis of literature related to outsourcing domestically and offshore. Thus, a desk research was conducted. Key findings reveal that organizations usually outsource either domestically and/or offshore front-office processing, middle office processing and back-office processing. Two key domestic and offshore outsourcing trends consist of Business Process Outsourcing (BPO), and Knowledge Process Outsourcing (KPO). Today there are client companies that are offshoring services to countries such as India where labour and raw materials are cheap. India for some time now has been considered as the leader in outsourcing. Other countries such as those in Africa can learn from India’s outsourcing industry in order to boost their own economies and create jobs for citizens. However, developed countries suffer as jobs are transferred to developing countries consequently. Offshore outsourcing is viewed to be complex as there are numerous changes that keep occurring in the business environment, as well as risks and challenges that need to be considered to ensure that offshore outsourcing ventures are successful. Some challenges encountered in offshore outsourcing are; understanding cultural differences, examining contract performance and the client firm’s ignorance of what the outsourcing provider is doing for it. Two general types of risks encountered in offshore outsourcing emerge from economic and political uncertainty in the outsourcing vendor country.
Cricket in the Context of South Africa’s Human Needs

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Abstract
This paper will consider a case that involves multi-purposing white elephant sports stadiums into business incubators and entrepreneurial hubs, in order finance the transformation of sport in South Africa and indenture young graduates into the world of work. There are 70 sports stadiums in South Africa. All have substantial facilities and all are under-utilized to the point of being white elephants. They stand empty for month on end draining large sums of municipal finance in maintenance for very small events in terms of crowd attendance. In the final analysis the transformation of sport, can only take place if it is based on a sustainable financial model. The creative multi-purposing of sports stadiums could offer such a sustainable business model if cast into the framework of a wisely conceived franchise.

Sports authorities cannot cast their eyes askance at a formal 38.2% youth unemployment rate, which rises to 56% at the informal level. Could the transformation of sport in South Africa, be financed by the multi-purposing of underutilized sports stadiums into business incubators and entrepreneurial hubs? The vacant space in these sports stadiums would use the business incubators and entrepreneurial hubs to indenture a cross section of our young, newly qualified vocational and academic graduates into gainful employment. International experience at the Ajax Amsterdam Arena, the Sydney Olympic Sports Ground, and the Arsenal Football Club indicate that it is possible to multipurpose sports stadiums into economic, socially, culturally and sporting sustainability, and thereby use these as forums to serve the fundamental needs of the residents of the city in their quest for a meaningful and constructive life.

These are examples of the invocation of the recycling process inherent to the circular economy which has been legislated in the European Union, China and Japan. International experience also reveals that many stadia have been demolished because they have not been multi-purposed. The South Korean Winter Stadium for the last Olympic game was built at a cost of US$ 120 million and was only used five times and is now being demolished. The Pontiac Stadium in Detroit Illinois was built at a cost of US$ 220 million and is now being demolished and the Huston Astrodome is a white elephant.

These are manifestations are of the use and dispose linear economy where physical and humans are disposed after usage. This case explores the question: “Could our sports stadiums be linked with the transformation of sport, and at the same time serve a greater purpose of contributing meaningfully to solving our catastrophic problem of youth unemployment? If so, how could this be done? Who should be involved to make it happen? What resources are required, and for what purpose and priority? When should the process be set in motion? What business models should be created and to what purpose? Whose support be gained, and to what purpose?
Market discipline effect on bank competition in emerging market banking industry

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Abstract

Competition among banks has been a continuous debate in financial research, which has been intensified since the competition policy was taken seriously in the banking sector, especially in developed economies. The European commission has taken some decisions against abuses, cartels, mergers and acquisition that prevent competition in the banking industry. More so, the Wallis inquiry report in 1997 recommended a revised financial system that could promote competition among international financial institutions without a compromise to financial system's safety and soundness. Notwithstanding, to promote stability of the financial system and bank effectiveness, the effect of regulation on the bank competition should be assessed. Given the importance of market discipline, as an integral part of the regulatory architecture for banks, in this paper we chose to determine the effect of market discipline on bank competition in selected emerging market countries, and few developed market economies for benchmarking. In Godspower-Akpomiemie and Ojah (In Press), we queried the exclusive reliance on subordinated debt as a measure of market discipline, especially for emerging market economies with evolving capital markets with less publicly traded corporate debt markets. In the paper, we were able to generate relatively reliable different measures that are better reflective of market discipline in emerging market economies than any single variable that is popularly in use (subordinated debt). In this paper, firstly we measure the level of competition in the banking industry using Panzer and Rose model of H-Statistics. We found that both emerging markets and developed country banks operate under monopolistic competition, where H-statistics is less than 1, at 0.45 and 0.53, respectively. Secondly, we assess the effect of market discipline on the level of competition. Our preliminary results shows that market discipline from external stakeholders could have a negative effect on the level of competition in emerging market compared to developed market economies. While market discipline from market activities would increase competition in emerging market banking industry.
Derivatives Use and the Productive Lending Efficiency of African Banks

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Abstract
In the wake of well-advocated Africa’s derivatives trading initiatives, the proposed paper offers to delve the linkage between derivatives use and productive lending efficiency by banks among selected African economies. In that intent, a purposive sample of one hundred and eleven (111) banks in fourteen (14) African countries is emphasised over the 2011–2016 time frame; whereby the modelled banks account for those presenting an entry for derivatives use in their balance sheets. As such, the investigation mainly seeks to fill the apparent knowledge gap about the true African-based appraisal of the implications of derivatives use in the banking industry. In this vein, the critical question addressed in the study is that of whether derivatives use influences bank “productive lending” efficiency in Africa, given the alleged parallel capital market transformations. In a dynamic framework, the banks’ productive lending efficiency is thus analysed using the nonparametric facilities of data envelopment analysis (DEA) as the main efficiency analysis tool. Also, robustness checks on the nonparametric estimations are provided through the parametric stochastic frontier analysis (SFA) approach, of which the necessary interpretations rely on the common two-stage Maximum Likelihood (ML)-based SFA approach. As per its nonparametric outlook, the study rather contemplates a two-stage investigation resembling Simar and Wilson’s (2007) two-stage double bootstrapped technique, whereby the first-stage efficiency computation follows a DEA-based Malmquist analysis augmented by a subsequent second-stage examination, as part of a truncated regression estimation, of the capital market factors affecting the then computed time-varying lending efficiencies of the banks. Capital markets development is modelled for depth and liquidity in both markets for equities and bonds, but also the degree of financial openness experienced by individual countries. As is custom in DEA’s efficiency studies, the bootstrapping procedures are utilized throughout, including the auxiliary modelling of the environmental variables describing the stances of the capital markets; not only to correct for the potential bias in the computed efficiencies but also to secure valid statistical inferences thereon and on subsequent regression estimates. In sum, the pertinence of the alleged favourable developments alongside derivatives trading and implied stances of financial market completeness are to be verified. Positive inferences are thus expected from the increasing use of derivatives and capital markets development towards the expansion of the overall productive lending efficiency of banks.
The Relationship between Risk Behavior and Livelihood Activities of Women: Empirical Evidence from Ghana

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Abstract
The study examines the causal effect of risk behavior on the choice of livelihood activities among women using experimental risk behaviour data, matched with data on livelihood activities among a sample of 1,209 women in the Yilo and Lower Manya Krobo Districts of Ghana. The results lend credence to the debate on the importance of risk behaviour in determining livelihood activities. We find evidence that women who are willing to take risk are more likely to be farmers and that women who are willing to take risk are less likely to be in paid-employment relative to being unemployed. The risk behavior of women, however, do not differentiate between having a vocation, being involved in petty retailing and being unemployed. It is recommended that any policy intervention aimed at enhancing livelihood activities of women should take into consideration individual risk behaviour. Other individual and household characteristics that influence livelihood activity choice of women in our sample include age, education, household headship, dependency ratio, per-capita income, household farm ownership and household enterprise ownership.
Driving paternity leave

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Abstract
In November 2018 the South African Labour Laws Amendment Act was signed into law. South African employees who have exceeded 13 weeks of employment may claim 10 days of paternity leave as of 31 July 2019. These amendments bring to light the potential for other maternity and paternity rights to be relooked and possibly amended accordingly. This paper focused on the extension of maternity leave from the existing ‘at least four consecutive months’ maternity leave, as prescribed by the Basic Conditions of Employment Act No 75 of 1997 (BCEA) to at least six months and to offer the extension to same-sex parents.

The research question posed was, should South African maternity/paternity leave be extended to six months? The Act does use words at least which is not prescriptive and hence, allows the employer to use his/her discretion to determine the length of maternity leave that may be permitted. While the Act does not afford the same discretion to paternity leave. Therefore, an amendment to the act would have a greater influence than the discretion of an employer.

A qualitative content analysis was relied on to gather non-numerical data that investigated the proposition of why maternity/paternity leave should be amended to six months instead of the suggested four months. The BCEA and various international precedents were compared to determine a suggested leave period, to determine why South African maternity/paternity leave should be extended to six months.

In May 2019, motor company Volvo South Africa, extended their maternity leave to six months driving maternity leave changes in South Africa. This stance by the Volvo motor company now challenges other organisations and legislators alike to relook at existing maternity leave in South Africa. The study did present clear limitations which may be lifted by future studies. That would be the inclusion of a quantitative methodology that can support the findings of the content analysis which looked at legislation and existing policy on maternity leave in South Africa and elsewhere.

Recommendations were that in addition to a quantitative study, that future researchers conduct in-depth interviews with legislators and practitioners to determine their perceptions on the suggested extension of maternity leave in South Africa from the existing four months to the suggested six months. Implications for employers is to interpret the Act with the employee in mind, as the benefits of providing support outweigh the challenges that lie ahead when an employee begins to show signs of fatigue and dissatisfaction.

It can be argued that four months is adequate and why should legislators and practitioners now re-evaluate the duration of maternity leave in South Africa. The growing evidence on infant development, mental health, postpartum depression and need for breastfeeding suggest that four months are beneficial in the case of women, however, an additional two months would provide
the parent and infant with the opportunity to bond. The infant would benefit from the presence of
the parent, similarly, the employer would benefit from an employee who is present in mind and
person.

Keywords: Basic Conditions of Employment Act, maternity leave, paternity leave

Introduction

Maternity leave has become contentious since the early 1950s were more women, post-World
War II saw a need to have their maternity rights reinforced. In 2018 we see a repeat of this right
being asserted as maternity rights for same-sex parents. The ruling of Judge Gush set into motion
the decision that a male employee “given the circumstances, there is no reason why an employee
in the position of the applicant should not be entitled to maternity leave and equally no reason
why such maternity leave should not be for the same duration as the maternity leave to which a
natural mother is entitled” (M I A v State Information Technology Agency (Pty) Ltd, 2015, Para
17). In this case, Judge Gush disagreed with the employer’s argument that the Basic Condition
of Employment Act (BCEA) maternity leave provision was solely for the health and welfare of the
recovering mother but indeed included the health and welfare of the child and thus reflecting on
the Children’s Act. In so doing the right to maternity leave should be extended to same-sex
parents who have adopted a new-born and seek maternity leave for the purposes of nurturing
their new-born during the first four months. This paper proposes that in addition to extending this
provision to same-sex parents legislators should consider amending Section 25 (1) of the BCEA
from stating ‘at least four consecutive months’ to six months.

Background

Maternity leave according to Section 25 (2) of the BCEA affords an employee maternity leave at
any time “from four weeks before the expected date of birth or otherwise agreed; on a date from
which a medical practitioner or a midwife certifies that it is necessary for the employee’s health or
that of her unborn child” (Section 25 (2), BCEA, 1997). This provision which is further contained
within in Section 25 (4) of the BCEA expounds on the previous section and states that “an
employee who has a miscarriage during the third trimester of pregnancy or bears a stillborn child
is entitled to maternity leave for six weeks after the miscarriage or stillbirth, whether or not the
employee had commenced maternity leave at the time of the miscarriage or stillbirth” (BCEA,
Section 25 (2-4), 1997).

Although maternity leave is a basic right women are entitled to under the BCEA, the duration of
maternity leave according to the Act is somewhat ambiguous, as the Act refers to the duration of
the leave, as ‘at least four consecutive months’. Which arguably when interpreted infers either a
minimum or maximum of four months. Which leaves employers in a precarious position to decide
what the legislator had intended by stating at least four. Further, in an era where society has
recognised same-sex relationships that are entitled to adopt or seek surrogates is it fair to exclude
same-sex parents from accessing their right to maternity leave.
Problem statement

In a legislatively progressive nation as South Africa, that was fifth in the world to legalise same sex marriages (Noble, 2015) in 2006, it is an almost natural progression to look at supporting individuals that have entered same sex marriages in other aspects of their lives as suggestive of the initial piece of legislation that originally approved same sex marriages. With this being said, why can same-sex partners not claim paternity/maternity leave on the birth of their child and why should we not extend the four months to six months for all new parents who are the equivalent of a birth mother in a relationship. The main research objective is set out below.

The main research objective is:

To investigate that in addition to extending maternity leave to same-sex parents, legislators should consider amending Section 25 (1) of the BCEA to state ‘at least six consecutive months’ instead of the current four months.

Research design

While leaning on an interpretivist research paradigm, the researcher relied on a qualitative research methodology content analysis was relied on to gather non-numerical data that investigated the proposition of why maternity leave should be amended to six months instead of the suggested four months and to include parents who are the equivalent of a birth mother. The BCEA and various international precedents were compared to determine a suggested leave period, to determine why South African maternity leave should be extended to six months and to include same-sex parents. The section to follow next is the literature review.

Literature review

This section of the paper provides insight into the literature that speaks to the Basic Conditions of Employment Act, the history and purpose of the Act, application of the Act who does it cover and exclude, amendments and how amendments work, international determinants for maternity leave, same-sex parents and how would proposed amendments assist with change. In addition to these sections, the researcher looked at why six months was identified as the ideal duration for maternity leave. This section would be followed by the resultant advantages of the proposed amendments and how the current and proposed amendments would influence the discretion of the employer and lastly, to identify with whom does the onus lie (does this lie with the legislator or the employer) when determining the length of an employee’s maternity leave.

Basic Conditions of Employment Act (BCEA)

The discovery of gold and diamonds in South Africa was a turning point in South African labour history, as the nature of work changed. The master and servant relationship that was once indicative of farm and domestic workers now changed. The influx of workers resulted in power struggles between white and black workers, as political powers at the time introduced trade unions exclusive to the white labourer. With ensuing strikes in 1914 resulting in the deportation of white trade union leaders accompanied by the economic depress which forced the retrenchment of white labourers. The ratio of white skilled workers to black workers fell away.
With the passing of various labour acts and commissions in the subsequent years saw a glimpse of labour democracy. The black worker experienced moments of reprieve, but then again not to the extent seen with the birth of the new democratic South Africa between 1991 and 1994. In 1994 the Interim Constitution, Act 200 of 1993 was signed into law, this piece of legislation revolutionised the Constitutional foundation of South African law, simultaneously surfacing existing legislation that did not comply and meet with constitutional standards. In light of these revelations in 1994, the Department of Labour appointed a Ministerial Legal Task Team to overhaul existing labour legislation resulting in the Labour Relations Act 66 of 1995 which came into effect on 11 November 1996 (Bhoola, 2002). The Basic Conditions of Employment Act amongst other Acts were subsequently introduced. The purpose and application of the BCEA are discussed next.

**Application of the BCEA**

Chapter one Section 2 and 3 of the BCEA sets out the purpose and application of the Act. The purpose of the Act is to advance economic development and social justice by giving effect to and regulating the right to fair labour practices as conferred by section 23(1) of the Constitution by establishing, enforcing and regulating the variation of basic conditions of employment; and to give effect to obligations incurred by the Republic as a member state of the International Labour Organisation (BCEA, Section 2, 1997).

The application of the Act applies to all employees and employers except; members of the National Defence Force, the National Intelligence Agency and the South African Secret Service; and unpaid volunteers working for an organisation serving a charitable purpose (BCEA, Section 3, 1997).

The Act also applies to persons undergoing vocational training except to the extent that any term or condition of their employment is regulated by the provisions of any other law (BCEA, Section 3, 1997). However, the except section 41, does not apply to persons employed on vessels at sea in respect of which the Merchant Shipping Act, 1951 (Act No. 57 of 1951), applies except to the extent provided for in a sectoral determination (BCEA, Section 3, 1997).

Under purpose and application it is important to include Section 4 of the Act that speaks of the inclusion of provisions in contracts of employment (BCEA, Section 4, 1997) which states that a basic condition of employment constitutes a term of any contract of employment except to the extent that any other law provides a term that is more favourable to the employee; the basic condition of employment has been replaced, varied, or excluded in accordance with the provisions of this Act; or a term of the contract of employment is more favourable to the employee than the basic condition of employment. This clause provides the individual with the assurance that the Act may be replaced only if the terms of the contract are better than those covered by the Act. In this section, the researcher has offered the purpose, applications and role of the Act. The next section discusses the process to be followed for legislative amendments.

**Amendments**

Amendments are made to pre-existing legislation and follow a specific process before being signed as law. The following process is followed when an amendment to the legislation is
presented to parliament for consideration. The amendment is referred to in this instance as a Bill which may be presented by a Member of Executive Council (MEC), a Member of Provincial Legislature (MPL) or a Committee. Once the draft Bill is presented to and approved by the Executive Council the Bill is published in the Provincial Gazette, and notices are placed in various newspapers which bring the Bill to the attention of the public (PMG, n.d). The public thereafter has at 14 days to comment on the Bill.

Once the 14 days have lapsed the Speaker of the House introduces the Bill to Parliament and a Committee is assigned to address the proposed Bill. The MPLs in the Committee debate the Bill and propose amendments, in consultation with public (PMG, n.d). Parliament then puts the Bill to a vote, if the majority vote in favour of the Bill the Bill is passed. In the event that there is a minority vote, the Bill is rejected. A Bill that is passed is finally signed by the President and thereafter comes into effect.

In order for a Bill to be passed, it has to demonstrate that the amendment is in line with the Constitution and upholds the rights of the very constituents it is designed to protect. Often committees assigned to investigate the worthiness of the amendments, looks to international determinants and developments for guidance. The international determinants and developments with the proposed suggestion of including same-sex parents as beneficiaries to maternity/paternity leave under the BCEA and for the extension of four months maternity leave to be extended to six months are discussed below.

**International determinants**

Internationally various countries around the world are recognising same-sex marriages, South Africa was the fifth country to do so (Noble, 2015). South Africa’s progressive legislation is demonstrative in Section 9, Equity Clause of the Constitution of the Republic of South Africa, which includes sexual orientation and prohibits unfair discrimination on any ground including race, gender, sex, ethnic or social origin, colour, age, disability, religion, conscience, belief, culture or language and sexual orientation (Constitution of the Republic of South Africa, Act 108 of 1996). This inclusion affords protection to gays, lesbians, bisexual, intersex and transgender people.

Recently South African Labour Court held that the same-sex parent was entitled to four-month maternity leave (M I A v State Information Technology Agency (Pty) Ltd, 2015), this decision has opened the debate on why a country that has demonstrated its progressiveness has held back on extending maternity leave rights to same-sex parents. The table below provides an idea as to the various maternity leave provision around the world in relation to South Africa.

South Africa appears to fair in between other countries in the table above. A few countries have made provision for same-sex parents and these are discussed in the next section.
Table 1: Maternity leave

<table>
<thead>
<tr>
<th>Country</th>
<th>Leave days</th>
<th>Paid</th>
<th>Unpaid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mother</td>
<td>Father</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>18 weeks</td>
<td>14 days</td>
<td>42%</td>
</tr>
<tr>
<td>Belgium</td>
<td>15 weeks</td>
<td>10 days</td>
<td>64.1%</td>
</tr>
<tr>
<td>Denmark</td>
<td>18 weeks</td>
<td>2 weeks</td>
<td>53.6%</td>
</tr>
<tr>
<td>Finland</td>
<td>17.5 weeks</td>
<td>54 days</td>
<td>74.4%</td>
</tr>
<tr>
<td>Germany</td>
<td>14 weeks</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Iceland</td>
<td>13 weeks</td>
<td>91 days</td>
<td>59%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>16 weeks</td>
<td>1 week</td>
<td>100%</td>
</tr>
<tr>
<td>Norway</td>
<td>49 weeks</td>
<td>49 weeks</td>
<td>100%</td>
</tr>
<tr>
<td>Philippines</td>
<td>15 weeks</td>
<td>1 week</td>
<td>Paid</td>
</tr>
<tr>
<td>Serbia</td>
<td>20 weeks</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>South Africa</td>
<td>16 weeks</td>
<td>10 days</td>
<td>Paid</td>
</tr>
<tr>
<td>Spain</td>
<td>20 weeks</td>
<td>15 days</td>
<td>100%</td>
</tr>
<tr>
<td>United States</td>
<td>12 weeks</td>
<td></td>
<td>Unpaid</td>
</tr>
</tbody>
</table>

Source: Adapted from Lakrit (2019) and Rotondo (2019)

Same-sex parents

Organisation for Economic Cooperation and Development (OECD) countries provide at least 6 months of paid paternal leave (Raub, Nandi, Earle, De Guzman Chorny, Wong, Chung, Batra, Schickedanz, Bose, Jou, Franken, & Heymann, 2018, p.7). While paid leave entitlements for fathers were “generally shorter than for mothers. Twenty-one OECD countries guarantee at least 6 months of paid leave to fathers of infants. While 24 of 34 OECD countries guarantee at least 14 weeks of paid leave to fathers of infants” (Raub et al, 2018, p. 1). According to Raub et al (2018, p.11), 20 of the 27 OECD countries that paid parental leave can be taken by either parent. Although of the 27 countries, 12 of these countries had guidelines as to the hour’s parents are to work during this leave period. “In the majority of these countries, employers bear all responsibility for providing leave benefits, although father-only leave is generally much shorter in duration than that which is reserved for mothers or available to either parent” (Raub et al, 2018,p. 15). There remains an imbalance with the number of days allocated to fathers than to mothers with distinct silence with regards to the rights of same sex parents. That is the question raised by this paper, why can the gap not be filled by employer and legislators alike.

Advantages of arriving at six months

Advocating for six-month paternity leave is not as random as one may think according to Raub et al (2018,p.1) 25 of the 34 OECD countries sampled provided at least 6 months paid maternity leave, which according to the World Health Organisation is in line with the recommended length for exclusive breastfeeding. While Raub et al (2018, p.1) adds that “21 OECD countries guarantee at least 6 months of paid leave to fathers of Infants”. Raub et al (2018, p.1) found that research on the effects of paid parental leave on health economic, and gender equality outcomes strongly
supports making: “6 months of paid leave available to parents of infants, with 3 months as a minimum bar for supporting health and women’s economic opportunities” with further research supporting the “importance of paid leave for fathers as well” (Raub et al, 2018, p.1).

The benefits derived from extending paternity leave to 6 months are convincing. Raub et al (2018,p.2) have recorded that exclusive breastfeeding for the first 6 months reduces the risk of various infections in the new-born by 50%, in upper respiratory infections, 63% in lower respiratory infections and gastrointestinal infections by 64%. The benefits of breastfeeding are also linked to a reduction in the risk of child obesity, Type 1 diabetes, and sudden infant death syndrome (SIDS). This study was equally supported by Ferrante (2019, para 5) who added that: “breastmilk promotes sensory and cognitive development and protects the infant against infectious and chronic diseases. Exclusive breastfeeding reduces infant mortality due to common childhood illnesses such as pneumonia, and helps for a quicker recovery during illness”. The significant need for paternity leave in relation to breastfeeding was seen in a study conducted in Sweden which found that “infants whose fathers did not take paternity leave during the first year were significantly less likely to be breastfed at 2, 4, and 6 months” (Raub et al, 2018, p.2).

Other studies have shown that parent-child bonding in early infancy resulted in healthy development (U.S. Department of Labour, 2016). This was confirmed by Raub et al (2018,p.3) who have indicated that: “we know that parent-child bonding and a stable home environment are critical to healthy development, with the first 4 to 6 months of life being particularly important. Paid leave may facilitate this bonding”. The U.S Department of Labour noted that longer leaves promoted child bonding, “improve outcomes for children and even increase gender equity at home and at the workplace. Paid parental leave for fathers, as well as for mothers, provides a real advantage to working families” (U.S. Department of Labour, 2016, p.1). Walker (2018, para.1) as a new parent at the time noted that the benefits of parental leave are unquantifiable “I have a close relationship with my daughter; we are buddies. I have no doubt this is down to the three months I took off work when she was a baby”. In another study Dennison (2019, para, 4) documents that 6-month-olds who spent extended and regular playtime with their fathers “had more advanced vocabularies by age 3 than those who played only with mom, possibly because dads drop bigger words” (Dennison, 2019, para 4).

The extended maternity leave has the obvious recuperatory benefits to the new mother who is healing Chatterjii and Markowitz (2012, p.61), as quoted by Raub et al (2018, p.5) found that “women who took less than 12 weeks of maternity leave had higher depression scores (15%) and a 2-percentage-point higher probability of severe depression at 9 months after delivery”.

In addition to the physical benefits of the extended leave, making leave available to both men and women was: “critical to ensuring equal economic opportunities”. (Raub et al, 2018, p.5) The argument that this cannot be economically feasible has been refuted by studies which have demonstrated that it is highly achievable “OECD countries that provided at least 6 months of paid maternal leave had higher rates of labour force participation and no evident difference in unemployment rates” (Raub et al, 2018,p.7).

With clear benefits at hand the evidence suggests that extending paternity and maternity leave to six months provide a holistic benefit to both parent and child, however, current BCEA has left the
enforcement of paternity and maternity leave to the discretion of the employer. Understanding the discretion of the employer is discussed in the next section.

Discretion of the employer

The discretion of extending maternity and paternity leave rights lie with the employer, this is dependent on the individual employer who has the foresight to think beyond the conventional and look to the needs of family and employee wellbeing. Various employers in the past year have chosen to lead by example and have chosen to implement progressive maternity leave provisions, Reddit’s co-founder Alexis Ohanian who experienced the benefits of a six week parental leave has chosen to implement “16 weeks of paid parental leave, allocating additional leave for female employees who experience complications before or after they give birth” (Johannes, 2018, para 5).

While Volvo South Africa on the 1 May 2019 announced that employee who has to exceed a year of employment with Volvo would be entitled to six months leave with 80% pay. This provision according to Volvo South Africa will be offered to mothers, fathers, same-sex parents and parent of adopted children (Naidoo, 2019, para 3-5). Managing director of Volvo SA, Greg Maruszewski, has added that these provisions will “improve work-life balance, boost family time and fits in with a human-centric company like ours” (Naidoo, 2019, para 3-5).

Novartis on the 08 July 2019 announced that they will be providing all new parents “with paid parental leave of a minimum of 14 weeks (three and a half months) following the birth, surrogacy or adoption of a child” (Parent24a, 2019). These are examples of ground-breaking strides towards improving maternity and paternity leave and to become inclusive of the same sex and adoptive parents. Employers are prepared to make the change while others lag behind. However, this does not prevent employers from using their discretion to extend existing provisions to six months. South African legislators have taken steps in this direction, however, there is potential for improvement.

With whom does the onus lie?

Judge Gush in the obiter added, “it is clear that in order to properly deal with matters such as this it is necessary to amend the legislation and in particular the Basic Conditions of Employment Act” (M I A v State Information Technology Agency (Pty) Ltd, 2015, Para 19). The Act states “at least four consecutive months” and makes reference to the birth mother. While the South African Labour Laws Amendment Act will as of 31 July 2019 provide an employee with at least ten consecutive days of parental leave “which may commence on the day that the employee’s child is born, the date that the adoption order is granted or that a child is placed in the care of a prospective adoptive parent by a competent court, pending the finalisation of an adoption order whichever date occurs first” (Parent24b, 2019, para. 2).

Adoption benefits will come into effect on the 11 October 2019 in this provision the employee who has adopted a below the age of two would also be entitled to take at least ten consecutive weeks of parental leave “which may commence on the date that the adoption order is granted or that a child is placed in the care of a prospective adoptive parent by a competent court, pending
the finalisation of an adoption order in respect of that child whichever date occurs first” (Parent24b, 2019, para. 3).

Finally, an employee who is awaiting the birth of a child through a surrogate or is referred to as the commissioning parent would be entitled to maternity leave from the 10 December 2019 to at least “ten consecutive weeks. An employee may commence commissioning parental leave on the date a child is born as a result of a surrogate motherhood agreement” (Parent24b, 2019, para. 4).

Section, s27(2)(a) of the Basic Conditions of Employment Act “which originally offered 3 days family responsibility leave when a child is born - will be repealed and replaced under the parental leave provisions” (Parent24b, 2019, para. 4).

The legislator has obviously made it clear as to the law while the employer has some flexibility to work within these constraints and has the ability like Reddit, Novartis and Volvo to consider generous leave provision for their employees, so the onus in this instance lies with the employer to go beyond. The discussion of findings are next.

Discussion

Countries around the world have varying provisions on maternity and paternity leave looking closer to South African legislators have made amendments to offer from the 31 July 2019 ten consecutive days of parental leave to parents irrespective of their biological relation to their child. The amendments extend to commissioning and adoptive parents of a child under two years to at least 10 consecutive days of parental leave, or adoption leave of at least 10 consecutive weeks. The decision by Judge Gush in the case of M I A v State Information Technology Agency (Pty) Ltd set the stage for other employers to reconsider their own leave policy and question their progressiveness in embracing or rather extending similar provisions to same-sex parents and to further change the four consecutive months to six as proposed by the researcher.

It is evident that various countries around the world are making changes some more rapid than others. South Africa is the fifth country in the world to embrace same-sex marriage has not seriously considered the repercussion of this decision. Had this been a well thought out decision legislation pertaining to maternity and paternity leave provisions would have been addressed 13 years ago when same-sex marriages were legalised.

However, the new Bill has proposed to be inclusive of all parents, this is the first step in the provision. The researcher has proposed that existing leave term of four consecutive months be extended to six months and this with the aid of various authors and studies has demonstrated that the six-month provision is beneficial to both parents and child.

With whom does the onus lie in making these changes, it has always been assumed that changes to legislation should remain in the hands of the legislators, however, and in the instance when the legislator has left the interpretation to the interpreter has the discretion to improve on the suggested recommendation made by legislation. The paper argued why employers in this instance are not taking the initiative to interpret the law to the benefit of the employees, extending maternity leave provision to six months, instead of the current suggested four months and why have legislators remained silent and not clearly mentioned same-sex parents when setting out Section 25 of the BCEA.
Limitation and recommendations

The study does present clear limitations which may be lifted by future studies. That would be the inclusion of a quantitative methodology that can support the findings of the content analysis which looked at legislation and exiting policy on maternity leave in South Africa and elsewhere.

Recommendations are that in addition to a quantitative study that future researchers conduct in-depth interviews with legislators and practitioners to determine their perceptions on the suggested extension of maternity leave in South Africa from the existing four months to the suggested six months. “Greater work is needed in this area to understand how legislative language and interpretations of that language affect all family types and their ability to care for and bond with an infant, including lesbian couples with a birth mother, lesbian couples adopting, gay couples using surrogacy, and gay couples adopting” (Raub et al 2018,p.19). Implications for employers is to interpret the Act with the employee in mind, as the benefits of providing support outweigh the challenges that lie ahead when an employee begins to show signs of fatigue and dissatisfaction. Implications for legislators and employers follow next.

Implications for legislators and employers

The implications for legislators is to as suggested by Judge Gush “that in order to properly deal with matters such as this it is necessary to amend the legislation and in particular the Basic Conditions of Employment Act” (M I A v State Information Technology Agency (Pty) Ltd, 2015, Para 19). Ten consecutive days for paternity leave is the first step, legislators would now need to include same-sex parents in their description. This was clearly articulated by Judge Gush who stated: “there is no reason why an employee in the position of the applicant should not be entitled to maternity leave and equally no reason why such maternity leave should not be for the same duration as the maternity leave to which a natural mother is entitled” (M I A v State Information Technology Agency (Pty) Ltd, 2015, Para 20). Therefore commissioning parents and adoptive parents, as well as a natural parent, should not be treated any differently. Legislators need to make provision for this consideration. While this process takes its course employers are therefore burdened to initiate these changes when using their discretion on deciding individual workplace policy and provision that can exceed four months to include six months as is the current uptake with South African based companies like SASOL and PWC (personal communication, 11 June 2019). The initiator for these changes lies with the Human Resource Department as much as the employer, as an interpretation of labour policy and amendments are core business practice for HR practitioners. Embracing amendments and making progressive changes for the betterment of the employee and the organisation is essentially a norm for HR.

Conclusion

This paper touched on two areas of discussion the first being the suggestion to extend the existing four-month maternity leave to six months and the second to recommend that maternity leave provision should cover parents equally and not exclusively to the birth parent. The BCEA was discussed and the position of the prosed amendment was identified as Section 25 of the BCEA. The application of the Act was discussed and the purpose of the Act outlines, the amendment process was discussed next to demonstrate that the process for amending the law is not as taxing
as conceived and with the approval of a majority stakeholders legislation can be amended to the benefit of constituents.

As a means of demonstrating merit for the proposed extension from four to six months, the researcher demonstrated that six month extension was beneficial to both parent and child. International determinants were relied on to motivate that various other countries around the world are strongly considering amending their maternity leave provision to six months and to include both parents as eligible for maternity or paternity leave as the case may apply. The distinction of which parent should be entitled to leave should not be an issue as both parent irrespective of their gender should be equally entitled to the leave.

With furnishing literature and evidence in favour of the six-month provision and the inclusion of same-sex parents into Section 25 of the BCEA the focus was shifted to who does the onus lie when advocating for change does it lie with the legislator or with the employer. With the window of discretion identified when legislators initially indicated as “at least”. It allows for the employer to consider the benefit of the employee and the child and to make the fair decision to exceed the four-month consecutive leave to consider six months, as literary evidence suggest that although four months may be seen as adequate. The employers have the discretion to make a difference in changing legislation for the better.

Reference


Motsiri, N. and Timothy, O. (2015). Sir, your maternity leave has been granted...: Some laws need to be updated for civil unions and same-sex couples, Legal Maternity Leave, pp. 44-46, Retrieved 06 July, 2019 from www.hrfuture.net


Unpacking the Female Leadership Discourse: Perspectives from Women in East Africa

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Abstract
Women are still marginalised in certain traditional societies in Africa which has subjected them to abject poverty and vulnerability. Their deep regard for religion, tradition and culture, adds to their contextual complexity when they are trying to execute their leadership duties. A qualitative research approach was adopted. In-depth, forty-five minute semi-structured interviews were conducted with twelve perceived, successful, senior women leaders from four East African countries. An inductive method of data analysis was applied. Four major themes evolved, leading to a deeper understanding of; general leadership traits versus women leadership trait requirements; women leadership derailers; and women leadership enablement. Further to this, fundamental elements such as critical stakeholders, professional development, balancing family and professional expectations, coping with societal pressures and strengthening personal attributes were identified. It was concluded that female leadership is an inclusive and collaborative phenomenon across women, that is a sum of various components all of which should be considered holistically.

Key Words: women leadership; derailleurs, enablement; personal attributes

Introduction
With the high level of patriarchal tendencies that continue to characterise the prevailing world order, any steps taken to develop the future of Africa, should include the fundamental issue of women emancipation. This was highlighted during a 1987 speech by the late Thomas Sankara, the then president of Burkina Fasso (Nkenkana, 2015; Murrey, 2012) also known for including a large number of women in his government, at a time, when women empowerment was not yet a priority, even by the United Nations (AWGV, 2017). Women and men have constantly worked together as a team for the common good, therefore innovative ways of focusing on gender issues, to address the prevailing patriarchal system in Africa is vital so as to sustain global development which cannot be realised if women are constantly suppressed (Diaspora News, 2016).

Literature Review
Women have increasingly been seen to hold high profile positions of national leadership globally especially in various national parliaments (Jalalzai & Krook, 2010). This means that women participation in different walks of life continues to gain momentum despite the resistance women face in society. Their representation has increased in high profile positions ranging from being key members in the communities in which they reside, to successful presidential candidates (Ngunjiri, 2014). In addition, new leadership models and tendencies have continued to emerge
(Kuada, 2010) some of which are said to characterise the way women carry out their respective leadership roles (Thornhill, 2011) both at the executive and non-executive levels.

African women have assumed leadership positions at the highest pinnacle of government including parliamentary positions. Women like Presidents Ellen Sirleaf Johnson in Liberia, Ms Joyce Banda in Malawi and Ms Catherine Samba-Panza have all maintained instrumental positions in their respective governments of Liberia, Malawi and the Central African Republic while Seychelles, Senegal and South Africa have also produced very prominent women in parliament (Ngunjiri, 2014). They play an instrumental role in promoting justice, peace and reconciliation in their respective communities (Marke, 2013; Concord Times, 2009, Hewitt 2019) while participating significantly in various business sectors and have acquired a dominant place in informal but urban markets (Forbes, 2017; Verhoef, 2017). Women have also excelled as award winning authors within Africa (The Commonwealth, 2017) and as known activists within the continent (Adeso, 2016). Hence women in Africa have evolved from having engaged mainly in traditional and cultural roles to quite impressive leadership positions with some even doing better than their male counterparts. They are also enrolling in higher education which has further enabled them to advance in society (Marke, 2013).

However, the constraints that women experience as they administer their respective leadership responsibilities continue to persist (Madsen & Ngunjiri, 2015) and are in most cases forced to perform below their potential to avoid any form of marginalisation making them to mainly focus on the minor issues (Jalalzai et al., 2010). A range of prejudices are said to impede the increased participation of women in leadership positions (McKinsey & Co., 2016) with women at the Company Executive Officer (CEO) levels worldwide said to be around 3% to 4% only (Sherwin, 2014). Women are still marginalised in certain traditional societies in Africa which has subjected them to abject poverty and vulnerability (Marke, 2013). Women candidates seeking elective positions still face challenges especially with the deep regard for religion, tradition and culture in Africa (Gichuki, 2014).

They have also been continuously portrayed as incapable, lacking direction, ineffective and confused (Msila & Gumbo, 2016). These restrictive and prejudiced tendencies towards women include prevailing stereotypes labelling women in leadership positions as having abandoned more important domestic roles (Gichuki, 2014). Women are constantly being questioned about their suitability to take on prominent roles in society and Sheryl Sandberg in her book “Lean In: Women, Work and the Will to Lead” believes the reason for this is because women lack self-confidence which she attributes to prejudice and hindrances they face within the corporate setting (Kristof, 2013).

Hence, the number of women in leadership positions decreases as they ascend the corporate ladder which is quite puzzling especially since women are said to have thrived in positions that were previously dominated by males (Sherwin, 2014). This is supported by Hewitt (2019), who conducted a desktop research study of women in leadership position, and who concluded that women, is still under represented, notwithstanding predictions made by various institutions that their numbers will increase around boardrooms. However, it is believed that African women can use their traditional positions to counter this chauvinism as well as their unique feminine characteristics to lead successfully in today’s organisations (Msila et al., 2016).
Thus, based on the above the research question was formulated as “What can be learn from senior women leaders, who are perceived to be successful, and to what extent do these women leaders think, the skills and lesson they have learned, can be transferred to other women, trying to make it to the top?

Research approach and method

A qualitative research approach has been adopted to gain understanding from these senior women leaders. Their live history, as well as their lived experiences (Guest, Namey & Mitchell., 2013) was used as a point of departure to investigate reasons behind their behaviour, specifically why they think or do certain things (Castellan, 2010). It was further aimed to understand the underlying motives, that drove their behaviours, specifically, the why and how of their decision making (Rajasekar, Philominathan & Chinnathambi, 2014).

The total population consisted of perceived successful women leaders in Eastern Africa which include Kenya, Rwanda, Somalia and Uganda (The Africa Report, 2017). These countries especially Kenya, Uganda and Rwanda have been acclaimed for their conscious efforts through affirmative actions to ensure that women are included in senior leadership positions (Seidel, 2013) so as to be part of economic development initiatives in their countries. A total of twelve successful senior women leaders from the four East Africa countries were sought n=3 Uganda; n=3 Kenya; n=3 Rwanda; n=3 Somalia and obtained.

Data Collection and Analysis

Due to the geographical location of the selected senior women leaders various strategies had to be deployed to communicate and to ensure continues interest in the study. The methods included WhatsApp calling, skype communication and normal telephone calls. As electronic semi-structured interviews were adopted as the main method of data collection, as it was cost effective, there was no travel involved and it was convenient for the senior women leaders (Wilson, 2012) and the researcher. Challenges experienced were that the senior women leaders had different operating systems and computers and it is recommend that it should be taken into consideration for such internet based responses. Continuous messages were sent to the senior women leaders, who at times were slow at providing feedback, to encourage them and acknowledge that their feedback was useful and to maintain their confidence in the study (Bryman, 2008). All semi-structured interviews were recorded.

Data was analayised immendiatly after the electronic semi-structured interviews to ensure that relevant data was collected and that it linked to the main research question. Various approaches were applied to support the development of categories and concepts (Goeken & Borner, 2012), specifically, Miles and Huberman’s (1994) classification of the analysis process was adopted which included the process of data reduction, data display and the drawing and verification of conclusions.

Key points derived from the written notes and semi-structured interview transcripts were produced to compress long statements into summaries and involved condensing large amounts of text into
few words which helped to build the main themes that emerged from the various interviews (Kvale, 1996). These key points were compared, empirically generalised and linked together according to similarities (Glaser et al., 2013). The data were sorted into categories (Castellan, 2010) according to feedback from participants during which each fragment of data was interacted with and studied thoroughly (Denzin et al., 2011).

In order to ensure a level of validity and reliability of the process, the researcher did not stop at one defined conclusion (Saunders et al., 2009) after analysing the data, but continuously tested the theoretical propositions, that emerged from the data analysis and constantly sought other explanations about relationships between variables that were evident when the data was analysed (Gray, 2014). This process was followed until a point of theoretical saturation was reached and it was clear that the data no longer revealed any new information (Fusch & Ness., 2015), that was related to a particular theme and the linkages between themes have been verified. It was also ensured that the theoretical position was in line with the data so as to ensure validity (Shweta, 2016).

Reliability of data collection methods was ensured (Easterby-Smith, Thorpe, Jackson & Lowe., 2008) by making sure that the timings for interviews was favourable for the senior women leaders while guaranteeing anonymity during data collection and ensuring they were not biased with the liberty to express their views freely (Robson, 2009).

To ensure content validity (Gray, 2014) care was taken to align the theoretical position taken with the data and practical consideration was given to the methods used to collect data to ensure that these were relevant, representative and proportional to the senior women leaders under study (Shweta, 2016). This study also applied some scrutiny to language in the form of discourse analysis to understand how they expressed themselves during interviews, therefore transcribing the interviews was mandatory to help the researcher examine feedback thoroughly (Bryman, 2008). Data saturation was achieved by ensuring that no new information could be obtained from the data and all relevant codes had been exhausted so as not to affect the quality and validity of the study (Fusch et al., 2015; Shweta, 2016).

Results
The life history method is deeply rooted in the interpretive epistemology perspective that looks at people as living in a socially constructed world in which meaning is formed through understanding social contact (Cassell et al., 2004; Castellan, 2010). This approach has been used to capture the subjective interpretation of the senior women leaders account and theory about their social behaviour over time (Cassell et al., 2004) based on the assumption that “if men define those situations as real, they are real in their consequences” (Thomas, 1966, p.300) as quoted in Cassell et al., (2004). The major themes extracted from the data is presented in Table 1.

Each theme will be unpacked and discussed with reference to the sub-themes and existing theories. Lessons aspiring women leaders can adopt or take note of is highlighted as part of each theme.
Table 1: *Major themes generated from semi-structured interviews*

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<tr>
<th>No.</th>
<th>Themes</th>
<th>Sub-Themes</th>
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<tbody>
<tr>
<td>1</td>
<td>General Leadership Traits</td>
<td>Vision Oriented</td>
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<td>Goals-Based</td>
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<td>Followers oriented</td>
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<td>Influencing Others</td>
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<td>Legacy oriented</td>
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<td>2</td>
<td>Female Leadership Traits</td>
<td>Sensitive and Human</td>
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<td></td>
<td></td>
<td>Resilience</td>
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<td></td>
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<td>Innovative and Thorough</td>
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<td>Integrity</td>
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<td>3</td>
<td>Female Leadership Derailers</td>
<td>Self-Doubt</td>
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<td></td>
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<td>Lack of Mentorship</td>
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<td>Society and Culture</td>
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<td></td>
<td>Overwhelming Responsibilities</td>
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<td>4</td>
<td>Female Leadership Enablement</td>
<td>Professional Development</td>
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<td>Critical Stakeholders</td>
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<td>Balancing Family and Professional Expectations</td>
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<td>Coping With Societal Pressures</td>
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<td></td>
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<td>Strengthening Personal Attributes</td>
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*Theme 1: Adopting General Leadership Traits*

Discussions generally provided the sense that some of the fundamental attributes that are necessary for successful leadership focus on having a vision, goals, promoting followers and instilling an influencing aspect with the aim of leaving positive footprints in the form of a legacy. These attributes are said to be key determining factors for a successful leader and echo the transformational theory that embraces charisma and futuristic tendencies as key leadership characteristics. The influencing aspect of leadership both at the organisational and social level (Achua & Lussier, 2010; Uhl-Bien, 2006) as well as looking at the bigger picture in form of a vision and goals while adopting elements like collaboration with followers are all geared towards positive social change (Hailey, 2006, Afegbua et. al., 2012). These should be the ultimate goal of a leader.

Hence as most of the senior women leaders emphasised, leadership should be about relating with and enhancing followers as well as sharing responsibilities in order to withstand global competition in an effort to promote success and long term sustainability. All these feature within the transformational and relational schools of thought (April & Ephraim, 2006; Achua et al., 2010; Kezar, 2004; Uhl-Bien, 2006) and should be typical of any leader.

Aspiring women leaders are urged to take note of these attributes when embarking on their respective leadership journeys and enhance their existing abilities where applicable to arm themselves with the general leadership traits that are expected of them especially where these are lacking.
Theme 2: Harnessing Female Leadership Traits
Female leadership is consistent with the attributes of servant leadership that is required under the African leadership agenda. Majority of the senior women leaders acknowledged that women possess certain traits such as emotional intelligence, sensitivity, humanness, tolerance, resilience, integrity and innovativeness some of which are elements of service. These are required for servant leadership, a model of African leadership and Ubuntuism that is built from the transformational leadership theory (Brubaker, 2013). Community values such as compassion, family, kinship networks, value-based, team oriented, charisma, participatory tendencies, sharing, responsiveness, dialogue, debate, negotiation, influence, tolerance, listening and open expression of feelings among others which women are said to portray all characterise the African leadership paradigm (April et al., 2006; Mbigi, 2002; Brubaker, 2013).

Therefore senior women leaders concurred with the notion that aspirant women leaders need to recognise, exploit and where necessary reinforce these attributes inorder to succeed within the African leadership setting. Some of the senior women leaders echoed the fact that some of these characteristics also referred to as “soft components” are what define women and if strengthened and used appropriately to their advantage can enable them to thrive. Women value mutual relationships from an early age which makes them ideal for the emerging leadership requirements in the Fourth Industrial Revolution that favour personal interactions (Herold, 2016) as opposed to hierarchy and authority. This form of leadership looks at embracing complex needs of various followers, shaping preferences of others, leading by example and favours personality culture, moral authority, shared values and attraction as a basis for acceptance versus threats or force to stimulate collaboration.

Participants also emphasised charisma, emotional inspiration, encouragement and non-verbal communication as leadership ideals. These all fall under the transformational model where leaders must influence a large group of people over which they may or may not have direct authority (Ngang, 2012; Colvin, 2015).

Hence as some senior women leaders indicated, these attributes are essential for modern day leadership which is moving away from the element of coercion, directing and forcefulness and is embracing the transformational and relational leadership models which focus on collectiveness and relationships where the leader inspires, motivates, mentors and develops people (Achua et al., 2010; Kuada, 2010). These ideals are critical when forming a leadership structure in emerging economies in Africa so as to foster growth and development in the region. Due to their leadership tendencies, some of which are characteristic of how they function, women can comfortably be at the forefront of this agenda (Mayanja, 2013; Owen, 2004; Kuchynkova, 2015; Caliper, 2014).

Theme 3: Identify and Manage Female Leadership Derailers
Most senior women leaders noted that in order to thrive in the leadership arena, women need to take note of the various impediments, referred to here as derailers that disrupt their journey. The first step in overcoming these barriers, is to understand them in their entirety, after which a range of methods can be devised to counter them.
Existing literature and interview discussions identified **self-doubt** manifested in the lack of self-confidence as a key detriment to leadership success because women tend to lack the inner belief that they can take on roles that they often feel are meant for men and yet a strong sense of self is necessary to be able to lead a diverse workplace. This lack of self-confidence has also been attributed to the resistance that women face within the corporate setting (Escandon & Kamungi, 2007; Kristof, 2013).

The **lack of mentorship** has also been identified as critical in disrupting female leadership (Madsen et al., 2015). This is in line with interview discussions which highlighted mentorship as key in enabling women to do well in leadership positions. Therefore senior women leaders should seek the necessary mentors, in whose footsteps they can follow. Women also need to mentor other upcoming leaders so as to reduce on the gaps in this area (UNDAW, 2005; Gita et al., 2013; Radovic-Markovic et al., 2013). These all will tackle the self-confidence issue that greatly affects female leadership as some participants indicated. Hewitt (2019) referred to the iron butterfly who will support and encourage other women oppose to the queen bee who sets out to diminish her counterparts.

**Society and culture** has been identified as a major derailer and needs to be tackled holistically in order for women leaders to succeed. There is still a level of marginalisation in certain traditional African societies as well as a lack of progress which includes gendered conditions of access and unequal levels of leadership representation. Religion, tradition and culture in Africa continue to bear restrictive and prejudiced tendencies towards women regardless of their competence, education and power (Marke, 2013; Jalalzai et al., 2010; Gichuki, 2014; Idrissu, 2012). Therefore interview discussions highlighted the need for these to be recognised and confronted innovatively by the women themselves so as to thrive in their various leadership domains.

Being very **critical players at the home and work place** puts women in an overwhelming position because they need to take care of responsibilities in their respective leadership fronts and are expected to excel in both as interview participants pointed out. This confirms existing literature which suggests that due to their numerous domestic and professional commitments, women in leadership positions tend to encounter difficulties in balancing family and career needs and are often frowned upon and depicted as having abandoned their domestic responsibilities which are perceived as more important than the workplace (Moorosi, 2007; Gichuki, 2014). Therefore it was noted that women need to understand these challenges and devise the most appropriate means of dealing with them. Mindfulness and its associated techniques to deal with work life, family balances is strongly recommend here for women.

**Theme 4: Promote Female Leadership Enablement**

Senior women leaders need to understand the necessary requirements of a good leader and the attributes that they as senior women leaders display which make them successful at leading. They need to appreciate the issues that hamper their progress in leadership and how to counter these issues in the form of female leadership enablement. This will enable women to adequately succeed both at home and the workplace. Existing theory has been used to explain some of the traits that women display which when reinforced and applied correctly can enable them to counter
existing leadership challenges. These attributes should therefore be utilised hand in hand with the following leadership enablers:

**Professional Development**

Professional development which takes the form of continued learning and embracing existing and emerging trends was frequently highlighted as key to going a long way in strengthening aspiring female leaders. Therefore this should be looked at as an investment. Women should be proactive in harnessing their growth by acquiring the right education, embracing volunteerism and self-learning, nurturing their leadership attributes and abilities, gaining useful skills, increasing their confidence, assertiveness and emotional intelligence, creating their own personal brand all with the aim of strengthening their professional capacities and to enable them thrive as leaders. This is also highlighted in existing literature (McKinsey & Co., 2016; Hannum, et al., 2011; Gita et al., 2013; Madsen et al., 2015).

The need to adapt to changing global trends within various industries is also very key. The participants advised aspirant women to take note of these occurrences especially since organisations are constantly seeking to unlock new and emerging markets. Business is continuously being internationalised therefore the effectiveness of leadership will depend on the ability to adapt to these emerging trends and the cultural differences that are encountered as a result of globalisation (Bolden et al., 2009). The era of the Fourth Industrial Revolution for example comes with a range of prospects and new technologies that require people’s ability to embrace new skills, innovativeness, empathy and resourcefulness (WEF, 2018).

Emerging trends such as changing technologies, mobile learning, multiple stakeholder engagement, managing outsourcing functions, engaging remotely with teams, social impact, combining efforts for cost reduction, managing work life balance, increased impact and use of social media and digital marketing are all penetrating various industries. Therefore women need to keep abreast with these innovations and acquire the right skills set to keep up as well as reinforce and maintain high quality teams (Ghemawat, 2012; Hannum et al., 2011, PWC, 2014).

Women have also been urged to use the current statuesque, such as social and main stream media to their advantage so as to obtain useful information. They have been advised to market their brands using channels such as LinkedIn and other professional platforms so as to remain visible as well adopt the requirements within the new world of work and VUCA environment linked to financial growth of corporations. Women also need to incorporate issues like collaboration, new possibilities, abundance, new economies and paradox thinking to be able to solve the issues they encounter as well as embrace and influence discussions at the global level. The ability to adapt and cope with external forces, the changing world order and a range of other complexities inorder to succeed are all vital components in successful female leadership (Escandon et al., 2008; PWC, 2014; Kronz et al., 2014; Ungerer et al, 2016; Burns et al., 2011) and are all critical in enabling women to thrive both domestic and professionally as the interview discussions suggested.

**Critical Stakeholders**

Constructive alliances in the form of critical stakeholders are crucial in shaping a woman’s leadership journey to a large extent. Successful female leadership is grounded in collaboration
among various stakeholders. These include professional and community networks, family ties and role models all of which need to be embraced collectively so as to enable women to flourish in their respective leadership domains. Participants agreed that mothers have an immense influence on their daughters. Upbringing has a significant bearing on leadership tendencies for women and plays a role in how they turn out in regards to their leadership tendencies. Therefore parents, spouses, children and the society at large all need to be embraced holistically so that a conducive environment exists for women to progress.

Hence women need to utilise their existing attributes which have been highlighted using existing theory to establish and maintain useful partnerships which can support them both at home and in their professional responsibilities. Appropriate support networks and alliances that include active and vocal support from family, grassroots engagements and professional networks that include men are all key in enabling women to manage responsibilities and to be accepted (Madsen et al., 2015; Iddrisu, 2012; UNDAW, 2005). Strong role models are crucial for motivation and appropriate mentorship which is key in helping women to develop and fine-tune their abilities for efficient and sustainable leadership (UNDAW, 2005; Hannum et al., 2011; Escandon et al., 2008). These were all emphasised as vital resources that contribute to strong women leadership.

Balancing Family and Professional Expectations

Family linkages are critical in enabling women to succeed (Carli, 2010). Family is very important to a woman and this should be taken into serious consideration when planning a woman's leadership journey. Women are put to task to take advantage of their various attributes and abilities that have been described using existing theory to organise themselves and create the appropriate balance between their family and professional expectations inorder to succeed. Their self-organising and multi-tasking abilities have been seen as key to enabling women juggle home and work place responsibilities which has ultimately led to leadership success (Moen, 2010).

Women are expected to excel in both their domestic and professional leadership fronts and although family seemingly comes first for most women, they do need to focus their energies on thriving in both fields. Using domestic help and existing family linkages to their advantage, embracing coping mechanisms like new technologies such as Skype communication, video conferencing as well as emerging trends such as work life balance, utilising flexi working hours and working remotely will go a long way in enabling female leadership. Women should also create their own definition of success and work within the existing society norms to juggle the various responsibilities that they bear effectively so that they can succeed at both levels (Cheung et al., 2010; McKinsey & Co., 2016).

Coping With Societal Pressures

The pressures which women face in society are still far from over and as interview discussions suggested, will either make or break a leader depending on how appropriately these forces are handled. The Constructionist theory that highlights how we view and interpreted the world basing on our experiences (Kezar, 2004, Bolden et al., 2009) comes out very strongly in the socialisation aspect of women leadership. Several participants concurred that coping with societal pressures is therefore very key especially since socialisation has a strong bearing on leadership tendencies of women. They further advised that wider society and its impact on success has to be thoroughly
understood and dealt with accordingly. Culture is embedded in the society we live in especially in Africa and this goes hand in hand with progress and shapes successful women leadership to a large extent.

Therefore coping mechanisms need to be adopted so as to thrive. Understanding the society, using existing attributes and in-born characteristics such as intuition, empathy, resilience, patience, tolerance to their advantage, embracing socialisation and its impact on personality are some of the elements that can be adopted in order to cope. Women have also been advised to lead and provide mutual support for fellow women so as to progress at the same pace. Variations in cultural values and way of life in different countries require management and leadership styles that suit the context. Some traditional and cultural practices can also be used positively by women as an empowering tool for positive change and subsequent advancement of the African women's role in leadership. (Bolden et al., 2009; Iddrisu, 2012).

The cultural values that are upheld in emerging economies, Sub-Saharan Africa for example embrace the need for characteristics that are aligned with charisma, value based, team focused, participative and humane approaches said to be the preferred leadership approach to neutralise the uncertainty, centralised power structures, increased control mechanisms characteristic of leadership and management in these countries (Bolden, et al., 2009; Blunt, et al 1997) which critical theories allude to. Therefore women have been encouraged to embrace these ideals which they already have when embarking on their respective journeys especially in Africa. Understanding the societal and cultural tendencies and using this contextual knowledge and analysis to improve on growth and sustainability (Burns, et al., 2011) is key. This is in addition to adopting the right attitude, behaviour and level of assertiveness as means for dealing with existing pressures all of which are crucial in enabling women to progress.

**Strengthening Personal Attributes**

Women are also urged to develop themselves inorder to be entrusted with leading others and to accommodate the emerging leadership requirements in African and global economies. Working extra hard, being prepared, having a level of self-awareness, compassion, embracing their femininity, accepting vulnerability, upholding integrity, self-confidence, team spirit and collaboration tendencies, passion and resilience are some of the key attributes that need to be adopted and refined inorder for women to thrive. African leadership focuses on people and self-respect with an emphasis on transformational and relational leadership tendencies like collectiveness, transparency, inclusiveness and tolerance and inculcates the need for all voices to be heard (Mbigi, 2002; April et al., 2011; Kezar 2004).

Competing globally to guarantee success within global markets requires the element of delegation and team work in and out of the work place. Women also need to work exceptionally hard so as to make an impact especially in situations where there is scepticism about their ability to do well. Focus should be on motivating teams for organisational growth and improvement (Achua et al., 2010; Iddrisu, 2012; April et al., 2006). Inner drive in the form of self-confidence by leaders as well as an element of courage and resilience are all necessary to propel action (Nzimakwe, 2014; Day et al., 2013). Team spirit in the form of communication, collaboration and cohesiveness are all key in promoting successes within any given context both now and the future world of work.
Therefore these should all be taken into consideration by emerging women leaders.

Evidence suggests that women are at times forced to develop masculine tendencies so as to cope with existing stereotypes which tends to be counter-productive. However, women’s femininity can be nurtured to their advantage because the unique attributes that make a woman have some very crucial advantages that can be applied at the work place or any other leadership arena. Women intuition was specifically emphasised to include reflection which enables them to know and anticipate the impact of some of the decisions they make. Hence it is believed that African women can use their traditional positions to counter chauvinism as well as their unique feminine characteristics to lead successfully in today’s organisations (Caliper, 2014; Msila, et al., 2016).

**Areas for Future Research**

The importance of various stakeholders in enabling women’s leadership journey needs to be investigated further to contribute to literature on how women can establish linkages and alliances with the multiple players that are necessary to enable their growth in the leadership arena. Mothers have been perceived as a key motivating aspect for aspiring women leaders therefore this phenomenon should be studied further to understand the different ways that daughters draw motivation from their mothers and whether the bond that mothers share with their daughters should be given more focus within the leadership discourse.

The study determines that women’s female-ness is a core attribute that plays a major role in shaping their leadership actions and these should be nurtured accordingly. The researcher therefore recommends future research in this area to contribute to literature on how women can understand the value of these attributes so that they do not have to try and emulate the men but to use their feminine attributes to their advantage. The study also discovers that women at times tend to be their own derailers. This is an interesting area that may need further investigation to uncover some of the circumstances that lead to such phenomenon.

The study also reaffirms that success at the home front correlates to success at the work place. Therefore women need to thrive in both. The family unit contributes profoundly to the success of female leadership. Therefore it would be of interest to focus research in this area so as to discover how women can be supported further to enable they perform both responsibilities adequately.

Professional development has been identified as a key female leadership enabler therefore this is an area that should be given further emphasis especially in regards to improving competencies and embracing emerging and existing trends.

**Conclusion**

This article has highlighted certain measures which when embraced will go a long way in enabling female leadership and also reaffirms the important roles that family and culture play in leadership issues. It confirms that soft leadership that embraces people centered approaches like emotional intelligence, compassion, tolerance, team effort among others is increasingly becoming the norm and women are more advantaged to display these tendencies. Global demands require certain attributes which women can comfortably exude. However women should be aware that these
attributes work to their advantage and should reinforce and use them accordingly and not strive to emulate the men.

Learning and keeping up with the trends goes hand in hand with successful leadership. Successful female leadership is characterised by the notion that leadership is a multi-dimensional phenomenon that requires the sum of multiple parts in order to prosper. Hence the multi-faceted nature of leadership needs to be taken into consideration when embarking on this journey. Female Leadership therefore incorporates various components which should be embraced holistically in order for success to be realised. The multiple players involved in leadership need to be understood sufficiently by women to enable them to adequately manoeuvre within the leadership terrain.

Hewitt (2019) desktop research found that if women increase in number around the boardroom table and if they support each other, their voice became heard. Thus, it is concluded that women can to a great extent, extent the lessons they have learned to establish themselves in leadership positions to other women.

References


Accessed 29th August 2017


Dieronitou, I. (2014). The Ontological and Epistemological Foundations of Qualitative and Quantitative Approaches to Research with Particular Reference to Content and Discourse Analysis of Textbooks. *International Journal of Economics, Commerce and Management*, United Kingdom (II) 10, University of Nicosia.


Kuada, J. (2010). *Culture and Leadership in Africa; A Conceptual Model and Research Agenda; Department of Business Studies. Aalborg University, Aalborg, Denmark.*


Rajasekar, S. Philominathan P. & Chinnathambi, V. (2013). Research Methodology. School of Physics, Bharathidasan University, Tamilnadu, India.


Soini, H., Kronqvist, E.L., & Huber, G.L. (2011). Epistemologies for Qualitative Research, Qualitative Psychology Nexus, (8),Center for Qualitative Psychology, Tubingen, Germany.


Wilson, V. (2012). Evidence Based Library and Information Practice, Research Methods: Interviews. University of Saskatchewan, Saskatchewan, Canada 96-98.

Macroeconomic Policies and the Agricultural Sector in Nigeria: Evidence from Asymmetric Cointegration

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Abstract

This study examines the impact of macroeconomic policies on Agricultural output in Nigeria using the Asymmetric cointegration estimator. The results of the study indicated interest rate, inflation and exchange rate are important monetary policy variables driving the performance of agricultural sector in Nigeria. From the fiscal angle, the study found that budgetary provision for the agricultural sector over the years in Nigeria have been abysmally low and not up to the 23% of total budget specified in the Maputo (2003) declaration. Similarly, the study found institutional quality hindering the performance of the agricultural sector in Nigeria. The study therefore concludes that macroeconomic policies (monetary and fiscal) apart from institutional quality are crucial variables that influence the performance of Agricultural sector in Nigeria, as a results government need to align properly both the monetary and fiscal variables to achieve better agricultural performance while not overlooking the role of institutional quality.
The Effect of Farm Size on Soil Investment and Quality: Evidence from a Panel Data Set in Tanzania

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Abstract
Soil degradation represents a serious threat to the livelihoods of many small holder farers in the developing world. This paper explores the relationship between soil degradation and farm size. Previous research has postulated that more intensive farming on smaller plots leads to faster soil degradation. This paper proposes a simple theoretical model of an effect in the opposite direction: Higher productivity per acre on smaller-sized farms incentivizes farmers to invest more in improving their soil. Using data from the Tanzania National Panel Survey and International Soil Reference and Information Centre, I find evidence consistent with this effect. Smaller farm sizes are associated with increased organic fertilizer use and the effect of farm size on soil quality is indeterminate.
Determinants of Improved Seed Choice amongst Smallholder Sunflower Farmers in Singida, Tanzania: The Double Hurdle Approach

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Abstract

The use of improved sunflower seed varieties is widely promoted by stakeholders in public and private sectors in developing countries in general and Tanzania in particular. The adoption of improved seeds is critical for enhancing the productivity and income of smallholder farmers, thereby improving household welfare. However, there has been limited rigorous empirical research on the extent and antecedents of improved sunflower seeds choice among smallholder farmers. The current paper aims to address this lacuna of knowledge and determines factors influencing the choice of the improved sunflower seeds and the level of adoption.

The paper applies the double hurdle model to a cross-sectional survey data generated from a randomly selected 353 smallholder sunflower farmers in Singida region. In this study, smallholder farmers are construed to encounter two decision problems. The first decision concerns whether or not to adopt the improved see, where the second concerns the extent of use of the improved seeds used during a given farming season. In this vein, the study considers the Double Hurdle (DH) approach as the most appropriate for analyzing the factors influencing the choice of the seeds.

The results of analysis suggest that access to government led extension services, membership to rural producer organizations, liquidity constraint for improved seeds and off-farm employment significantly influence improved seeds choice. For the intensity of improved seeds choice, the results suggest that education, farmer’s age, farm size, household size, off-farm employment, seed market access constraint and group membership significantly influence the intensity of improved seed choice. In view of the above, it is plausible to think that the sustainability of the improved seeds choice depends not only on the availability of the improved seed varieties but also on the effectiveness of extension services supported by the government. The implications for policy and practices are discussed at the end of the paper.

Keywords: Seed choice, contract farming, improved sunflower seeds, smallholder farmers, double hurdle model
Conceptualizing learning and adaptation for the South African social system

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Abstract
This paper draws from a research that provided a conceptual framework to facilitate a process of theorising about learning, adaptation, consultation, involvement, patterns of relationships and seeking a stable operating structure for engaging people in building their own realities. The focus of the paper is on how South Africa can achieve sustainable societal transformation through learning and adaptation of the experiences of other successful nations in order to eradicate the socio-economic challenges faced by the majority of its people. The paper seeks to highlight the importance of active citizenry in the effective implementation of policies.

The methodology is descriptive and involves content analysis of the multiple cases of Brazil (as a parallel to South Africa) from 2003 at the inauguration of former President Luiz Inacio Lula da Silva to the end of his term in December 2010. The centrepiece of his integrated effort were social projects to eradicate hunger and poverty in Brazil. The second case is on Sweden (as an example of an egalitarian state). The process involved a detailed and systematic examination of contents of a particular body of material for the purposes of identifying patterns, themes, biases and grouping the data into pre-determined categories.

This paper conceptualises learning and adaptation as an intervention to devise suitable and effective social structures that could enhance South African societal transformation. Learning and adaptation is achieved by systemically learning from others and adapting to the internal and prevailing external environment without losing the social system’s identity. The conclusion drawn is that responsible and adaptive leadership is pivotal to societal transformation, when the leaders are able to design suitable social structures of how to involve people in the sustainable societal transformation process.

Key words: Learning and adaptation, collective learning, active citizenry, consultation, implementation, societal transformation.

1.0 Introduction
Globalisation and its complexities cause fluctuations in economies that require swift adaptation through learning from each other’s experiences. Dawson (2007, p.3) discusses the urgent need for a “new global morality which is centred on the adaptation of mankind as a global system.” The interconnectedness and interdependences of the world economy is pushing for a collective view to the sustainable future of the world. The leadership orientation is also faced with a challenge to
be responsive to wider stakeholder needs and demands. Some nations have progressively attained competitive levels that are taking care of the needs and aspirations of their people whilst some especially on the African continent are lagging behind. Based on the Global Competitive Index report (2018) the highly competitive country in Africa, Mauritius, is pegged at number 49 based on the world standards.

South Africa is ranked 67th and it is the fifth member of BRICS, a group that comprises of Brazil, Russia, India and China and is focussed on advancing more inclusive and equal growth within their socio-economic policies. This places South Africa in a strategic position to be able to learn and adapt the experiences of the group members. Yet, the perpetual triple challenges of unemployment, inequality, poverty together with corruption, poor education, poor health, and poor service provision and recently state capture, remain problematic in South Africa. The numerous service delivery protests are an indication that the civil society is pushing for change. In 2016 more than 30 protests were recorded per day and all these were attributed to a leadership crisis across the nation. Using principles and practices gleaned from organisational and other systemic analysis metrics, an assessment and analysis of the competitiveness of South Africa, Brazil and Sweden was done with a view of exposing the points of departure, and then highlighting the best practice that South Africa can learn from and adapt to inform her socio-economic policies.

The objective of this paper is to conceptualise learning and adaptation for the South Africa social system exploring whether learning and adaptation of experiences of progressive nations could be of value in the sustainable improvement of the general welfare of South Africans.

2. Background

South Africa is faced with socio-economic challenges which, include unemployment that surged to 27,6% in the first quarter of 2019, the poverty level that is seemingly going down is pegged at 45,5% which translates to twenty-three million people living below the upper band of poverty line (Statistics South Africa, 2019). Whilst the poverty situation is seemingly improving, on one hand, inequality remains problematic on the other hand with a Gini-coefficient of 0.65 based on expenditure data (Statistics South Africa, 2018) making it one of the highest in the world (Kiersz, 2014). According to Barros and Gupta (2017) inequality impacts negatively on socio-political stability and economic development of South Africa. The GCI persistently show poor performance for South Africa at a micro-level.

In comparison, Brazil, with a population 209 million had its Gini coefficient fell in 2003 during the reign of former president Lula from 0.58 to 0.54 (OECD, 2010). The Gini-coefficient measures the level of inequality with 0 indicating total equality and 1 total inequality. Gini coefficient for Brazil has been on a steep descent since 2000 and the social public policies were responsible for reducing inequality by 7% from 2003 to 2009 (OECD, 2010). Brazil has a poverty rate of 29.7% (Kleiman, 2011). Unemployment in Brazil is 12, 3%. Although the Brazilian economy has shrunk from its peak of 2012, with the social programmes, which sustains millions of its population are under threat due to reduced funding, this paper, seeks to re-assess the period between 2003 and 2012 when Brazil experienced economic boom. Sweden belongs to the group of most equal OECD countries despite the rapid surge of income inequality (OECD, 2015).
Other BRICS countries all have single digit unemployment rates. The BRICS five nations have a combined GDP that is equivalent to 20% of the gross world product (BRICS Wikipedia, 2016). South African statistics posts a contradictory picture in comparison with the other BRICs members, yet this association presents a very favourable learning position for South Africa. Learning in its purest form informs, enriches and raises consciousness levels in individuals as well as in collectives.

3. Literature Review

3.1 Learning

Learning is a result of the experienced response (operant view of learning) and vicariously, through observing the effects of the social environment on other peoples’ behaviour (Chowdhury, 2006). It is facilitated by suitable social structure that conforms to the traditions and norms of the particular society; otherwise, it could be copying and pasting other people’s behaviour (Toendepi, 2013). This is achieved collectively, Cundill (2010) or individually in the psychological perspective according to Bandura (1991) and results in social change, development and transformation. Collien (2018, p.134) concurs that learning is a collective, “embodied and embedded process that is practice-based.” Colien (2018) describes learning as a way of being in the social world and is composed of individual and collective identities. Reiners (2019) quotes Hall (1993:2718) defining learning as conventional and occurring when people assimilate new information.

The information is usually based on experience and applied to subsequent actions (Reiners, 2019). However, Mostert, Pahl-Wostl, Rees, Searle, Tabara and Tippett (2007) indicate how the concept of social learning is often confused with the conditions or methods necessary to facilitate social learning such as stakeholder participation and involvement. Reiner (2019) also discusses paradigm change as occurring when target hierarchies change or when existing paradigm becomes obsolete or less suitable for the aspired development. Most importantly to note is that learning is triggered when programs fail (Reiners, 2019). The concept of change has in some way been included in almost all-learning theory. Dahlgaard-Park (2006) discusses change as having a dichotomous behaviour because not all change is desirable change, it could be positive or negative.

Learning and education are understood and defined as a continuous reconstruction of experience, through which the world is continuously re-perceived and through which individuals realise themselves as being in an ongoing process of growth (Dahlgaard-Park 2006). The acquisition of knowledge is hardly distinguishable from learning (Colien, 2018). Ramsey (2014) refers to the same process as knowing. Therefore, learning, knowledge and knowing are concepts that overlap. Pavlidis (2015) argues that collective transformation and collective shaping of reality are acts associated with the acquisition of knowledge and that education makes people capable of adapting their understanding of change in their world.

Importantly in this paper is the process of policy learning, highlighted by Reiners (2019, p.39) as a change in political knowledge, skills and attitudes that are brought about by new information. According to Reiners (2019, p.41) policy transfer “is a process in which knowledge about policies,
administrative arrangements, institutions in one time/or place is used in the development in another time/place." Policy learning can be voluntary (Rose (1993) or both voluntary (Reiners, 2019). South Africa can only voluntarily do policy learning and policy transfer and adapt such policies for the home environment. There may not be a direct fit of these policies and procedures as they were designed for particular circumstances and time. In the Brazilian case, there is a realisation that the needs of urban and rural people differed and specific sets of interventions for each case were designed (OECD, 2010).

Pressures from socio-economic challenges usually foster the need to learn. Availability of new information facilitates the learning (Rose, 1993). It maybe that the South African politics is not fully aware of the successes in the Brazilian and the Swedish models. However, Reiners (2019) specifically pointed out that public administration controls the transformation of any state, and hence the leadership should learn about others’ successes in policy development and implementation first. Reiners (2019, p.37) also discussed “political administrative learning” because the sub-systems of politics and administration cannot be separated. The leaders learn for the whole nation and are responsible for engaging the general populous on the suitable pathways for sustainable developmental. Reiners (2019) points out that quality public administration has a positive influence on the transformation process. Colien (2018) discusses the impact of power in organisational learning, which also affects public learning, policy learning and policy transfer. There has to be political will to learn and adapt others’ policies. Power hinders the learning process, yet, it also enables learning (Colien, 2018).

South Africa is a society in learning as it is a new democracy; it should be open to policy learning and policy transfer. Edwards (1997) describes a learning society as a learning market, which enables institutions to provide services for individuals as a condition for supporting the competitiveness of the economy. A learning society has to be educated, committed to active citizenship, be a liberal democracy and offers equal opportunities to its citizens (Edwards, 1997). Societies transform themselves through their internal processes responding to the external environmental forces (Toendepi, 2013). Cundill (2010) pointed out that societal learning is facilitated by the willingness of participants to listen to alternative viewpoints. Social learning is however, aligned loosely to a structure and it is semi-formal.

3.2 Adaptation

This paper seeks to advance the proposal that learning and adaptation, just like in social learning takes place when there are suitable and effective social structures that embrace democratic processes to engaging society. Wang (2010) state that it is the continuous enforcement of adaptive processes such as higher order learning that generates new knowledge. Hence, complex adaptive systems constantly seek to adapt to the changing environment and have the capacity to operate in all conditions (Xiang-yu & Xiang-yang, 2007).

Adaptation is a process in which a species becomes suited for its habitat by acquiring new ways of action (Pikkarainen, 2018; Kull, 2014). Due to the global complexities and the varied political agendas, most economies are subjected to drastic fluctuations, which require adaptation in order to cope. Adapting to the new environment requires learning of the new ways suitable for current environment (Pikkarainen, 2018). Human systems are capable of producing adaptive incremental
changes as well as discontinuous radical change (Xiang-yu & Xiang-yang, 2007). In order to survive in the competitive market environment, governments and organisations have been striving to improve their flexibility and agility to adapt to the fast changes of the internal and external environment, in order to maintain their competitive advantage (Zhang, 2008). This calls for the need to integrate business management and leadership processes to combine them as a unified system in order to remain competitive at any level. An adaption strategy can pave a way forward for South Africa as it imports foreign experiences from Brazil and Sweden as cited in the case data.

3.3 Leadership role in social learning and adaptation

Northouse (2018) stipulate four components of leadership as process, influence, involving the collective and that leadership is centred on the achievement of common goals. It is the responsibility of leaders to align, motivate, and inspire people to invest or buy in the alternative approaches and thereby build broader support for change. Leaders will rely on the integration of scientific and local knowledge in designing suitable structures and there are alternative options of modelling other leaders who guided successful transformation (Toendepi, 2013). The then President of Brazil (Luiz Inacio Lula da Silva) visualised the relatedness of food production, consumption and distribution and communicated his vision and life’s mission fulfilment of “seeing every Brazilian having three meals a day by the end of his administration.” The Swedish social system focuses on egalitarianism which is the guarantee of equality for each person to develop to his/her fullest potential (OECD, 2011).

In the General Systems Theory (GST) (Dawson, 2007) leadership came out as one of the outstanding fields along with people, knowledge, habitat, time and rules. The fundamental job of a leader is to establish a clear vision for people, and to formulate a strategy and an action plan so that people know what is expected of them in the achievement of the vision. Transformation occurs when leaders focus on the structure of how to gather participants and the context in which the gatherings take place (Toendepi, 2013; Block, 2008).

The complexity of leaders is emanating from how the leaders should deal effectively with the chronic poverty, inequality, unemployment and diseases and still attain sustainable development (Mirvis, DeJongh, Googins, Quin & Van Velsor, 2010). The United Nations (UN) (1987, p.5) define sustainable development as “development that meets the presents needs without jeopardising the ability of future generations to meet their needs.” Hence, the emergence of responsible leadership theory that demands value-based and ethical principles driven by concrete and morally sound relationships broader stakeholders’ perspectives (Paraschiv, Nemoiana, Langa & Szobo, 2012; Mirvis, et al., 2010). Mirvis et al (2010) further elaborate that adaptive processes that involve society, organisations and individuals shape responsive leadership. Responsible leadership is an adaptive process because it addresses emergent realities emanating from the interdependent global world.
3.4 Adaptive leadership

Adaptive leadership is about how leaders “encourage people to adapt or face and deal with problem, challenges and change” (Northouse, 2018, p.257). The centrepiece of adaptive leadership is dealing with change. The South Africa public leadership will have to convince civil society that the policy learning and policy transfer from other geographic locations is of benefit based on the success stories in the case data. The whole essence of adaptive leadership is challenging people to deal with difficult challenges by providing them with opportunities and space to learn new ways of doing things (Northouse, 2018), hence it is follower centred. Adaptive leadership calls on to the leaders to “get onto the balcony” (Heifetz & Laurie, 1997, p.132) to be able to see what is really happening and get a clear view of the challenges. The South Africa leadership should get onto the balcony, learn from others experiences, and adapt those for the home environment. Northouse (2018) presents the advantages of adaptive leadership as being people centred, interactive process and that it underscores that leadership is a complex transaction that happens between leaders and followers.

4. Method

The primary concern of this paper was to conceptualise learning and adaptation of the experiences of other nations for the South African social system. The paper draws from the findings of the main research that developed a conceptual framework to facilitate a process of theorising about learning and adaptation. The main research was a qualitative inquiry that adopted Grounded Theory as a methodology. Grounded theory was chosen for its strength in integrating data from various methods. The multi-method approach encompassed semi-structured interviews, three focus groups, participant observation and document analysis on the multiple cases of Brazil and Sweden and still adhered to the Grounded Theory principles by (Strauss & Corbin, 1998).

This paper dwells only on the findings from document analysis, which involved systematic evaluation of documents using the analytical procedures of content analysis (Bowen, 2009). Corbin and Strauss (2008) stressed that document analysis requires extensive data examination and interpretation in order to gain elicit meaning crucial in knowledge development. The combination of document analysis with other qualitative methods is not unique it is often referred to as “method triangulation” which is a combination of methods in a study.

Grimmer and Stewart (2013) concur with Schreier (2012) that content analysis procedures are a systematic and objective in analysing large scale texts by means of describing and quantifying phenomenon. Hofmann and King (2010) argues that the number of documents that can be analysed depends on the specific application of interest. Bowen (2009) notes that documents of all types are relevant in assisting the researcher uncover meaning and insights on the research problem.

Data from content analysis was grouped into pre-determined categories that matched those that had emerged from the primary collection method of interviews. Stemler (2001) described such an approach as “priori coding”, Bowen (2009) agrees, and states that pre-defined categories may be used when the content analysis is to supplement other research methods. The selection of the documents purely depended on the issues that were being explored. In the research, relevance,
authenticity and credibility of the documents was ensued as most of the documents were obtained from the Organisation for Economic Co-operation and Development (OECD) online library, where access was granted for scholarly purposes. More documents were from Food and Agriculture Organisation (FAO), International Monetary Fund (IMF) and the researcher visited the embassies of the two nations in Pretoria where other materials were collected.

The documents obtained from OECD and analysed included the social policy documents, Reviews of evaluations and assessments in education, Brazil economic policy, key challenges for Swedish economy, Economic surveys for South Africa, Assessing scientific reading, mathematics literacy, Employment protection regulations and Labour Market performances, Sources of economic growth for OECD countries and International Monetary Fund assessments.

All issues in the selected material were considered fully in order to boast their representation as a sample. Relevant and comparable properties from the content were grouped into predetermined categories. There were 27 predetermined categories from the main research, which included leadership, politics, economic growth, inequalities, poverty, employment, education, health, culture, social policy, foreign policy, agriculture and rural development, gender equality, technology and labour issues.

5. Findings

5.1 Brazil

The research looked closely at Brazil from the inauguration of the then President Luiz Inacio Lula da Silva to the end of his term in 2010. The centrepiece of his integrated effort was the Fome Zero (Zero Hunger) Strategy. The Zero Hunger Strategy combined short-term responses to emergence situations and long-term responses that helped in creating the necessary conditions for families to guarantee their own food security (FAO, 2009).

Category 1: Inequalities

From 2004-2006 Brazil reduce its undernourished population from 17 million to 11.9 million, through the Zero Hunger Strategy, launched in January 2003 by the then inaugurated Lula Administration. In the midst of the economic crisis, Brazil sustained internal consumption in part because of cash transfer programmes and Government support to family farms (FAO, 2008). Other actions that were part of the Zero Strategy, included school transfers and family grants. The Zero Hunger strategy recognised that the needs of people living in rural and urban areas differed and offered specific sets of interventions. The strategy was a new economic development model that is more inclusive and it gave opportunities to all citizens to contribute and benefit.

“If structural changes were not made to reduce social exclusion and concentration (income, land etc), thereby breaking the vicious circle linking social exclusion to poverty and hunger, the food security policy would not have succeeded” (Embassy of Brazil 2011).

Over ten ministries were involved in the strategy that had 30 programs and initiatives falling into four main areas of intervention, which, were access to food, strengthening of family farming, income generation and social empowerment, mobilisation and oversight. The multi-sectoral
approach where the state, municipalities, civil society and the private sector all participated brought about rapid and significant decrease in the levels of poverty and hunger. The combined effort made the strategy take a centre stage as a permanent priority of the country and a transformation beyond the Lula administration. This approach also allowed the focus on the hunger to reshape the role of state and society in tackling the county’s longstanding social and economic challenges.

The Lula administration had made it clear from the very start that fighting hunger was its top priority. In his inaugural speech on 1 January 2003, President Luiz Inacio Lula da Silva stated that he would consider his life’s mission fulfilled if every Brazilian was able to have three meals a day by the end of his administration.

“This is a cause that could and should belong to everyone, without distinction of class, party or ideology,” the new President said, calling upon all elements of Brazilian society to embrace.

The Zero Hunger strategy focussed on the eradication of hunger and malnutrition, which needed to be the top priority of the political agenda and be a shared commitment backed by action.

“Hopefully in looking at how the Zero Hunger strategy was designed and implemented other countries will find a valuable source to draw from and adapt or take into consideration when tackling these same challenges” (FAO, 2009).

The inability of most Governments to deal effectively with hunger and malnutrition is caused by a wide range of factors, which include lack of political will, institutional and legal framework to promote food security, insufficient resources to invest in food security and agriculture, social and political instability and climatic changes (FAO, 2009). In many developing countries, employment and wages remain below their pre-2008 economic crisis levels.

“In the current situation the poor are hit doubly hard since they must pay more for food while their purchasing power dwindles due to the economic crisis” (FAO, 2008).

Gini coefficient of income concentration of Brazil is 0.51 (World Bank, 2014) had a steep descent since 2000. The social public policies were responsible for reducing inequality by 7% from 2003 to 2009 (OECD, 2010). Brazil has a poverty rate of 29.7% (Kleiman, 2011). Brazil still has one of the highest rates among the OECD countries, which means income distribution is still highly unequal.

**Category 2: Social Welfare**

Brazil introduced the Food Card as a cash transfer programme for the Zero Hunger Strategy. Initially introduced to the two municipalities in the state of Piaui, (Guaribas and Acaua) which are in the drought stricken region. The primary beneficiaries were women and the Food Cards were exclusively for purchasing food and were valid for six months, which could be extended if the socio-economic and nutritional conditions of the household did not improve. The Food Card programme benefited 1.9 million households. The School Grant is a conditional cash transfer programme that provides financial assistance to Brazil’s poor and extremely poor households, provided certain education, welfare and health related conditions are met.
“As of September 2009, 12.4 million families received the grants” (Embassy of Brazil, 2011).

The programme has remained formulated around three dimensions of fighting hunger, poverty and inequality, which involved:

- “The promotion of immediate relief of poverty through direct cash transfers to households, provided certain conditions are met;
- The strengthening of basic social rights, such as access to health and education which will help families break the intergenerational cycle of poverty; and
- The linkage to programmes which aim to enable families that receive the Family Grant to overcome their condition of vulnerability and poverty…” OECD, 2011

The Family Grant was said to have assisted 48 million people throughout the country (FAO, 2009). Its major outcomes include:

- “The reduction in income inequality: where the income of the bottom 10% grew six times faster than the top 10%; and
- Reduction of poverty: the poverty index fell from 42.7% to 28.8% and extreme poverty from 12% to 4.8%, hence the Gini coefficient also fell during the same period (between 2003 and 2009) from 0.581 to 0.544” (OECD, 2010).

Businesses also participated in a programme referred to as “good karma marketing” which played a very important role in the public’s perception of the actions undertaken by Government to unite sectors in the fight against hunger. Labour Unions too contributed greatly towards the mobilisation of society in support of the programmes. Churches and philanthropic organisations formed an extensive network of institutions that provided the valuable social resources also needed for the implementation of the programme. The participation by non-governmental organisations played a pivotal role in preventing private interest groups from thwarting the efforts of Government (FAO, 2009).

**Category 3: Economic Growth**

According to FAO (2009) economic growth helped to explain overall progress in terms of reducing extreme poverty and hunger in Latin America until 2006. The new jobs created as a result of this economic growth increased employment opportunities and more tax revenues, which spurred greater social spending. The region’s problem was essentially pointed out as a lack of access to food and not as lack of production of food.

“A significant portion of the population did not have the money it needed to buy food” (Embassy of Brazil, 2011).

The food security policies of Brazil encompassed the interrelationship between food production, distribution and consumption whereas the cash transfer policies are confined to consumption only.

“The perpetuation of hunger is a perpetuation of the vicious circle of exclusion” (WFP, 2009)

The Zero Hunger strategy successfully transformed vicious cycles of exclusion into virtuous cycles of inclusion through coordinated and integrated action. FAO (2008) noted that hunger could
not be overcome solely by distributing free food. Food security policies have to be linked to economic and social development strategies helping to promote growth with income distribution and more and better jobs. If an economic development model contributes to the concentration of resources (financial, natural) and does not successfully reduce unemployment and provide better wages, the vicious cycle of exclusion, hunger and poverty perpetuates themselves.

The Zero Hunger Strategy is an example of an economic development model with twin tracks of assisting the needy and promoting social inclusion. Based on the Zero Hunger Strategy the relationship between the three dimensions of food production, distribution and consumption was governed at 3 levels:

- **“National-level: structural policies coordinated by central government to address the primary causes of hunger and poverty (WFP 2009). Such policies included employment generation, income generation, the promotion of family farms, and agrarian reform among others;”**
- **“Local level policies: where there was a decentralised local system implemented to ensure for food security which enhanced social participation” (FAO, 2009).**

According to FAO (2009) the experience in Brazil indicates that the institutional framework of a food and nutrition security policy should involve at least four elements of:

- **“A participatory approach to policy making;”**
- **“Performance monitoring, institutional arrangements to make the implementation of policies feasible, including executive institutions and advisory bodies such as councils at central and decentralised levels;”**
- **“A coordinating institution answering directly to the head of Government; and”**
- **“A right to food approach guaranteed by a legal framework that also ensures the sustainability of key programs” (FAO, 2009).”**

**Category 4: Education**

Brazil has approximately 34.6 million students that consume fresh and nutritional food free from Monday to Friday at public schools (FAO, 2009). All students in the public system, from preschool, primary, high school, technical, and adult literacy programs were included in this (FAO, 2009). Bolsa Familia also has an in-road to education in that one of the conditionalities stipulates that from an education perspective a minimum school attendance frequency of 85% for children aged 6 to 15 years and minimum of 75% teenagers from 16 to 17 years has to be attained. With respect to social assistance, a minimum frequency of 85% of the socio-educative services to children and adolescence until 15 years of age in risk or recovered from child forced labour is expected (FAO, 2008). Both the families and the public system are responsible for fulfillment of BF’s conditionalities. The objective of the conditionalities were not to punish families but to ensure compliance and commitment from both the beneficiaries and the public system.

**Sweden**

**Category 1: Inequalities**
The success story of a welfare state in Sweden is the equitable income distribution and high standards in the general welfare of its people. The Nordic nations altogether have the narrowest gap between the incomes of the top 10% of the population and lowest 10% (OECD, 2010). Sweden is a laboratory of social experiments, implementing series of reforms, many of which are emulated in the world. The Gini coefficient for Sweden is one of the lowest in the OECD group (OECD, 2010).

“The success story of a welfare state in Sweden is the equitable income distribution and high standards in the general welfare of its people. The Nordic nations altogether have the narrowest gap between the incomes of the top 10% of the population and lowest 10% (OECD, 2010). Sweden is a laboratory of social experiments, implementing series of reforms, many of which are emulated in the world. The Gini coefficient for Sweden is one of the lowest in the OECD group (OECD, 2010).

Today Sweden remains a mature welfare state” (Swedish Embassy, 2011).

The consequence of large-tax financed systems has been a society with narrower economic gaps between the social classes than in comparable countries within Western Europe. The classic welfare state has been referred to internationally as the “middle way,” the “third way,” or the “Swedish model.” The latter expression originally described the centralised negotiations between Swedish employers and the country’s strong unions, which secured crucial stability in the labour market for several decades as the welfare state expanded (Swedish Institute, 2009).

Category 2: Welfare State

The prosperity that Sweden built was and still is distributed amongst the population in the form of large tax financed systems of education, health, child and elderly pensions, parental insurances, social grants and various general allowances.

“The fruits of success were distributed among the population through generous public social welfare systems that gave the population heavily subsidised schooling, health care and child and elderly care” (Swedish Institute, 2005).

Sweden is a model country for the rights of women, children and vulnerable population groups. Because of this social welfare policy, it is one of the world’s countries with the heaviest tax burden. Sweden is one of the countries with the highest average life expectancy and living standards in the world. Life expectancy rates are 78.4 years for men and 82.7 for women, labour force participation is 80% for men and 76% for women (Facts About Sweden, 2011).

Category 3: Economic Growth

In recent years, Swedish corporations have struggled with difficulties partly due to globalised markets and stiff competition. Initially cited as a problem, was that foreign owners have acquired many Swedish flagship companies like Volvo, Astra, Pharmacia and ASEA (OECD, 2009). Others have taken a positive view to seeing it as a natural consequence of globalisation and as proof that Swedish companies are competitive and attractive. This effect has since been balanced by Swedish acquisition of companies in other countries.

The Swedish economic model received international attention for its ability to combine growth-oriented policies, openness to globalisation and structural change with social cohesion. The domestic product market regulation is relatively liberal compared to other western European countries (OECD, 2010). Sweden exerts the lowest state control and fewer legal barriers to competition than other European countries. Comparatively low levels of corruption and high levels of trust also underpin the effective functioning of markets and contribute to a sound business
environment. With a market oriented regulatory environment and a skilled labour force, Sweden ranks high in broad surveys of overall competitiveness.

**Category 4: Education**

Schooling is free, in other words tax financed not only in the nine year compulsory school and the three year upper secondary school but also at University and college level, where government offers study loans so that young people from all social classes can afford to study. Sweden currently leads in the EU statistics measuring equality in its political and education systems. Almost all men and women in Sweden are either gainfully employed or studying.

“Unemployed women receive an unemployment benefit even if the husband is a millionaire” (Swedish Institute, 2009).

Students who fail to qualify for senior school can have individual programmes tailored to their needs. The aim is for these students to be able to transfer eventually to one of the national programmes. Students with intellectual disabilities are offered a special programme. The performance of Swedish education system is monitored by a range of tools including participation in international assessments, thematic quality evaluation by the Inspectorate and evaluation reports by the National Agency of Education (OECD, 2011). The Swedish system of education combines national standard setting and central test development with a high degree of trust in school professionals to carry out evaluation and assessment. All educational activities are organised around a system of management by objectives (MOB) where each level of the education system i.e. is national agencies, municipalities and schools engage in evaluation activities. At a central level, there is high degree of transparency in measuring and publishing results on goal achievement.

The major strength of the Swedish evaluation and assessment framework of education is its clear focus on outcomes, “an outcome oriented framework” (OECD, 2011). Teachers are seen as experts not only in instructing but also, in assessing their students (OECD, 2009). Teachers play a pivotal role in the internal evaluation of their own schools. Teachers, have conceived quality assurance and reporting within the school as a collective process with a strong focus and democratic participation and ownership (OECD, 2009). Sweden is one of the earliest supporters of international benchmarks of standards of performance in core areas such as mathematics and science.

“The Swedish ministry has a policy that prioritises the use of research results to inform better practices in schools” (Swedish Embassy, 2011).

By international standards education attainment is high in Sweden. Over 90% of the young cohorts have completed upper secondary education and share among the highest rated in the OECD countries. Even though Sweden has the highest education attainments, they still strive to improve the system to reduce the youth unemployment rate and improve productivity through privatisation. Several studies showed that higher education levels have been an important contributor to Swedish GDP growth over many years now (OECD, 2011).
6. Discussion

The Brazilian economic model's main characteristics include structural changes that embrace inclusivity, a multi sectoral approach, societal engagement and participation. The Swedish economic model received international attention for its ability to combine growth-oriented policies and structural changes with social cohesion. In the Swedish social structure, consensus, accountability and trust are pivotal. The system is sensitive to human needs as it recognises the rights of women, children and the vulnerable within the population. Communication is also in all directions and the society is educated enough to be able to voice and articulate their challenges.

Government of South Africa, as a learning system learns for society through political administrative learning, policy learning and policy transfer. Policy learning refers to a change in political knowledge, skills and attitudes brought about by new information (Reiniers, 2019). The critical element in policy learning is political will to learn as well as to initiate policy transfer (Reiners, 2019). The “Lula moments” are a demonstration of political will to transform the nation through the eradication of hunger. It became a collective vision with multi-sectoral approach where the state, municipalities, civil society and the private sector all participated brought about rapid and significant decrease in the levels of poverty and hunger (Kleiman, 2011). The combined effort made the strategy take a centre stage as a permanent priority of the Brazilian nation and a transformation beyond the Lula administration.

The Brazilian social structure is people centred, consultative and encapsulated a goal-oriented philosophy, like the eradication of hunger. The people define the challenges, participated in devising solutions and the implementation of such. The strategy was understood from the bottom-up and horizontally across sectors as well as from private and non-governmental environs. Once the processes and procedures within a social system are effectively interrelated and engaging, buy-in and participation by people becomes a non-negotiable (Toendepi, 2013).

Policy transfer “is a process in which knowledge about policies, administrative arrangements and institutions in one place is used in the development in another place” (Reiner, 2019, p.41). As a BRICS member, South Africa is privy to all the success stories of the other group members, thereby presented with an opportunity to learn and adapt. However, that responsibility lies with the leadership who firstly need to design suitable social structures of involvement (Toendepi, 2013), and secondly must mobilise broad support for change and maintain the momentum needed to navigate the transition (Olsson, et al., 2006). Where leaders are insensitive to learning they become cogs in the social system (Dawson, 2007). Hence, responsible leaders who are sensitive to the needs and aspirations of a broader stakeholder perspective (Mirvis, et al., 2012; Paraschiv, et al., 2012) will successfully lead sustainable change (Toendepi & Viljoen, 2019).

The progressiveness of Brazil in dealing with the socio-economic challenges is in the structural changes that were effected. The realisation by the then President Lula, that the society had to be central in tackling their own challenges, became the basis of the new social structure. The Brazilian society owns the Zero Hunger model and made it a success because it was developed for their own benefit. However, the Brazilian social structure still has some elements similar to the South African hierarchical structure; although it has effective collaboration and sharing of
knowledge. The Brazilian structure sold and invited people to participate in decision making thereby transferring the strategy from the top to the people and to all sectors of the economy.

The Swedish economic model received international attention for its ability to combine growth-oriented policies and structural changes with social cohesion. The system has comparatively lower levels of corruption and higher levels of trust and accountability. According to OEDC (2010), deregulation, globalisation and technology sectors have been the key productivity drivers for Sweden. The Swedish social structure has communication in all directions and its society occupies the centre. The social structure regards people as a source of knowledge and experience. Such a social structure is participatory, flexible and enhances accountability, transparency and efficiency. Senge (1990) notes how participatory approaches view change as a joint process that can only be realised when all actors are brought together. The Swedish management system is a social sharing circle of equals where all pull together for the group while developing their human potential and heightening their awareness because of their inclusive nature (OECD, 2008).

8. Conclusion

There are significant lessons that the South African social system can learn and adapt from the experiences of both Brazil and Sweden in terms of changing the social structure to enable public participation, inter-sectoral integration, collaboration, accountability, trust and improvement in the quality of education and other public systems. South Africa requires leadership that is responsive to the needs of the collective and involves the people in devising and implementing suitable solutions.

References
Colien, I. 2018. Critical-reflexive-political: Dismantling the reproduction of dominance In organisational learning process, Management Learning, 49(2), 131-149.
Dahlgaard-Park Su Mi. 2006. Learning from east to west and west to east. The TQM Magazine, 18(3), 216-237.


*A full reference list can be provided by author on request*
Corporate Philanthropy and Firm Value in Africa: A case study of Selected Firms in South Africa

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Abstract
This study investigates the relationship between corporate philanthropy and firm performance in Africa, using Listed Firms in South Africa as the representative sample. The study recognises that Corporate Philanthropy (CP) is still nascent, but steadily taking shape in Africa. Three closely related objectives are advanced. First, investigates the impact of CP on financial performance, while the second investigates the impact of size variables on CP. Third Objective determines the impact of CP on stock returns. Results of Objective one indicates that only sales revenue is a significant determinant of CP. Inclusion of Firm Size and After-Tax Income do not improve the results as sales revenue still remain important for objective two. Lastly, the study finds out if active participation in corporate gifting affects firm’s share price. Results indicate size and income are significant determinant of returns, while test power of CP is insignificant. Given the close relationship between the three objectives, Generalised Method of Moments (GMM) is applied. GMM results produce reduced statistical powers for all the three equations. The study provides a sign of success judging from the steady growth, but lack of sufficient data cannot allow judicious statistical conclusion.
Determinants of Savings amongst Adults in South Africa

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Abstract
The study investigated the determinants of savings among adults (individuals above the age of 18) in South Africa. The 2015 Finscope Consumer Survey data was used for analysis. The study found that 15.93% of South African adults were saving at formal banking institutions. The study also found that an overwhelming 64% of South African adults were not saving at all. Key factors that determined the uptake of formal savings included internet access, geographic distance to an ATM, homeownership status, age and gender. Mobile phones that provide users access to the internet could possibly play a role in encouraging the uptake and commitment of South Africans to formal savings products.
Is it the case of a Dripping Basket? The poverty alleviation agendas of some developments NGOs in the Savannah regions of Ghana.

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Abstract

On the Africa continent, poverty is perceived and acknowledged to be profound and nearly enduring. It has been found to be dominant in rural areas even though there are some pockets of urban centres which similarly suffer this phenomenon. Most multi-lateral and bilateral organisations found in Ghana have intervened to address concerns of poverty, deprivation and underdevelopment in the contexts of giving aid either directly to beneficiaries' communities or through other Non-governmental and/or Non-profit Organisations working in this communities. The savannah regions of Ghana happen to the welcoming home of some of the longest serving Ngos in Ghana. This research seeks to investigate why donors give aid to these communities and what have been their interests in these regions. Its further probes what their core mandates are in the regions and how far have they come in achieving these development agendas. The overall management practices and governance of this third sector players must improve the wealth and wellbeing of the communities they are involved in; and sustainable measures taking for the long term.
A review of the political economy of sovereign credit ratings their impact on Eurobond market in African countries

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Abstract
In this decade, multiple African sovereigns embraced the phenomenon of issuing foreign currency denominated bonds, eurobonds, along with sovereign credit ratings which are mandatory when issuing Eurobonds and play a critical factor in determining the cost of borrowing for these governments. Our paper reviews the political economy of sovereign credit ratings in Africa and the perceived power of credit ratings agencies (CRAs) empirically using event study and panel VAR techniques. The political economy analysis reflects that while CRAs have faced global criticisms, there are Africa specific challenges. Utilising the concepts of ratings accuracy and ratings failures in Africa, we show that African sovereigns have higher default rates than global averages, CRAs failed during the Arab spring on Egypt, Libya and Tunisia as well as during the oil price fall from June 2014 on ratings for Angola and Gabon. Our analysis also reflects that only 30% of rating actions directly impact on eurobond yields in African countries suggesting that largely ratings are no longer unanticipated, not carrying new information and the perceived power of CRAs may be overstated. We think that the growth of the fixed income market with independent analysis by asset managers and the introduction of the regulatory calendar to publish ratings reports makes sovereign rating actions anticipated and have indeed reduced the perceived power and impact of credit ratings.
The impact of financial constraints on firm performance: the case of selected African countries

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Abstract
Limited access to finance is one of the major factors that hinder firm growth. This is because financially constrained firms may be forced to forgo positive net present value projects, thus reducing firm value in terms of investment. Using the World Bank Enterprise Survey data set, we investigate the extent to which firms in 11 African countries are constrained. We also assess the impact of these constraints on firm performance and growth. We employ various matching techniques and find evidence that access to finance matters for growth: firms facing serious challenges when it comes to accessing finance tend to grow at slower rate than those with access to finance. That is, we find a significant and strong positive effect of firm financing on firm productivity and sales growth. We however recognize the diverse relationship across the various countries especially on sales growth. The study also finds that firm financing impacts on firm growth and labor productivity differently, depending on whether the firm is in the lower, middle or higher level of labor productivity and sales growth distributions. Despite the fact that all firms benefit from financing, the effect is more significant and felt on the highly productive firms. It is therefore advisable for banks and other financing agencies to target financing to the right segment of firms to ensure growth in the economy is sustained.
Impact of Macroeconomic Factors on Sovereign Bond Spreads and Spill Over in the BRICS Economies

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Abstract
This study investigated the impact of macroeconomic factors on sovereign bond spreads and spill over in the BRICS economies. The objectives of the study were to determine if macroeconomic variables have similar impact on the BRICS economies, and whether changes in the global market conditions impact the BRICS countries equally and determine any financial contagion and spill over effects amongst the BRICS countries. Eight domestic and global variables were selected to establish their effects on bond spreads in BRICS countries. Monthly time series data spanning the period of 2007 to 2017 were used in a linear regression model with vector autoregression (VAR) to determine the directional spill over among the BRICS economies. The findings reveal that the selected variables have little significance on the bond spreads of the BRICS economies. The magnitude of spill overs among the BRICS countries is low, with only South Africa and Russia being susceptible to external shocks as opposed to their own internally generated shocks.
Capital flows and the real sector in Africa: assessing the peripheral effects of financial development

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Abstract
The paper primarily examines the brinks of financial development at which capital flows to Africa enhance growth at the level of the real sector. We deploy a newly developed financial development dataset to moderate the association between capital flows and the real sector over the period 1990 to 2017. We employ Lewbel instrumental variable two-step GMM estimator (IV – GMM), with Kleibergen-Paap robust standard errors and orthogonal statistics in establishing our empirical relationships. Initial estimations at the overall level of the real sector, manufacturing, and industry show that FDI has no growth effects, and even worsens growth of the agriculture sector; while financial development stifles growth. On decomposing both the real sector and capital flows, we found FDI to enhance the growth of the real sector and its components at face value. However, our marginal effect analysis shows that the growth impact of FDI on the overall real sector, industry, and service sector growth starts at the threshold level of the 25th percentile of financial development, while the growth impact on manufacturing is only evident at the 90th percentile of financial development. Finally, although financial development aids FDI in enhancing the growth of the agriculture sector, it cannot wholly eradicate the initial adverse impact from FDI.
Structural Economic Transformation in the Presence of Trade and Financial Integration in sub–Saharan Africa

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\textbf{Abstract}

This study examines the impact of economic integration on structural economic transformation, and the role of the moderation role of trade and financial integration. We document two important findings. First, while trade and financial integration significantly spurs manufacturing and agricultural sector value additions, in the case of the industrial sector, only financial integration robustly matter for industrial growth with no apparent effect of economic integration on the service or tertiary sector. Second, both trade and financial integration act as moderators to their relationship with structural economic transformation. Specifically, our evidence suggests that trade and financial integration act as complements to each other and for most part, do not operate independently to influence structural economic transformation.

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Abstract
The study of import tariffs pass through has been observed to be crucial for policy making, for instance this may inflate some goods’ prices with a negative effect on individual welfare. However, extant literature on the import tariffs pass through effect has largely ignored the possibility of spatial dependence between domestic goods prices which may brew imprecise estimates. Hence, this study proposes an extension of the traditional empirical model for estimating the import tariff pass through effect by introducing controls for the domestic spatial dependence of prices. The estimates relied on a panel dataset of consumer goods for Zimbabwe, which has both the individual spatial effect and the time spatial effects. Spatial Durbin model (SDM), Spatial AutoRegressive model (SAR), Spatial Error model (SEM), Spatial Autoregressive with Spatially Autocorrelated Errors model (SARAR) and the Generalised Spatial Random effect model (GSPRE) all agree that there is positive spatial dependence of domestic goods’ prices in Zimbabwe over the period 2009 to 2014. When compared to our modified model, the traditional import tariffs pass through model was found to highly overestimate the import tariffs pass through effect. The study found that a positive and significant portion of import tariffs is being passed on to domestic goods prices in Zimbabwe, and also that provinces are disproportionately affected by import tariffs. Thus there is need for policy to be cautious of the import tariffs increase in relation to national inflation, and poverty targets.
Optimizing balance: The case of the South African Child Support Grant

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Abstract
The success of various matching methods depends on balance in the covariate distributions of the treatment and control group. Ideally, one should compare the joint distribution of covariates for the matched, treated, and control group to assess balance. However, this is often not possible because of the curse of dimensionality. Instead, lower dimensional summaries of covariate distributions are often used to assess balance, that is, mean or mean and variance. Other proposals include the use of distributional measures like empirical CDF and the Kolmogorov-Smirnov (KS) statistic. In this paper, we consider whether the balance measure used to assess balance matters when balance is being optimized.

To do this, we investigate the impact of the Child Support Grant (CSG) in South Africa using Genetic Matching (GenMatch) to optimize balance. The entropic distance metric that compares the distribution of covariates is used as the balance measure. Other balance measures that are commonly used in the literature are also considered. While the literature suggests that CSG does not have a significant effect on stunting in the binary treatment case, we find that CSG has a significant effect on stunting.

We argue that the difference in these results is due to the superior performance of the GenMatch method and the entropy balance measure. Specifically, the entropy metric captures aspects of balance that other measures may ignore. We then conclude that covariate weights under different balance measures have implications for bias and precision of treatment effect estimates under the GenMatch approach.

Keywords: Genetic matching, information theory, entropy metric

1.1 Introduction
This paper illustrates how the entropic distance measure introduced by Oyenubi (2018) can be used with the matching algorithm introduced by Diamond and Sekhon (2005). The algorithm is called Genetic Matching (GenMatch). GenMatch performs multivariate matching by using an evolutionary search algorithm to determine the weight each covariate is given in order to satisfy the balancing condition in matched data. The algorithm allows the researcher to select a loss function to be optimized and the preferred measure of balance. In this paper, we use the entropy

18 Author’s PhD thesis (Oyenubi, 2018)
measure with this matching method to estimate the treatment effect on beneficiaries of the South African Child Support Grant (CSG).

The motivation behind combining the proposed matching method and balance measure is based on their expected superior performance when compared with the alternatives, as articulated by Diamond and Sekhon (2005) and Oyenubi (2018). Diamond and Sekhon (2005) argue that GenMatch addresses some limitations of popular matching procedures such as the Mahalanobis distance and propensity score matching (PSM), while Oyenubi (2018) notes that comparing distributions with the entropy metric is a more effective way of capturing imbalance than commonly used mean and variance comparisons.

We follow the work of Coetzee (2013 & 2011)\textsuperscript{19} which makes use of Wave 1 of the National Income Dynamics Study (NIDS) data from 2008 to estimate the impact of CSG on outcome variables that capture child well-being. However, in our application, we use only one outcome variable (which is the height-for-age z-score). This is because the focus of this study is to demonstrate the effectiveness of the entropy measure (as a measure of balance) and the GenMatch approach to matching. Under the assumption that the treatment variable is binary (i.e. a child is either receiving the CSG or not), Coetzee (2013) finds no convincing evidence that the CSG results in improvement in well-being in terms of nutrition, education, and household expenditure (using PSM methods).

In general, it was noted that the estimate of the impact of CSG is small across response variables and provides inconclusive evidence that the CSG received by caregivers is spent mainly on improving the well-being of children. The fact that CSG has a positive impact in the continuous case suggests that increased dosage will lead to a stronger impact (at least over some range of dosage values), which in turn suggests that there should be an effect in the binary case i.e. one that captures the lower bound of the treatment effect. Furthermore, Statistics South Africa reports that poor households in South Africa spend a third of their income on food on average\textsuperscript{20}. It is therefore curious that poor households benefiting from this grant do not exercise the option of spending more on food and improved nutrition as a group in the binary case, as shown by the result in Coetzee (2011). In general, the fact that the effect even in the continuous case is weak does not help policy argument in favour of the programme.

This work re-estimates the treatment effect of CSG on height-for-age z-score (stunting) in the binary case. We focus on the average treatment effect on the treated (ATT) so that our quantity of interest does not vary across estimation methods. Even though the binary case ignores the fact that treatment dosage (duration for which a household has been benefiting from CSG) is not homogeneous among beneficiaries, we show that the impact of CSG on height-for-age is significant under our proposed methodology. We replace the PSM method used by Coetzee (2011) with an approach that is expected to improve balance in the matched sample (i.e. GenMatch). We also show that the way balance is measured under GenMatch matters for the

\textsuperscript{19} Coetzee (2011) is the working paper version of Coetzee (2013)

\textsuperscript{20} http://www.statssa.gov.za/?p=2564
outcome of our analysis. All things being equal, results using a mean based measure differ from the results when the entropic metric is used to optimize balance.

We made some changes to the sample used by Coetzee (2011). First, a different approach is used to estimate the unobserved (motivation\(^{21}\)) variable that may bias the results. Second, we include an extra covariate that improves the prediction of motivation. Third, we exclude children who have benefited from the CSG for less than a third of their lives. We argue that the treatment effect for this group of treated children may be weak. Using our sample, the treatment effect estimate under the PSM method (used by Coetzee, 2011) is 23 and 16% of standard deviation and insignificant under 1:1 and 1:2 matching respectively.

On the other hand, when the GenMatch method is used to for matching, the treatment effect ranges from a low of 13% to a high of 39% of standard deviation across balance measures and matching configurations (we use 1:1 and 1:2 matching). These effects are significant when the standard error does not account for matching under all balance measures and matching configurations. This suggests that the GenMatch approach measures the effect more precisely than the PSM method. The effect becomes insignificant (for other balance measures) when standard error is calculated using the method of Abadie and Imbens (2004) which accounts for the (asymptotic) variance induced by the matching method. However, the effect remains significant when the entropic distance is used to optimize balance (under 1:2 matching).

We then compare the size of the treatment effect on the treated under different balance measures. The treatment effects are largest under the entropy balance measure followed by the standardized difference in means and are least under the default balance measure. The default balance measure under GenMatch is a combination of the p-value of t-test (for equality in covariate means) and Kolmogorov-Smirnov (KS) test (for equality of covariate distributions).

We note that the variation in the treatment effect estimates under different balance measures can only be attributed to the difference in the balance measures (or what the balance measures capture). For example, we note that under GenMatch the standardised difference in means will choose optimal weights that attempt to balance only the mean and the variance of the covariates, while the entropy measure will choose optimal weights that attempt to balance the kernel density of the distribution of covariates. Consequently, the distribution of weights allocated to variables under the different balance measures should be different.

The rest of the study is organized as follows. Section 1.2, 1.3, and 1.4 reviews the literature on Genetic Matching, the Entropic distance measure, and CSG in South Africa. Section 1.5 discusses the estimation of the motivation variable using censored regression. Section 1.6 presents the dataset for our analysis, while the results are presented in section 1.7. Section 1.8 concludes.

1.2 Review of Genetic Matching

GenMatch seeks to maximise covariate balance by finding covariate weights that optimize balance. This is achieved by optimising a user-specified loss function, which is, in turn, a function

\(^{21}\) We expand on this in section 1.4
of some balance measure. For example, one can choose to maximise the mean of the p-values of t-tests for all covariates. For this example, the mean is the balance measure while “mean of p-values” defines the loss function. Alternatively, one can choose to maximize the minimum p-value of the t-test for all covariates (as suggested by Diamond and Sekhon (2005)).

In general, the aim is to optimize balance as much as possible rather than using a stopping rule (i.e. critical value in a statistical test) to decide when balance is adequate. Diamond and Sekhon (2005) argue that GenMatch will help address some of the limitations of popular matching procedures such as the Mahalanobis distance and propensity score matching. In this regard, Genmatch can be thought of as a generalisation of the Mahalanobis metric to include an additional weight matrix:

\[ d(w_i, w_j) = \left\{ (w_i - w_j)' (S^{-1/2})' M S^{-1/2} (w_i - w_j) \right\}^{1/2} \]

where \( w_i \) is a vector of covariates for observation \( i \), \( M \) is a \( t \times t \) positive definite weight matrix and \( S^{-1/2} \) is the Cholesky decomposition of the variance co-variance matrix of \( X \). The main goal is to find the weight matrix \( M \) that achieves the best balance when the distance produced by \( d(w_i, w_j) \) is used to match observations in the sample. Propensity scores can be included as one of the covariates, and in this case, both propensity score and Mahalanobis distance matching can be thought of as limiting cases of GenMatch. If propensity scores contain all relevant information required to balance the covariates, then all other variables will receive zero weight (more appropriately enough weight just to make sure that \( M \) is positive definite). In this case, GenMatch is equivalent to propensity score matching. On the other hand, GenMatch will converge to Mahalanobis distance (even when propensity score is included) if it is the more appropriate distance measure for the sample (i.e. when the propensity score fail to achieve the optimal level of balance in the covariates). In less extreme cases, Genmatch allocates weight to the propensity scores and all covariates.

The implication is that it does not only balance the propensity scores but also accounts for imbalances in individual covariates where this imbalance is not accounted for by the propensity scores (this may occur if the propensity score equation is mis-specified). The fact that GenMatch does not rely solely on matching on the propensity score to achieve balance means that it is robust to mis-specification of the propensity score\(^{22}\). When matching is done on correctly specified propensity score covariates should be balanced (Rosenbaum & Rubin, 1983), however, the correct propensity is not known. If the propensity score is mis-specified this may lead to bias.

By default, GenMatch optimizes (maximizes) the p-values of t-tests (for discrete and continuous covariates) and KS tests (for continuous covariates only). Ramsahai et al. (2011), note that this allows GenMatch to compare the balance from covariates of different types on the same scale. In our application, we optimize the entropy measure directly since it can be used for both discrete

\[^{22}\text{GenMatch however comes with some cost. The computation time is significantly higher than other methods.}\]
and continuous distributions (Maasoumi & Racine, 2008). The entropy measure, therefore, allows for the comparison of relative balance in variables measured in different units.

Using the statistic rather than the p-values also allows us to compare its performance with that of the standardised difference in means because this statistic also has the property of being comparable across variables measured in different units (Austin, 2009). This approach also avoids the complication of testing procedures (which involves bootstrapping and increases the computation time considerably). Therefore, instead of maximising the minimum p-values of the t-test and KS test, we minimise the entropic distance and the standardised difference in means. The idea is to optimise balance as measured by these balance statistics in the sample as much as possible (Imai et al., 2008; Ho et al., 2008; Diamond & Sekhon, 2013)

1.3 Estimating entropic distance by kernel techniques

Consider the case where there is just one covariate to compare. This can occur when the set of covariates contains only one covariate or when covariates \( X = \{x_1, x_2, \ldots, x_t\} \) are compared one at a time, or when \( X \) is summarized into propensity scores. In practice, implementing the entropy measure (\( S_\rho \)) to compare two distributions involves a two-step procedure. First, the densities to be compared, \( f_1 \) and \( f_0 \), must be estimated, then the distance between the estimated densities is measured. Naturally, any error in estimating the densities will filter into the resulting distance measure. Following Granger, et al. (2004), Maasoumi & Racine (2008) and Maasoumi & Wang (2012), the kernel density estimates of \( f_1 \) and \( f_0 \) will be used so that

\[
S_\rho = \frac{1}{2} \int_{-\infty}^{\infty} \left( \hat{f}_1^{1/2} - \hat{f}_0^{1/2} \right)^2 dW
\]

and for discrete covariates, we have

\[
S_\rho = \frac{1}{2} \sum (p_1^{1/2} - p_0^{1/2})^2
\]

where \( \hat{f}_1^{1/2} \) and \( \hat{f}_0^{1/2} \) are kernel density estimates of \( f_1 \) and \( f_0 \) respectively and \( p_1 \) and \( p_0 \) represent the marginal probability in the discrete case. To do this, the choice of bandwidth and kernel becomes important in making sure that the distance measure in the second step is reliable. It turns out that the choice of kernel is not as important as the choice of bandwidth in the kernel density estimation.

The implementation of \( S_\rho \) in this study follows the implementation in Maasoumi & Wang (2012). Like these authors, we use the Gaussian kernel and a robust version of the “normal reference rule-of-thumb” bandwidth \( \left( = 1.06 \min \left( \sigma, \frac{IQR}{1.349} \right) n^{-\frac{1}{5}} \right) \) where \( \sigma \) is the standard deviation of the variable the density of which is being estimated and \( IQR \) is the interquartile range. We use the “npunitest” in R to implement \( S_\rho \).

As noted earlier, Oyenubi (2008) argues that this measure performs better than alternatives in capturing balance.

1.4 Brief Literature review on the Child Support Grant (CSG)
Introduced in 1998, the CSG is an unconditional grant intended to assist poor households in improving the welfare of children in such households. While there are soft conditions related to school attendance attached to the grant, failure to comply is not exclusionary. The unconditionality of the grant, therefore, gives full financial autonomy to caregivers to spend the grant. Consequently, measuring the impact of the CSG is complex compared to measuring the impact of conditional cash transfer programmes such as Oportunidades in Mexico which is conditioned on school attendance, health care (in form of clinic visits) and nutrition. Given the cost of this programme to South African taxpayers (approximately 35.5 billion according to the National Treasury, Republic of South Africa (2011)) a number of studies have investigated the impact of the programme on child welfare.

Outcome variables that have been explored include variables that capture education, health, and nutrition. Case, et al. (2005) uses data from the KwaZulu-Natal Income Dynamics Study and finds that children who benefit from the CSG are more likely to be enrolled in school than older siblings who did not benefit from the CSG. Aguero, et al. (2006), using the same dataset and under the assumption that treatment effect is continuous, find that high dosage of the CSG early in life has a positive impact on child nutrition. Coetzee (2013) also investigates the impact of the CSG on these welfare variables (education, health, and nutrition) using data from Wave 1 of the National Income Dynamics Study (NIDS) dataset. Like Aguero, et al. (2006), Coetzee (2013) finds an effect under the assumption that the treatment effect is continuous.

1.5 Controlling for Caregiver Motivation

Aguero, et al. (2006) was the first study to show that, apart from the observable characteristics needed to obtain an unbiased estimate of the impact of the CSG, an imbalance in an unobserved variable that captures caregiver motivation or eagerness may bias the result. Caregiver motivation is directly related to the length of time that a caregiver takes to apply for the CSG, with highly motivated caregivers applying earlier than less motivated caregivers. A delay in applying for the programme affects the impact via the length of time the child benefits from the CSG. Conversely, early application increases the duration of grant receipt or treatment dosage. For example, receipt of the CSG can improve nutrition through increased spending on food. However, nutritional deficiencies in early stages of life can cause stunting (measured by height-for-age) which may not be reversible (Duflo, 2003).

Aguero, et al., (2006) therefore construct a variable that captures variation in the motivation of caregivers as a function of the amount of time that passes before each caregiver applies for the grant, and whether they reside in a rural or urban area. Coetzee (2013) noted that even though the programme was rolled out simultaneously in all areas, delay in take-up is much shorter for rural compared to urban areas

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23 It may seem odd that poor households that qualify for this grant delay in taking advantage of it but the data suggests that the reason why some qualifying households are not receiving the grant boils down to bureaucratic delays like not having a valid identity document or birth certificate.
1.5.1 Caregiver Motivation Censored Regression approach

The approach adopted in this paper to calculate caregiver motivation is different from the one used in Coetzee (2011). Specifically, we note that some caregivers in the control sample may have applied for CSG and not received it. Our point of departure is therefore in the definition of the observed delay for the eligible non-beneficiaries. Under the Coetzee (2011) approach, the observed delay for control observations is the difference between the birth date of the child and the date of interview. The data, however, include information on whether the caregiver ever applied for CSG on behalf of the child and the date of application. To account for this, we construct a control sample that uses the date of application (instead of interview date) for eligible non-beneficiaries, to calculate the delay for the respondents that supply such information. Although this reduces the sample size in the control group considerably compared to the approach adopted by Coetzee (2011), this control sample is more appropriate in the case where the application date is available.

Furthermore, the reasons why these caregivers were unsuccessful in the application may not be related to the treatment. To improve the sample size, eligible non-beneficiaries who have never applied for the CSG (see Table 1.1) are included in the estimation sample.

### Table 1.1 Reason Why CSG has not been applied for

1. Caregiver has not heard of CSG
2. Caregiver does not know how to apply for CSG
3. CSG applied for by someone in another household
4. Ineligible because the child is too old
5. Caregiver cannot apply as not child's mother
6. Child is not eligible as receives a different grant (foster care/care dependency)
7. Child is not eligible as caregiver income too high
8. Caregiver does not have the right documentation (e.g. Birth certificate, ID)
9. Cost of application is too high
10. Application process is too complicated or too time-consuming
11. In process of applying or getting relevant documentation
12. Haven't got round to it yet
13. Cannot be bothered
14. Other
15. No need
16. Parent/s work for the government
17. Parent/s working

To accommodate these observations, censored regression was employed to estimate the expected delay equation. These observations are regarded as being right censored, with a variable censoring point that is equal to the age of the child (since an application has not been made for these children but may be made sometime in the future).
Apart from the covariates included by Coetzee (2011) to predict motivation, the censored regression includes a dummy variable that indicates whether the primary caregiver is a mother or father of the child. The thinking here is that the motivation of the caregiver may be affected by their relationship to the child. Households, where caregivers are parents, may exhibit more motivation (which will manifest as less delay) than those where the child is living with a relative.

Table 1.2 Censored Regression to predict caregiver motivation

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Delay in years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child age</td>
<td>0.877***</td>
</tr>
<tr>
<td></td>
<td>(0.019)</td>
</tr>
<tr>
<td>rural</td>
<td>-0.820***</td>
</tr>
<tr>
<td></td>
<td>(0.164)</td>
</tr>
<tr>
<td>Father/Mother=1</td>
<td>-1.662***</td>
</tr>
<tr>
<td></td>
<td>(0.170)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.740***</td>
</tr>
<tr>
<td></td>
<td>(0.242)</td>
</tr>
</tbody>
</table>

Observations 3,504

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 1.1 shows that caregiver relationship does explain significant variation in delay, in the presence of the other variables. Specifically delay is lower is the primary caregiver is the father or mother of the child. This table suggested the prediction (which is the point of this exercise) of delay is better with the inclusion of caregiver relationship.

1.6 Data and Summary Statistics

The first wave of the National Income Dynamics Study (NIDS) is used for the analysis. The NIDS dataset is a nationally representative panel dataset, with the first wave undertaken in 2008. Table 1.3 presents the summary statistics of the variables used in this analysis. The treatment and control group consist of children under the age of 14 years.

Even though stunting in the first 3 years of life may not be reversible (UNICEF, 2014; Duflo, 2003), a strand of the literature suggests that under the right conditions malnourished children can experience catch-up growth. Catch-up growth is defined as rapid linear growth that allows the child to accelerate toward and, in favourable circumstances, resume his/her pre-illness growth curve (Boersma and Wit, 1997). This suggests that even if some poor children are malnourished in the first 3 years of life, CSG can help them recover some of the lost grounds relative to eligible non-benefiting children. In other words delay relative to the age of the child is an important factor.
Eligibility for CSG is determined by age and the means test as it was applied in 2008. The age and means test conditions are used to identify children who should benefit from CSG. A child is assigned to the treatment group if it is indicated that CSG is currently being received for the child or another child who lives in the household (similar to Coetzee (2011)).

Table 2.3 Summary Statistics

<table>
<thead>
<tr>
<th>Treatment status</th>
<th>Control group</th>
<th>Treatment group</th>
<th>Mean difference</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>SD</td>
<td>mean</td>
<td>SD</td>
</tr>
<tr>
<td>zhfa(stunting)</td>
<td>-0.980</td>
<td>1.449</td>
<td>-1.005</td>
<td>1.486</td>
</tr>
<tr>
<td>Delay in years</td>
<td>8.518</td>
<td>4.869</td>
<td>2.198</td>
<td>2.119</td>
</tr>
<tr>
<td>Motivation</td>
<td>-0.201</td>
<td>0.588</td>
<td>0.112</td>
<td>1.168</td>
</tr>
<tr>
<td>Employed</td>
<td>0.259</td>
<td>0.438</td>
<td>0.257</td>
<td>0.437</td>
</tr>
<tr>
<td>Married</td>
<td>0.556</td>
<td>0.497</td>
<td>0.416</td>
<td>0.493</td>
</tr>
<tr>
<td>Caregiver Education</td>
<td>6.445</td>
<td>4.636</td>
<td>7.369</td>
<td>4.313</td>
</tr>
<tr>
<td>Caregiver age</td>
<td>43.33</td>
<td>16.27</td>
<td>38.08</td>
<td>12.98</td>
</tr>
<tr>
<td>Gender of head of hh</td>
<td>0.503</td>
<td>0.500</td>
<td>0.431</td>
<td>0.495</td>
</tr>
<tr>
<td>Child gender</td>
<td>0.506</td>
<td>0.500</td>
<td>0.499</td>
<td>0.500</td>
</tr>
<tr>
<td>black</td>
<td>0.827</td>
<td>0.379</td>
<td>0.924</td>
<td>0.265</td>
</tr>
<tr>
<td>coloured</td>
<td>0.151</td>
<td>0.358</td>
<td>0.0750</td>
<td>0.263</td>
</tr>
<tr>
<td>electricity</td>
<td>0.704</td>
<td>0.457</td>
<td>0.668</td>
<td>0.471</td>
</tr>
<tr>
<td>water</td>
<td>0.319</td>
<td>0.466</td>
<td>0.196</td>
<td>0.397</td>
</tr>
<tr>
<td>telephone</td>
<td>0.0731</td>
<td>0.260</td>
<td>0.0342</td>
<td>0.182</td>
</tr>
<tr>
<td>toilet</td>
<td>0.354</td>
<td>0.479</td>
<td>0.252</td>
<td>0.434</td>
</tr>
<tr>
<td>Per capita expenditure</td>
<td>5.756</td>
<td>0.920</td>
<td>5.513</td>
<td>0.684</td>
</tr>
</tbody>
</table>

*** p<0.01, ** p<0.05, * p<0.1

This is appropriate since the definition of a household in NIDS survey required that members of a household must share food from a common source. The control group consists of children who live in households that are eligible but have never benefited from the CSG. This classification and subsequent cleaning of the dataset was done to follow Coetzee (2011) as closely as possible. Note that we exclude the Asian population from the analysis because they represent 1% of the estimation sample.

As expected, the summary statistics show that the delay is higher in the control group than in the treatment group. On average, caregivers of children who benefit from CSG delay for 2 years, while the prediction from the censored regression puts the average delay in the control group at 8.5 years. This translates to a significant difference in the distribution of motivation in the two

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24 At the time of the NIDS 2008 survey a caregiver (who does not have to be a family member of the child) must have a monthly income below R800 in urban areas or R1,100 in rural areas (see Coetzee (2011)).

groups. Coetzee (2011) notes that the inclusion of caregiver motivation exacerbates the imbalance in the sample such that it becomes difficult to find a propensity score specification under which balance is achieved.

1.7 Results

Similar to the observation in Coetzee (2011), we are unable to find a specification that balanced the distribution of covariates according to the DW algorithm (Dehejia & Wahba, 1999 & 2002) when the motivation variable is included. We, therefore, use the simplest propensity score specification (i.e. one that excludes higher order and interaction terms) given by

The logistic probability model is used in the propensity score equation. The sample is then restricted to the region of common support, this is done using the common support option of the “pscore” command in Stata (see Becker and Ichino, et al., (2002)). This command implements the DW algorithm and drops only those control observations that are not within the range of propensity score values for treated observations. After dropping off-support control observations, the estimation sample reduces to 2,823 (2,108 treated and 715 control observations).

This section present the results under the PSM and GenMatch under the different balance measures. The results are presented in table 1.4., panel 1 show the result under the PSM method, panel 2 & 3 show the result under GenMatch when the balance measure is the standardized difference and the entropy measure respectively.

| Table 1.4: Treatment effect estimate and Standard errors |
|-------------|--------|--------|
| Ratio       | 1;1    | 1;2    |
| PSM         |        |        |
| Panel 1     |        |        |
| Estimate    | 0.237  | 0.1679 |
| SE          | 0.328  | 0.3262 |
| SE AI       | 0.1717 | 0.1598 |
| T-stat      | 0.72   | 1.42   |
| T-Stat AI   | 0.138  | 1.05   |
| GenMatch (Standardized difference in means) |
| Panel 2     |        |        |
| Estimate    | 0.2645 | 0.3521 |
| SE          | 0.0406 | 0.0405 |
| SE AI       | 0.2413 | 0.2211 |
| T-stat      | 6.5067*** | 8.6885*** |
| T-Stat AI   | 1.0958 | 1.5922 |
| GenMatch (Entropy) |
| Panel 3     |        |        |
| Estimate    | 0.3585 | 0.3998 |
| SE          | 0.04   | 0.0404 |
| SE AI       | 0.2257 | 0.1947 |
| T-stat      | 8.9437*** | 9.8837*** |
| T-Stat AI   | 1.5882 | 2.0531** |

*** p<0.01, ** p<0.05, * p<0.1
Under the PSM method the treatment effect as shown in table 1.4 (panel 1) is 23% and 16% of standard deviation, respectively, when 1:1 and 1:2 matching is performed. We note that the substantive conclusion from this analysis is not very different from the one in Coetzee (2011). However the size of the estimate is larger, Coetzee (2011) reported an insignificant treatment effect of 7% of standard deviation. Perhaps the inclusion of relationship of caregiver to the child and dropping of beneficiaries with low dosage accounts for this.

Panel 2 (of table 1.4) shows the treatment effect estimate when the standardized difference in means is used to optimize balance under GenMatch. The treatment effect is now 26% and 35% of standard deviation, respectively when 1:1 and 1:2 matching is performed. The notable difference here is that the estimates are larger (relative to the PSM approach) and statistically significant at 1% level when the standard error does not account for the matching process. This can be attributed to the difference in method. Unlike PSM, that weights observations to balance the propensity score density alone, GenMatch weights both the covariates and the propensity scores to achieve balance. In the very likely situation where balance in propensity score does not translate into optimal balance in covariates, the GenMatch result will be different from the result of PSM. This is the advantage of the GenMatch approach, that is, instead of placing all the weights on the covariates (Mahalanobis matching) or the propensity scores (PSM), it finds the allocation of weights between the two approaches that optimize balance in all covariates, given the data, the loss function, and the measure of balance used.

Note that while the standardized difference in means compares the first two moments to assess balance, the entropy metric compare the entire distribution to assess balance. The treatment effect estimate is presented in Panel 3 (of table 1.4). The estimates are 35% and 39% of standard deviation for the 1:1 and 1:2 matching respectively. Similar to the result under the standardized difference in means, the effect is significant at the 1% level for both matching configurations when the standard error does not account for matching. In addition, under the 1:2 matching the effect is significant even when the standard error accounts for matching.

We note that the difference in effect size in panels 2 and 3 can only be attributed to the difference in the balance measure. For the GenMatch approach, differences in balance measures can only lead to a difference in inference if the difference in the balance measure results in a difference in the distribution of weights allocated to the covariates in equation (1.1). In other words, the different balance measures lead to a different optimal $M$ matrices in equation 1.1. Therefore, one explanation for this result is that the entropy measure lead to weights that attempt to balance the distribution of covariates (which is very important for continuous variables like motivation and propensity score in this example).

1.8 Conclusion

This paper uses the NIDS data to illustrate one possible use of the entropy metric as a balance measure. Following Coetzee (2011), it draws treatment and control samples from the NIDS Wave 1 data for 2008. By changing the methodology employed to estimate the treatment effect, we arrive at a different conclusion from the one in Coetzee (2011). This is that the CSG has a positive and significant effect on stunting in the NIDS Wave 1 data.
We attribute this difference in our result to the superior performance of the GenMatch approach and the use of the entropy measure to capture all aspects of balance. Finally, our analyses show that the balance measure used to calculate the treatment effect does matter for the result under GenMatch. Using a measure that compares distributions rather than a few moments leads to stronger effect estimates in this example.

Bibliography


Probability Distributions of Returns in Cryptocurrencies and Emerging Financial Markets

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Abstract
Several empirical papers have fitted different distributions to financial asset data collected over a short frequency interval. As some merely follow previous works to assume a single distribution for the data at hand, others fit quite fewer distributions to the data. The most grievous of the issue is in situations where the returns of assets are preliminarily described by descriptive frequency analysis to show more clusters of data points at the tails, yet analysts impose light tail distributions, in some cases the normal, perhaps due to its parsimonious and/or flexibility. Using daily log-returns from six assets classes, we explore a large pool of light to heavy tail parametric distributions under individual and aggregate data settings. In majority of the cases, the heavy tail, the semi-heavy tail, and the relatively new distributions from the generalized hyperbolic distribution (GH) class provide appropriate fit which well-capture the skewness and leptokurtic features of the data. Our results generally diffuse the notion of a universally “best” distribution, and suggest a relaxation of such assumption, to rather fit candidate distributions that incorporate asymmetries and tail behaviours of return distributions. Our findings have important implications for risk management.
Application of Projectile physics and variable drag implications within futures (instruments) market price.

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Abstract
This particular study took an econophysics route to explain the market behaviour for futures contracts in terms of prices and its market life span. We used projectile motion models defined under two distinct conditions (perfect/horizontal and imperfect/ drag implication) based on Newton’s and Galileo’s laws of motion. Despite that it was more theoretical we managed to derive the futures price functions and the results showed that futures prices depends largely on market forces of demand and supply and underlying assets price behaviour. Also, we managed to find the terminal prices for the securities given the initial prices, which is a worrying matter to the trading parties. From the performance comparison of the two models used, results suggested that futures price function from a drag variable is more powerful in modelling the price behaviour for options than the one sorely controlled by market demand and supply forces. However, it should not be carelessly taken that the projectile models used are much good at price motions/movements within the market from time to time with a stunted ability to capture in other facts of interest such as volatility coefficients which paves a research way for other scholars.
Executive compensation and Firm Performance in Africa

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Abstract
This study examines the impact of executive compensation on firm performance after successful mergers and acquisitions in Africa between 2005 and 2016. Using accounting and financial performance measures and controlling for firm, deal and corporate governance factors, we show that executive compensation induced by M&A in Africa negatively affect the performance of listed firms. There is also evidence to support the impact of firm size, deal size, target destination, foreign ownership, diversification, outside board representation and executive ownership on the pay-performance nexus. Besides, corporate governance factors in Africa, generally, worsen firm performance, especially for cash and total pay.
The Perceived Impact of HRM on Business Performance: Evidence from Nigeria

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Abstract
Despite some attention paid to the impact of human resource management (HRM) on organisational performance in the context of industrialised countries in the West (e.g., Kehoe and Wright’s (2013) recent study of employees’ perceptions of high-performance HR practice), there is a relative absence of studies on HRM and performance management in developing countries in Africa. Given the significant socio-economic and institutional differences, organisational approaches to HRM and performance in the West may not be completely transferable to organisations in Africa. In other words, there is a need to examine and capture the diverse issues and challenges of performance management from an international perspective. This paper addresses this gap through an empirical study of performance management in Lagos, Nigeria. In particular, it focuses on three interrelated questions: To what extent does HRM affect employee productivity? To what extent do generic HRM functions – such as job design, training and development, performance appraisal, remuneration - affect business performance? To what extent do strategic HRM practices affect business performance? Drawing on an in depth case study of a construction company, the paper investigates the impact of HRM practices on business performance.
The role of institutional investors in corporate governance of South African listed companies

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Abstract
Recently, a number of corporate collapses have been witnessed which can be attributed to various corporate governance issues. Research has found that institutional investors have a significant role to play with regards to corporate governance. But in South African context (specifically with the existence of King Report), the relationship between institutional investors and corporate governance has not been well researched. This study explored how institutional investors influence the corporate governance of South African listed companies. It examined the link between institutional investors and financial performance and identified the association between institutional investors and Environmental Social Governance (ESG) performance. Data for the study was collected using questionnaires. Analysis of data was carried out using the Statistical Package for Social Sciences (SPSS). This study indicated that institutional investors are always the main representatives in the audit committees, more so, they always ensure effective supervisory and management board oversight. The study also found that there is a close association between institutional investor involvement and the financial performance of the given companies. Companies with institutional investors are reported to have more improved performance compared to companies without institutional investors. It can be deduced that highly effective management monitoring by institutional investors contributes to good financial performance. Additionally, most respondents also indicated that there is a positive relationship between the number of institutional investors in a company and financial performance. Finally, the research concluded that most of the institutional investors consider ESG performance before engaging in investments.
The effect of the adoption of International Financial Reporting Standards on Foreign Portfolio Investments in Africa

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Abstract
The adoption and implementation of International Financial Reporting Standards (IFRS) are anticipated to enhance the quality and credibility of financial statement in terms of reliability, transparency, and comparability. Consequently, it presupposes to improve the functioning of the capital market and influence foreign investments in the adopting countries. Thus, this study examines the effect of IFRS adoption on foreign portfolio investment (FPI) inflow among countries that required all their listed companies to use IFRS in Africa. Annual FPI data from the Balance of Payments and International Investment Position from 1994 to 2015 were employed. The panel data regression using ordinary least square, fixed-effects, and random-effects models is utilised. Besides, the system generalised method of moments (SGMM) estimator is employed for the robustness of the model and to address the problem of endogeneity. Certain covariates, that may influence the interpretation of the results, were included in the model. Our finding shows a significant and positive effect of IFRS on FPI after the adoption. The evidence indicates that there is a significant and positive effect of IFRS adoption on FPI inflows in countries that required all their listed companies to use IFRS in Africa.
Are there asymmetric linkages between African stocks and exchange rates?

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Abstract
In this study we explore the dynamic asymmetric connection between selected African stock markets and their respective exchange rates using the Ensemble Empirical Mode Decomposition (EEMD)-based quantile regression. The EEMD decomposes price return series into short-term, medium-term, and long-term scales termed as Intrinsic Mode Functions (IMFs) with which parametric Quantile Regression Analysis (QRA) and nonparametric Quantile-in-Quantile Regression (QQR) are performed over 19 quantiles from 0.05 through to 0.95. The QRA and QQR can adequately capture the time-varying asymmetric linkages between African stock market returns and exchange rates across Egypt, Ghana, Kenya, Mauritius, Morocco, Nigeria, South Africa, and Tunisia. Based on the QRA we make three grouping; Ghana and Kenya exhibit inverse association in the long term at the quantiles and direct link otherwise, Mauritius, Nigeria and South Africa show positive association in the short and medium terms but a switch blend of negative and positive alternating between lower and upper tails of the distribution, and Morocco and Tunisia which have direct relationship between stock markets and exchange rates across the board. However, there overall match in pattern for QRA and QQR, the estimates of the latter are smaller in magnitude and much more varying (between negative and positive) across time scales and quantiles. This evidence of time-varying relationships across the quantiles provide instructive implications for policymakers and industry practitioners in Africa.
The comparative impact of discretionary and non-discretionary disclosures on firm value: Does Impression management and governance matter?

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Abstract
This study assesses the differential impact of discretionary (including impression management) and non-discretionary disclosures on firm performance. Diction text analysis software is used to determine the tone of language used in chairman’s letter as a proxy for discretionary disclosures. GMM technique is used to determine the differential impact of discretionary and non-discretionary financial statement’s disclosures on firm performance. The results show that both in emerging and developed markets, return on assets have a significant positive impact on firm performance while dividend yield, GDP growth, interest rate and the rule of law have a negative significant impact on firm performance. However, impression management measures have positive significant influence on performance in developed economies than in emerging markets. This implies that investors in developed economies are likely to be influenced by the tone in chairman’s letter (impression management - discretionary disclosure) whereas investors in emerging markets may prefer the company’s fundamentals (non-discretionary disclosure). In conclusion, users of financial statements should be aware of impression management contained in the financial reports.
Stock markets coherencies and volatility dynamics: A case of South Africa and its major trading partners.

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Abstract
This research studies stock markets coherencies and volatility dynamics between South Africa’s stock market index and that of USA, Germany, Japan, India and China. The study focused on the co-movements and volatility spillovers amongst stock markets, specifically on how the trading partners influenced the South African’s stock market. The study utilised weekly stock market data obtained from Bloomberg terminal for the period from 7 January 2005 to 22 December 2017. A battery of econometric techniques such as DCC-GARCH, BEKK- GARCH and the wavelet were employed. The results indicated that there was a strong static and time varying conditional correlation between South Africa and Germany followed by USA. There were bi-directional spillovers that existed between South Africa and India, China as well as Japan. Uni-directional volatility spillovers existed from USA to South Africa while on the other hand results indicated volatility spillovers in the direction of SA to Germany. The coherence plot and the multiple cross correlation of stock markets indicated a high degree of all markets co-moving together from scales 16 to 32. The extreme scales indicated India being the leader in the market maximising multiple correlations against a linear combination of assets within the investment portfolio while Germany leads in the higher frequency band (scales 1, 2, 4 and 8). The findings recommended investing in countries that were characterised by (1) pairs that exhibited low static correlations (2) low dynamic conditional correlations and covariances (3) low volatility (4) low correlations zones within the multiple cross-correlation of stock market returns (5) high frequency bands typified by low wave multiple correlation. These results provided insights about the flow of investments and interdependencies expanding the extant literature and suggested implications to investment and risk managers.
Information Asymmetry, Non-scheduled Announcements and the Persistence of Price Pressure Effects around Index Revisions

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Abstract
One of the most contentious debates in the literature on index revisions is whether the price effects are permanent or transitory. This paper sheds light on this debate by providing empirical insights into the interaction between information asymmetry risks, price patterns and trading volume behaviour around the revisions. Using data from the Nikkei 225 and liquidity as a proxy for information asymmetry, it finds that price pressure effects for deleted (added) stocks with high (low) information asymmetry risks are substantially permanent (transitory), suggesting that the perceived higher information asymmetry risks for deleted stocks are priced. Further analyses reveal that non-scheduled announcements exacerbate the price pressures that cause prices to overshoot and lead to an overall deterioration in pricing efficiency around the revision dates. For index funds that demand immediacy in order to minimize tracking error, this implies that they are forced to pay higher premiums on newly added stocks than they otherwise would. Results overall are consistent with the theoretical predictions of Llorente, Michaely, Saar and Wang (2002).
Modelling the asymmetric linkages between spot gold prices and African stocks

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Abstract
We model the asymmetric nexus between spot gold and African stock market returns using the Maximal Overlap Discrete Wavelet Transform (MODWT) and quantile regression techniques. We find, in general, that the relationship between gold price and African stocks is time-varying and asymmetric in nature across the various time-scales and quantiles. In some countries, the relationship is not significant for the composite index but significant at some scales, whereas in some countries the relationship is significant at the composite level but not significant at all scales. There is no significant link between gold and stock prices for Egypt, Ghana, Kenya, and Mauritius. Movements in gold prices have negative effect on stock returns in Morocco, Nigeria, South Africa, and Tunisia. On the decomposed series, it is found that there is a positive effect of gold on stock returns in Egypt, Morocco, South Africa, and Tunisia in the short scale. For the medium scale, there is a positive effect of gold prices on stock returns in Ghana whereas it is negative for Kenya, Morocco, South Africa, and Tunisia. For the longer scale, there is a significant relationship between gold and stocks in all the countries. Whereas the effect of gold is positive in Ghana, Mauritius, and Nigeria, it is negative in Egypt, Ghana, Morocco, South Africa, and Tunisia. The results possess important implications for risk management since dependencies are not only studied over the entire conditional distribution at once but based on quantiles (through quantile regression) and further at different time horizons based on wavelet-based decompositions. The strategies employed engendered in this analysis afford investors to make well-informed decisions to mitigate trade risks as they closely match the heterogeneity of market participants and their various operational mechanisms.
Quantitative and Qualitative Infrastructure Effects on Economic Growth and Productivity: The Case of Sub-Saharan Africa

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Abstract
This paper examined the growth and productivity effects of the stocks and quality features of electricity, telecommunication, road and airport infrastructures. The correlation analysis and GMM estimations are used to achieve the purpose of this study. Correlation analysis suggests that both GDP per capita and productivity have a positive comovement with each infrastructure variable (both quantity and quality) except with road infrastructure. The GMM findings indicate that electricity, telecom and airport infrastructure quantities have a positive impact on economic growth. However, road infrastructure quantities exhibited negative growth and productivity effects. Electricity and airport quantities indicate positive impacts on productivity whereas the quantitative impact of telecom is not significant. In terms of the qualitative effects, the quality of airports shows no significant effect on growth while the qualities of electricity, telecommunication and roads imply negative growth effects. The quality features of all the infrastructure sectors indicate no significant effect on productivity. SSA needs to improve the quality of its various infrastructure sectors, which are currently low. While these results seem interesting, further studies may perform similar research using a different approach.
What Drives Underwriting Performance of Insurance Companies?

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Abstract
The insurance industry in emerging markets such as Ghana has recorded growth in market activities over the last decade partly due to improved regulatory environments and financial liberalization. Nevertheless, the industry has witnessed significant underwriting losses which have caused the regulator to raise issues concerning the underwriting operations of the industry. This study contributes to the knowledge discourse of finding the drivers of underwriting performance by sampling the audited annual reports of 67 percent of each sector of the industry over the period 2007 to 2016 for the empirical analysis. The findings generated through rigorous panel regression indicate that the attempts of managers and agents to overtrade by underwriting more premiums to increase their market shares do not add value to the underwriting profitability of life insurers. Similarly, managerial compensation and growth in market shares detract from non-life insurers' underwriting performance. The risk indicators have significant adverse effects on underwriting performance in both sectors. This may suggest that the industry charges disproportionately too little premiums for the risks it underwrites which may be an indication of under-pricing by some insurers to grow their customers' base. The findings have profound implications for managerial efficiency and risk management structures within the industry. The managerial compensation structure of the industry should be revised to reflect underwriting profit-based compensation instead of the quantum underwritten premiums.
Infrastructure and Sectorial Growth Nexus: Evidence from sub-Saharan Africa

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Abstract
Building on recent empirical evidence which mainly focused on infrastructure–aggregate growth nexus, this study moves a step further to examine the relationship between infrastructure and sectorial growth relying on 29 countries in sub-Saharan Africa (SSA) spanning 2000 to 2014. Our evidence based on system generalized method of moments (GMM) shows positive and significant impact of infrastructure on both industrial and service sector growth. Nevertheless, no relationship was established between infrastructure and agriculture sector growth. Besides, it was further revealed that while labour force, inflation and polity2 score proxying political (in) stability are shared determinant of output growth in the agriculture and industrial sectors, terms of trade and labour force were also found to be shared determinant of output growth in the industrial and service sectors. Evidently, government expenditure enhances only service sector growth and hence, serves as a different determinant of output growth in the agriculture and industrial sectors. We discuss key implications for policy.
Necessity is the Mother of Inventions: Electricity Outages and Firm Innovations in Sub-Saharan Africa

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Abstract
A key driver of the productivity gap between developed and developing countries is the differences in the level of innovation. In this paper, we examine whether power outages in Sub-Saharan Africa (SSA) inhibits or spurs innovation among firms in the region. Using recent data from the World Bank Enterprise and Innovation Follow-up Surveys, we apply the instrumental variable approach to estimate the impact of electricity outages on firms’ decision to innovate and to invest into R&D. Findings from the paper reveal that exposure to intense electricity outages induce firms to innovate as well as increase decision to investment into R&D. We interpret these results as coping strategies by firms to mitigate the negative impact of outages on their productivity and survival. Innovation decisions by firms in SSA are not transformative but rather towards survival. Moreover, lack of finance constrained firm’s ability to innovate. We find no evidence of a differential impact of outages on innovation and R&D activities between manufacturing and service sectors.
Environmental emissions and life expectancy nexus: further evidence from Nigeria

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Abstract
The paper examined the nexus between environmental emissions and life expectancy using Johansen co-integration and error correction modeling in Nigeria, applying time series data spanning 1990-2016. The finding reveals that environmental emission (proxied by per capita carbon dioxide) is a significant determinant of life expectancy at birth in Nigeria. Also, results reveal that both improved sanitation facilities and public expenditure on health positively and significantly impact on longevity level in Nigeria. Arising from the findings, the study recommends, amongst others, that relevant government policies that could significantly curtail environmental emissions should be strictly enforced and accorded priority in development policy measures. Such efforts should be complemented by embarking on mass sensitization of the Nigerian populace on the strategies to help keep their environment clean in order to reduce mortality relating to unkempt environment and to improve the health status of the citizens.
Weather Shocks and Internal Migration Flows: Evidence from South Africa

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Abstract
Evidence shows that global climate is warming; however, literature on climate change and migration is scarce, with fragmented conclusions. This paper investigates the effect of weather shocks on migration incidence and intensity in South Africa, based on Lee’s ‘Push-Pull’ framework. A Logistic regression model is used on municipality level dataset from South Africa, matched with spatially disaggregated datasets on temperature and precipitation patterns as exogenous variables. The study revealed that there is a statistically significant relationship between weather shocks and internal migration flows in South Africa. There is a positive and significant relationship between low precipitation, high temperature, and out-migration incidence. Similarly, local municipalities with high precipitation and moderate temperatures are more likely to attract migrants, controlling for other socio-economic factors. Additionally, individuals are more likely to migrate from municipalities with very low precipitation accompanied with very high temperature. These findings confirm Lee’s Push-Pull framework highlighting that, environmental factors have significant explanatory power in relation to migration decision making. It is therefore important for policymakers and researchers to give keen attention to climate-induced migration in South and Southern Africa, not only to examine its significance, but to be able to estimate the relative importance of climate change against other driving forces that influence migration decision by people.

Keywords: Weather shocks, Climate Change, Precipitation, Temperature, Migration, South Africa

1. Introduction
Substantial evidence shows global climate has been warming for the past few decades. Current predictions indicate not only its persistence, however, severe warming in terms of mean and extreme values with a very gloomy and unpredictable climatic patterns in the future (Kubik & Maurel, 2016: IPCC, 2007). An estimated 258 million (3.4%) people live outside their country of birth which represents an increase of 49% since 2000. 2015 recorded about 20 million people forcibly migrating as a result of extreme weather condition (OCHA, 2015) and, as forecasted by UNFCCC (2016), by 2050, more than 200 million people will be on the move as a result of climate reasons. Despite the significant role climate change is playing in migration, existing social science theories narrowed their models to economic, social, political and cultural factors, without any hint on climatic factors. The Neoclassical theories on migration view the phenomenon as a
permanent human capital investment, which therefore deduced that an indifferent individual is more likely to migrate, if his/her expected earnings at host country is higher than the existing earnings in country of origin (Constant & Massey, 2002; Kumpikaitė & Žičkutė, 2012; Massey et al., 1993). Similarly, the New Economics of Labour Migration (NELM) views migration as a temporal household decision to diversify risk, as a result of market failure. In effect, the decision to migrate is a form of risk diversifying strategy for the entire household, to alleviate any form of economic, socio-political risks. Within the theoretical literature, Lee’s push-pull framework appeared to be the only work modelling environmental factors as one of the key determinants of migration (Lee, 1966). Yet, existing scholarly works to proof this claim are very limited with very fragmented conclusions.

Albeit, studies on the determinants of migration concluded that, economic reasons dominate the determinants of migration (Hare, 1999; Hunt, 2006; Mora & Taylor, 2005), there is a growing body of evidence that climate change is a significant determinant of migration. Existing works on climate change and migration focused on both internal and international migration (Black et al., 2011; Entwisle et al., 2016; Feng, Krueger, & Oppenheimer, 2010; Gray & Mueller, 2012; Kabir, Ahmed, & Khan, 2017; Kubik & Maurel, 2016; Neumann et al., 2015; Reuveny, 2007; Tacoli, 2009). These studies found that, aside social insurance, income smoothing, self-insurance, climate related insurance, crop insurance among other things, migration is a major risk diversifying strategy for climate change. This is because the effectiveness of the above-listed mechanisms is limited in hedging household consumption against any form of income shock arising from climate change. While others conclude that this is mostly used by the poor, few other studies highlighted that climate change rather deepens the poverty levels of poor households. Based on this claim, most studies conclude that poor households cannot afford migration as a risk diversifying strategy during adverse climate change. These complexities in the empirical literature on the climate change – migration nexus may be attributed to the contextual nature of climate in different areas, due to the different agroecological culture in different countries. Another plausible reason could be paucity in reliable data on the two main variables of interest, especially in developing countries. Obviously, tracking climate-induced migration is difficult since this is mostly hampered by the largely dominated socio-economic factors. Providing a deeper, and more contextual understanding of the role of migration as a coping strategy for adverse climate change is very crucial knowing its significant strengths and limitations.

A baseline study on internal migration and climate change clustered countries to show the macro relation of climate change on rural-urban migration across countries, however, it failed to account for country specific realities and effects, which may pose as a major caveat in methodology (Peri & Sasahara, 2019). In the case of South Africa, undoubtedly, a lot has been done on migration with focus on trends and changing patterns of migration; internal and international migration on crime rates in receiving areas; the impact of migration on inequality and subjective wellbeing of migrants in receiving areas (Kollamparambil, 2017, 2018; Mulcahy & Kollamparambil, 2016; Posel, 2010). Yet, there are no traces of empirical works that examined the relationship between climate change and migration. Exploring this link in the South African context is very important due to the extreme variations in the climate - rising temperature, excessive drought and water variability in recent times.
South Africa has a warming rate of 2 °C per century, which is more than twice the global warming rate. Amidst the unclear projections of rainfall pattern across the country, speculated temperature variations grossly exceed 4 °C and even more than 6 °C for some provinces (Draft National Climate Change Adaptation Strategy, 2019). Between 2015 and 2018, South Africa experienced severe drought, with Western Cape Province mostly affected with water shortage which led to agricultural loss and food inflation of about 12% (StatSA, 2018). Given the fact that the adverse climate impact in South Africa cannot be counted random due to climate-related incidence like the occasional droughts the country experiences with particular reference to Western Cape as the most victimized Province, it is noteworthy that adverse climate change poses as a major threat to the development of South Africa in the near future, if not now. South Africa is known as one of the countries with the problem of water stress and water scarcity. This prediction about the rise in temperature and extreme water variabilities does not make the future for South Africa as a climate resilient country per the national climate change adaptation strategy does not appear promising.

One of the major factors of migration, mostly forced migration is environmental factors (Black et al., 2011; Entwisle et al., 2016; Knight & Gunatilaka, 2016; Massey, Axinn, & Ghimire, 2010; Mudefi, Sibanda, & Chazireni, 2019). While this determinant has been mostly clouded by economic factors, climate reasons are becoming very widespread and growing at a relatively fast rate.

In order to adjust, individuals would need to diversify risk through insurance and other climate resilient approaches. Given the high rate of urbanization (60% to 66% growth) in South Africa, migration has been identified as one of the main, if not the major contributing factors. Thus, it is crucial to explore the link between climate and migration (StatSA, 2018). In this paper, we investigate the effect of weather shocks on migration incidence and intensity in South Africa. In order to examine the impact of weather variabilities on migration, the study estimates precipitation and temperature shocks using a five-year estimated average of precipitation and temperature variations at the district municipal levels at the receiving area. Temperature and precipitation data for origin areas are also used since the study examined both migration inflow and outflows. These estimates will be matched with migration rates within such periods in geo-coded areas. The identification strategy solely relies on random variations in the precipitation and temperature which are orthogonal to the determinants on migration, given the location-specific effects. The rest of the paper is structured as follows: section (2) presents the theoretical framework that explains the relationship between weather shock and migration flows. This is followed by section (3) focusing on the data and descriptive statistics used for the analysis. Section (4) presents the empirical strategy which is followed by results in section (5), and concludes with section (6) with summary of findings and policy implications.

2. Lee’s Push-Pull Framework on Migration

This section presents a theoretical framework that underpins the factors that influence migration at both the host and sending areas. The well-known theories comprising Ravenstein’s laws of migration, neoclassical models, new economics of labour migration theory, gravity model, push-pull theories conclude that migration is a spatio-temporal process undertaken by humans for various reasons. Following the work of Lee (1966), this paper investigates the link between
weather shock and internal migration incidence and intensity. Lee’s Push-Pull theory is a neoclassical theory that underscores the movement of people from either densely to sparsely populated areas; adverse to better climatic areas; low to high income areas; or link migrations to fluctuations within the business cycle. Although a comprehensive theory of migration is unattainable, the reason why people move has remained the vital task of social demographers to investigate and provide scientific answers.

Migration laws concluded that the phenomenon is driven by several factors grouped into "push-pull" factors. The main setup of these two-category included unfavorable socio-economic conditions in one place such as unemployment, poverty, bad environmental conditions among other things “push” people out, and promising circumstances at the prospective destination tend to “pull” them. All the above factors which can be regrouped as Social, Economic, Political, Cultural and Environmental have been categorized under macro, meso and micro factors affecting migration (see Castelli, 2018). The focus of this paper is to examine the likelihood of migrating, given the climatic condition. Thus, the push-pull framework argues that, if an individual is indifferent about whether to migrate or not, a higher propensity of weather shock may lead to migration.

The theory acknowledges the fact that decision to migrate is far from rationality due to the asymmetric nature of information about the place of destination and the temporal nature to fully be informed about any place. However, technology has played key role in reducing these intervening obstacles by providing detailed information. Also, communication and transportation have become easier and cheaper in recent times. While the role of technology cannot be underrated, it is also misguiding individuals through social media and influencing their aspiration to migrate. One of the key propositions of the Push-Pull theory is the establishment of streams and counter-streams which occurs when migrants at the destination begin to act in the direction of exploiting untapped opportunities at places of origin in terms of the needs of the origin. This attracts indigenes at the destination areas as well as children of these migrants to cause reverse migration for these migrants and a counter flow by the indigenes referred to as counter-streams which naturally manages movement to cause balance in both origin and destination areas.

3. Data and Descriptive Statistics

The study draws on datasets from two main sources: Standard Precipitation and Evapotranspiration Index (SPEI) as well as 2016 South Africa community survey data which provides information on internal flows of migrants across provinces and/or within provinces but across district municipalities. This information is used to estimate migration outflow and inflow binary variables for both the origin and receiving areas respectively. For the purpose of this study, two classifications of migrants have been adopted. A migrant has been defined as an individual who moved from one Province to another between the periods 2013-2015 using the 2016 community survey. Secondly, an individual who relocates from one district municipality to another within the same Province, given the defined periods above qualifies to be a migrant. Even though there are various periods to measure migration, the former classification overrides the latter since movement across Provinces equally means there has been change in local municipality thereby
underscoring the second classification which is in line with the conventional measurement of internal migrants (StatSA, 2016). Our analysis settles around two outcome variables; in-migration and out-migration. In line with Lee’s push-pull framework, this approach is adopted in order to provide a robust analysis on how extreme weather variation serves as a push factor of migration from the origin area as against how stable and good weather condition pulls individuals to destination areas of their choice.

It is very important to explore the migration dynamics at both receiving and origin areas alongside their respective weather conditions. In so doing, precipitation and temperature datasets for the 52 local municipalities are captured and matched with both in-migration and out-migration dataset. A five-year average precipitation and temperature has been estimated for periods 2011-2015 and matched with migration inflow variable. Another computation for both precipitation and temperature were used to proxy for weather data at the origin areas of migrants prior to their migration. This information helps to capture the weather condition at the origin area before the individual migrated in order to examine the role of other predictable variables of migration.

For the purpose of understanding the pathways through which weather shocks (precipitation and temperature) influence migration incidence within South Africa, we decomposed weather variables for both the origin and destination districts to estimate how the individual migrant’s decision was influenced by these two. Consequently, the study used the 2015 temperature and precipitation datasets, given the fact that South Africa in general experienced the adverse weather condition among all other years within the ten-year period of assessment. While the destination weather condition serves as a major reason for people to move, it is also important to examine the weather condition at the origin, since that may either push or repel potential migrants from migrating. This partly satisfies the Push-Pull theory of migration. While there exists weather information for several years, the 2015 weather data served as a reference year in analyzing the influence of extreme weather condition on migration incidence. This is because South Africa experienced extreme weather conditions within this period which led to water scarcity and water stress. It is therefore no coincidence that majority of migrants (33.37%) were recorded in 2015. It is important to highlight the fact that extreme weather variation in South Africa has been experienced during 2015 with significant impacts on water scarcity and water stress. This partly explains why the study focused on the selected year period(s).

This paper uses three years in order to make analysis very consistent with the principal variables – precipitation and temperature since the selected periods are very reflective of the exogenous shocks experienced which might have percussed the outcome variable – migration flows. This means that individuals who do not move within the defined periods fall within the non-migrant category. This provides us with a non-migrant group which serves as a control group for comparison, in order to enrich and also, make the analysis very robust. The community survey dataset also provides information on the previous province, municipality and dwelling of the individual which was used to compute the migration variable. Additionally, information on socio-demographic characteristics like age, sex, race, marital status, education levels were recorded for this purpose which would be useful to determine the status and the needs, as well as individual differences of migrants. With regards to precipitation and temperature at both the origin and destination areas of migrants, Table 1 reported that standard deviations for precipitation and temperature are relatively higher at origin areas of migrants as compared to destination areas.
This is because the year of computation for destination represents the year South Africa experienced major shocks in the weather which significantly deviates from the five-year average estimated to represent the origin areas. This also confirms how temperature at migrant sending municipalities is relatively higher than that of receiving districts. It is also similar in the case of precipitation data which presents relatively higher precipitation for migrant receiving districts than sending districts.

Table 1  Summary Statistics

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<th>Variable</th>
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4. Empirical Strategy

In estimating the effects of weather shocks on the likelihood of migration, the paper used a five-year average of precipitation and temperature calculated for 2011-2015 for all 52 local municipalities which serve as an exogenous stochastic estimate for weather shocks. This is matched against migration flows (both migration inflow and outflow variables) within or across provinces but from one district municipality to another. The outcome variable, 'Mig' measures the probability that an individual migrates, given the covariates which include socio-demographic factors and the weather variables (precipitation and temperature). The reduced-form model is estimated in equation (1) below:

\[ p(\bar{x}) \equiv P(Y = 1 \mid \bar{x}) \] ................................. (1)

\[ Y_i = \begin{cases} 1 & \text{if the person migrates} \\ 0 & \text{if otherwise} \end{cases} \]

where \( P(Y = 1) \) from equation (1) represents the probability of migrating or not, given the covariates \( \bar{x} \), where \( \bar{x} \) consists of vector of predictor values such as socio-demographic and weather variables.

Given that the migration variable (\( Mig_i \)) is binary, modeling \( p(\bar{x}) \) means modeling \( E(Mig_i \mid \bar{x}) \), which reads as the probability to migrate or not, given the covariates.

The estimated covariates, \( p(\bar{x}) \) represents series of variables grouped into control variables, weather and socio-economic variables. They can be expanded as:

\[ \beta_0 + \beta_1 \text{Age}_i + \beta_2 \text{Male}_i + \beta_3 \text{Educ}_i + \beta_4 \text{Race}_i + \beta_5 \text{Married}_i + \psi_1 \text{Precip}_i + \psi_2 \text{Temp}_i + \psi_3 \text{GDP}_i \\
+ \psi_4 \text{Unemployment rate}_i + \psi_5 \text{Poverty rate}_i + \psi_6 \text{Crime rate}_i \\
+ \epsilon_i \] ................................. (2)

The above equation estimates the expected probability that an individual migrates where \( P(Y = 1) \), for given values of the covariates \( x_1, \ldots, x_p \). The logistic regression model then estimates the odds that the likelihood that an individual migrates, given the independent variables by using the Maximum Likelihood Estimation (MLE) technique. (see equations 4 and 5 below),

\[ \prod_{i=1}^{n} \left\{ p(\bar{x})^{Mig_i} [1 - p(\bar{x})]^{1 - Mig_i} \right\} \] ................................. (3),

which represents an expression as;

\[ P(Mig_1 = Mig_1, \ldots, Mig_n = Mig_n \mid \bar{x}_1, \ldots, \bar{x}_n) \] ................................. (4).

The explained variable \( Mig_i \) is binary, taking the value of 1, given the probability that the individual migrates, and 0 if otherwise. The explanatory variables \( X_i \) represents the socio-demographic characteristics and 'Push-Pull' factors that influence migration. These Socio-demographic factors include age, sex, marital status, race, religion, education levels of prospective migrant. \( \beta_i \) and \( \psi_i \) captures the intensive margin estimates of the extent to which the above-mentioned factors explain the likelihood to migrate, whereas \( \epsilon_i \) which represents the error term captures other unobserved characteristics. The underlying assumption is that, variations in weather variables
(precipitation and temperature) are exogenous and uncorrelated with the unobserved factors of migration, and these are equally orthogonal to Province and/or district municipal level conditions.

5. Results

In determining the extent to which weather shocks influence internal migration flows at the local municipal level, we run separate Logit regression models using the out-migration and in-migration binary variables presented in tables 2 and 3 respectively. Table 3 presents the results of the likelihood to migrate out of one local municipality, given the existing weather condition and other control variables at the sending municipality’s viewpoint. The model predicts that higher precipitation is associated with a lower probability of out-migration among individuals (see models 5, 6 and 7). It is interesting to realize that the square of precipitation which represents severe precipitation leading to flooding increases the probability of out-migration (model 6). These two variables are statistically significant at 1% level of significance. Temperature and temperature squared which depicts very warm weather condition also serves as a push factor for out-migration (models 1 & 2). These are statistically significant at 1% level of significance. This partly explains why people were moving from provinces affected by drought. The models also predict that individuals are more likely to migrate from place with high unemployment rates (models 3, 4, 7 & 8).

Similarly, table 3 presents the logit regression results for the migrant receiving local municipalities which highlights that municipalities with high precipitation are more likely to receive migrants, controlling for other variables (models 3 & 4). This is statistically significant at 1% level of significance. Interestingly, the square of precipitation has a negative relationship with the likelihood of receiving migrants and this is statistically significant at 1% level of significance (model 3). This explains how individual migrants are repelled away from flooded municipalities. Likewise, municipalities with moderately rising temperature are more likely to attract migrants whereas very high temperature (temperature squared) repels individual migrants and both are statistically significant at 1% level of significance (models 1 & 2 respectively). It is very clear that there is non-linear relationship between weather variables (temperature and precipitation) and migration incidence. Municipalities with high precipitation and moderate temperature levels increases the likelihood of migrants to settle by 2.37 and 75.9 percentage points respectively while an increase in the square of precipitation and temperature reduces the likelihood to in-migration This confirms the first part of a study by Peri and Sasahara (2019) which concludes that rising temperature increases the likelihood of out-migration in middle-income countries. The control variables generally behaved as predicted, with the odds of in-migration reducing for females, married and older persons. Individuals are less likely to migrate to municipalities with high crime rates (see model 4).

Using Province level effect, there is no significant relationship between the probability to migrate whether an individual resides in either Western Cape or Gauteng. A plausible reason for this is the fact that people’s migration decision to these two Provinces is significantly orthogonal to the weather conditions in these two areas. This is because the two Provinces are non-Agrarian dominant Provinces. More so, while there are issues with weather variations in these areas, and water crises for that matter, these two Provinces receive the highest share of migrants. This could
due to the relatively improved economic and social architecture, as well as the developed nature and presence of more opportunities that can be found. Drawing from the STATS SA report, poverty headcount between 2011 and 2016 in Western Cape and Gauteng dropped from 3.6% to 2.7%, and 4.8% to 4.6% respectively as compared to other Provinces. Also, these Provinces tend to be supplied with water by Lesotho which may partly explain why prospective migrants are rather attracted, rather than being repelled to other Provinces. It therefore concludes that the decision to migrate to Western Cape and Gauteng may not be explained by weather variations but rather, socio-economic among other factors which confirms the findings of some existing studies. The above discussions and findings confirm the main proposition and predictions of Lee’s Push-Pull framework of migration which suggests that individuals will migrate as a result of push factors like extreme environmental conditions among other factors to relatively better areas. In Table 4, which represents the quintile regression models, we observed that at the extremes of temperature shown using the 10th and 90th percentiles, people are more likely to migrate at origin municipalities and less likely to move to municipalities with such extreme temperatures. Similarly, municipalities with very low precipitation push individuals whereas high precipitation municipalities attract individuals. The study observed that after including socio-economic variables, the potency of weather variables dropped, which is a clear indication of multicollinearity between these two sets of variables in that, weather variables influence migration directly and indirectly through socio-economic variables.
### Table 2  
Out-migration Logit regression results

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<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
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Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
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<td>(0.0261)</td>
<td>(0.0261)</td>
<td>(0.0911)</td>
</tr>
<tr>
<td>Race</td>
<td>-0.0655***</td>
<td>-0.0276</td>
<td>-0.0254</td>
<td>-0.130*</td>
</tr>
<tr>
<td></td>
<td>(0.0217)</td>
<td>(0.0219)</td>
<td>(0.0220)</td>
<td>(0.0674)</td>
</tr>
<tr>
<td>Matric</td>
<td>0.0852**</td>
<td>0.101**</td>
<td>0.105***</td>
<td>-0.0200</td>
</tr>
<tr>
<td></td>
<td>(0.0396)</td>
<td>(0.0398)</td>
<td>(0.0397)</td>
<td>(0.138)</td>
</tr>
<tr>
<td>Secondary</td>
<td>-0.0937*</td>
<td>-0.0669</td>
<td>-0.0609</td>
<td>-0.202</td>
</tr>
<tr>
<td></td>
<td>(0.0510)</td>
<td>(0.0513)</td>
<td>(0.0513)</td>
<td>(0.176)</td>
</tr>
<tr>
<td>Post-Secondary</td>
<td>0.396***</td>
<td>0.406***</td>
<td>0.405***</td>
<td>0.712***</td>
</tr>
<tr>
<td></td>
<td>(0.0664)</td>
<td>(0.0665)</td>
<td>(0.0665)</td>
<td>(0.216)</td>
</tr>
<tr>
<td>Married dummy</td>
<td>-0.338***</td>
<td>-0.307***</td>
<td>-0.312***</td>
<td>-0.312***</td>
</tr>
<tr>
<td></td>
<td>(0.0283)</td>
<td>(0.0285)</td>
<td>(0.0285)</td>
<td>(0.0978)</td>
</tr>
<tr>
<td>Destination Temperature</td>
<td>0.0193**</td>
<td>0.759***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00882)</td>
<td>(0.172)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destination Temperature sq</td>
<td></td>
<td></td>
<td>-0.0219***</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.00462)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coefficient</td>
<td>Standard Error</td>
<td>Coefficient</td>
<td>Standard Error</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
<td>----------------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Destination Precipitation</td>
<td>0.0171**</td>
<td>(0.00856)</td>
<td>0.0237***</td>
<td>(0.00760)</td>
</tr>
<tr>
<td>Destination Precipitation sq</td>
<td>-0.000222***</td>
<td>(7.59e-05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty rate</td>
<td>-0.890</td>
<td>(1.572)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Crime</td>
<td>-0.000307*</td>
<td>(0.000166)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>0.00899</td>
<td>(0.0123)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP Growth Rate</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Province FE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.008***</td>
<td>(0.175)</td>
<td>-9.575***</td>
<td>(1.592)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-3.347***</td>
<td>(0.248)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-2.936***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.576)</td>
</tr>
<tr>
<td>Observations</td>
<td>156,780</td>
<td>156,780</td>
<td>156,780</td>
<td>14,448</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0
## Table 4  Quintile Regression

<table>
<thead>
<tr>
<th>Variables</th>
<th>Margin (10th percentile)</th>
<th>Margin (90th percentile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origin temperature</td>
<td>0.112***</td>
<td>0.121***</td>
</tr>
<tr>
<td>Origin precipitation</td>
<td>0.128***</td>
<td>0.113***</td>
</tr>
<tr>
<td>Destination temperature</td>
<td>0.056**</td>
<td>0.029***</td>
</tr>
<tr>
<td>Destination precipitation</td>
<td>0.027***</td>
<td>0.042***</td>
</tr>
</tbody>
</table>
6. Conclusion

The paper investigated the possible relationship between extreme weather variations and internal migration incidence within South Africa. Based on Lee’s Push-Pull framework of migration which proposed that there are push and pull factors that influence individual’s decision to migrate or not, the study used the 2016 community survey in South Africa, matched with a geocoded precipitation and temperature datasets. In doing so, the Logit regression model is used since it estimates a non-linear model with fixed effects in order to deal with downward bias issues in the asymptotic standard errors. The results confirmed the statistically significant relationship between extreme weather shocks (high temperatures and low precipitation) and the probability to migrate. More specifically, districts with high precipitation are more likely to receive migrants, holding other covariates constant, whereas very high temperature repels individual migrants and both are statistically significant at 1% level of significance. From the origin viewpoint, the study concludes that higher precipitation reduces the probability of out-migration among individual individuals. Interestingly, the square of precipitation leads to a higher probability of out-migration. Similar to the in-migration results, the two variables are statistically significant at 1% level of significance.

Generally, the evidence from the study are in line with the assertion made by the ‘Push-Pull’ framework by Lee that, extreme climatic conditions are push factors while conducive and stable climate serves as pull factors of migration, controlling for other factors. This therefore means that individuals faced with bad weather moved from their place of residence (from one district municipality or Province) to another area with relatively better weather conditions. While this is true, using the Province effect, it is not the case of Western Cape and Gauteng Provinces even during periods of extreme weather conditions. A plausible justification is the fact that these two Provinces are relatively much more developed with robust economic resilience as compared to the other Provinces. More so, they are less likely to respond, using migration as a coping strategy to escape bad weather but rather, form resilience and put measures in place through resorting to Lesotho for water supply. Additionally, Western Cape and Gauteng are non-agrarian dominant areas in terms of economic activities. A build-up study will focus on how climate change influences cross-border migration within the Southern African countries. Ultimately, the objective of the study transcends beyond only investigating the significant role of precipitation and temperature on migration incidence, but also, reveals the relative importance of climate change against other drivers of both in-migration and out-migration decision-making.

References


Lee, E. S. (1966). A Theory of Migration Author ( s ): Everett S . Lee Reviewed work ( s ): Published by : Springer on behalf of the Population Association of America Stable URL:


### Appendix A: Summary of variable description Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migration Inflow</td>
<td>CS-2016</td>
<td>Dependent variable for migration into a particular municipality. Dummy variable where 1=Migrate and 0 otherwise</td>
</tr>
<tr>
<td>Migration Outflow</td>
<td>CS-2016</td>
<td>Dependent variable for migration out of a particular municipality. Dummy variable where 1=Migrate and 0 otherwise</td>
</tr>
<tr>
<td>Male</td>
<td>CS-2016</td>
<td>Dummy variable where 1=Males and 0 is female</td>
</tr>
<tr>
<td>Age</td>
<td>CS-2016</td>
<td>Categorical variable that includes only the working age group from 15 to 65</td>
</tr>
<tr>
<td>Race</td>
<td>CS-2016</td>
<td>Categorical variable: Black, Coloured and White. Black is the reference category</td>
</tr>
<tr>
<td>Married</td>
<td>CS-2016</td>
<td>Dummy variable where 1=Married and 0 is Not Married</td>
</tr>
<tr>
<td>Education</td>
<td>CS-2016</td>
<td>Categorical variable: No education, Matric, Secondary and Post-Secondary education. No education is the reference category</td>
</tr>
</tbody>
</table>

#### Municipal level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature origin</td>
<td>GeoAid</td>
<td>Average yearly temperature measured in degree Celsius at origin municipality</td>
</tr>
<tr>
<td>Temperature destination</td>
<td>GeoAid</td>
<td>Five-year average yearly temperature measured in degree Celsius at destination municipality</td>
</tr>
<tr>
<td>Precipitation origin</td>
<td>GeoAid</td>
<td>Average yearly precipitation measured in millimeters at origin municipality</td>
</tr>
<tr>
<td>Precipitation Destination</td>
<td>GeoAid</td>
<td>Five-year average yearly precipitation measured in millimeters at destination municipality</td>
</tr>
<tr>
<td>Average Crime level</td>
<td>Easydata</td>
<td>Average number of crimes recorded by the municipality</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>Easydata</td>
<td>Percentage of individuals unemployed to the total labour force</td>
</tr>
<tr>
<td>Poverty Rate</td>
<td>Easydata</td>
<td>Intensity of poverty at the municipal level</td>
</tr>
</tbody>
</table>

#### Province level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Growth Rate</td>
<td>Easydata</td>
<td>Rate of growth of the economy measure in Gross Domestic Product</td>
</tr>
<tr>
<td>Usual Province</td>
<td>CS-2016</td>
<td>Province of residence by individuals</td>
</tr>
</tbody>
</table>
Connectedness – its importance within spiritual leadership and relevance to professional leadership

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awort@uj.ac.za

Abstract
In a letter defending his posture of non-violence Martin Luther King Jr. provided a compelling view on Connectedness arguing that “…all life is inter-related. All men are caught in an inescapable network of mutuality... Whatever affects one directly, affects all indirectly…This is the inter-related structure of reality” (1963). The concept of connectedness can be construed as wide and difficult to define. Although that might be the perception, connectedness is the one crucial factor toward the deeper experience of meaning and purpose of the individual within the organizational context. This existentialist view involves the pursuit of meaning in work towards a more purposeful outcome. This is a quest for something bigger than oneself and the resultant sense of interconnectedness with things beyond oneself. It seeks to answer questions of an existential nature such as, reasons for work being done; purpose and meaning attached to work and why one and organisations exist. The paper aims to investigate the subject of connectedness, viewing it through the lens of Spiritual Leadership and to assess whether or not it is relevant to Professional Leadership. The paper will further more focus on the conceptualisation and structural process within the Meta Theoretical Leadership Development model. Within the research, the conceptual model represents a system that is composed of core concepts, in which a greater understanding is created to assist people towards a greater conceptual knowledge of leadership; in the knowing, understanding and simulation of a possible situation the model represents

Key words: leader development, organisational context; professional leadership; commitment; caring; character; competence; connectedness.

1. INTRODUCTION: Why connectedness?

As observed by Dr Fitch (2015), connectedness does play a very important role within the individual in that it strengthens immune system, reduces anxiety and depression. It was further established that a lack of social connection can be worse for our health than smoking, obesity and high blood pressure (Fitch, 2015). Dr. Julianne Holt-Lunstad (2016), a professor of psychology at Brigham Young University did an analysis of 148 studies that included more than 300,000 people in total. Her research team found that greater “connectedness” cuts a person’s risk of early death by 50 percent.

Living connected to others is further more widely considered as a fundamental human need which can be seen as crucial to both well-being and human survival. In a research study, using 70 studies that included more than 3.4 million participants (mostly from North America, but some studies did look at people in Europe, Asia, and Australia) a research team concluded that disconnectedness is a threat to a person’s health as obesity and other risk factors. It furthermore significantly raised the risk of premature death (Novotney, 2017).
2. CONTEXT

In the context of a Hospitality group in South Africa, the concept of learning and developing of leaders was embraced. The need as expressed by their management was the identification of the core values and developing the leaders based on the expressed need. Theory has however taught us that most leadership development programs fail to deliver (Williams, 2005) due to a focus on:

- enhancement and introduction of skills,
- competencies and
- values

Within the hospitality group critical values were identified to what they want to see within their leaders. The critical reason being that values are the driver of leadership behaviour (Bardi, A and Schwartz, H: 2003) These values were expressed as how to effectively meet immediate and future challenges faced by the group and warranted an investment in leadership development towards greater organisational success.

The values as was identified came down too:

1. Respect
2. Loyalty
3. Communication
4. Integrity
5. Trust
6. Service
7. Passionate attitude

3. RESEARCH DESIGN

The research design is seen as the mapping out of the overall plan for the description of the phenomenon. The research method more specifically refers to the tools that will be used to fully describe this plan (Marshall & Rossman, 1995:40). Babbie and Mouton (2010:72) refer to two specific aspects that must be considered in the research design. This study is based on theory-generating, qualitative, explorative, descriptive and contextual research.
3.1 Theory Generative

All science and research aim to generate theory (Chinn & Kramer, 2011:176-180). The authors continue to define the nature of theory by stating that it is a “set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena”. From this definition, three aspects about theory are indicative.

Firstly, a theory is a set of propositions consisting of defined and interrelated constructs. Secondly, a theory specifies the interrelations within constructs and in doing so, presents a systematic view of the phenomena described. Lastly, a theory explains phenomena by specifying what variables are related to which variables and how, thus enabling the researcher to predict some variables on the grounds of certain other variables (Walker and Avant, 2005:184).

Fig 2: Theory Generation
3.1.1 Naïve Sketches

Naïve sketches (Maogi; 2014) will be used to elicit the learning experience of the participants at middle management level. The researcher exhausted the method of naïve sketches due to the phenomenon of grasping the dynamics in the model and the full operationalisation thereof being in a very specific learning moment and context. Giorgi (1971: 21-23) sheds very clear light on the fact that this moment and context are essential in understanding the phenomenon. The realisation is that no phenomenon can be studied by extracting it from the context in which it manifests itself. After the naïve sketches are obtained, Tesch’s descriptive method of open coding (Creswell, 1994:154; 2007:239-240) will be used to analyse the data.

3.1.2 Identification of Concepts

Researching phenomena in a specific context are examined for the importance it might have as examples of a larger population of similar events (Mouton & Marais, 1998:48). For that reason, the researcher was led in identifying the central concept of connectedness within the contextual research design to investigate leadership development as a phenomenon in addition to the current identified concepts of character, caring, competence and commitment in a leadership development model context. The population under study was sampled to represent a larger leadership population in the hospitality context.

3.1.3 Analysis and Defining

Flyvbjerg (2011:301) makes specific reference to researching a phenomenon as being an intensive analysis and defining of an individual unit, with the focus on processes and developmental factors in relation to the context. Creswell (1998:249) states that it is a “bounded system” focused a case or issue in order to provide an in-depth study of a system and relating it to the larger context or setting. The goal is not to generalise findings, but to keep it contextual to the specific and true to the population in the Hospitality Company.

Morse and Field (1996:3) note that qualitative and quantitative investigations are both guided by theory; however, the guidance is provided at a different stage of the research project. In qualitative inductive research, the researcher examines the data for patterns and relationships, then moves on to developing and testing hypotheses in order to generate theory or using developed theories to explain the data. Chinn and Kramer (2011:106) define theory as follows:

“A creative and rigorous structuring of ideas that project a tentative, purposeful and systematic view of phenomena being studied”.

This current research is theory-generative and it will explore the theory with focussing on the identification, development and interpretation of concepts. These concepts will then be then be used and construct statements and conceptual frameworks as a product of the research process (Mouton, 2011:125).
3.2 Qualitative Research

Mouton and Marais (1996:155) define qualitative approaches as those in which procedures are not as strictly formalised, the scope is most likely undefined and in which a more philosophical approach is adopted as the mode of operation. As pinpointed by Streubert and Carpenter (2011:12), qualitative researchers furthermore place emphasis on qualitative research having a strong belief in existence of multiple realities. This belief places strong emphasis on the depth that research needs to attain and the scope that it covers (Mouton and Marais, 1996:156).

When a phenomenon is identified, it is important to identify an approach that will support the most effective outcome in supporting the phenomenon being studied (Streubert and Carpenter, 2011:12). The researcher commits him- or herself to not only understand the participants' points of view but to also rigorously research it.

It is, however, of great importance to work according to specific hygiene principles such as those stated by Herzberg (1987:113-115). The importance in this regard is that the conduct of an inquiry should be done in such a manner that it will not disturb the natural context of the phenomena of interest. In the qualitative paradigm it is of paramount importance to the researcher to make links and draw the conclusions from the data obtained.

In the understanding of the phenomenon being researched, the conveying in reporting of such understanding should be done in a rich literature style. With regard to the current research project, the researcher will acknowledge all characteristics mentioned and, therefore, a qualitative research approach will be employed.

This current research is theory-generative and it will explore the theory with focussing on the identification, development and interpretation of concepts. These concepts will then be used and construct statements and conceptual frameworks as a product of the research process (Mouton, 2011:125).

3.3 Exploratory Research

Mouton and Marais (1996:103) state that the aim of exploratory research is to establish the “facts”, to gather new data and to determine whether there are interesting patterns in the data. These authors continue to state the importance of the researcher remaining open for new stimuli and exploring new ideas. Preconceived notions tend to send research in a specific direction and should therefore be avoided (Mouton and Marais, 1996:45).

The aim of the current study is to explore the characteristics of professional leadership and to develop a Professional Leadership Development Model from that. The proposed model will be evaluated by a panel of peers and finally be assessed by participants on middle management level in the hospitality group. However, the researcher will remain open for any new ideas and will explore the best combination in order to achieve best results.

3.4 Descriptive Research

The purpose of descriptive research is to describe particular phenomena or the appearance of things such as lived experience (Streubert and Carpenter, 2011:30). The author continue
to explain descriptive research as being involved in "direct exploration, analysis, and description of particular phenomena, as free as possible from unexamined presuppositions, aiming at maximum intuitive presentation" (Streubert and Carpenter, 2011:36). The perception of lived experience is stimulated by the descriptive inclination while emphasising the richness, breadth and depth of those experiences (Herzberg, 1987:113-115).

4. INVESTIGATION OF THE CONCEPT OF CONNECTEDNESS IN A SPIRITUAL LEADERSHIP PERSPECTIVE

"The concept of connectedness can be construed as wide and difficult to define. Although that might be the perception, connectedness is the one crucial factor towards the deeper experience of meaning and purpose of the individual within the organizational context. This existentialist view involves the pursuit of meaning in working towards a more purposeful outcome. This is a quest for something bigger than oneself and the resultant sense of interconnectedness with things beyond oneself. It seeks to answer questions of an existential nature such as, reasons for work being done; purpose and meaning attached to work and why one and organisations exist".

(Wort: 2018)

4.1 Personal Professional Leadership Perspective

The proceedings takes place within the framework of Personal and Professional leadership (PPL) perspective. The human being is viewed as a multi-dimensional being (Smith; 2009). Leadership is perceived as to start with personal leadership, i.e. leading one’s self, and emanates from the four inner life dimensions (spiritual, emotional, mental and physical) towards the four external life dimensions (social, vocational, financial and ecological). Leadership is therefore a practice that takes place from the inside out (Smith & Albertini, 2008).

The PPL approach propagates not only balance but a rhythm throughout these life dimensions. Smith however emphasises that the spiritual life dimension is seen as the circle that holds the house together (Smith 2009b:3). The spiritual life dimension is therefore seen as the foundation for holistic living. The PPL Life Dimensions Model (Figure 3) presents an illustration of the PPL approach.
This proceedings is seated within the spiritual life dimension through which a higher level meaning will be experienced in the expression of connectedness. The assumptions from the author will be made from within spiritual leadership. It is of high importance to note that spiritual leadership is seated within the higher consciousness or the spiritual mind through which greater meaning and purpose are experienced (Wort: 2013). In living from the spiritual mind (higher conscious mind), all other dimensions in the individual’s life is impacted (Minnaar 2007:187). Thus the author carries the assumption that connectedness in its purest form is a practice from of the spiritual mind.

PPL furthermore serves as a guide for leaders to become credible through a higher standard of leadership (Nair, 1994) characterised by a principle-centred, character-based, inside-out approach to life (Covey, 1994). These characteristics touch on the principals of spiritual leadership and correlate with the PPL strategy of moving towards a higher level of consciousness (Wort, 2019). Translated into a conceptual model Wort (2013) established 4 core elements as a necessity in successful Professional Leadership Development (Figure 4)
Out of the above research the outcome forthcoming was the causality shown from character through to commitment. It did however become clear that although the causality had a huge impact on leadership development, there was still a gap towards a fully functional Leadership Development Model. Through the mentioned research process it became clear that connectedness was the element lacking in the process.

4.2 Connectedness
In the investigation of literature it is clear that connectedness is portrayed as a concept of great significance inherent in human spirituality. Smith and Louw (1994) describes spirituality as to be inherently a force in the live of the individual through which a deeper connectedness is lived and experienced in meaning and purpose”.
In this Burkhardt (1994) portray to being spiritually connected as a major category of connectedness with the self as well as others. Pesut and Sawatsky (2008) further claims that connectedness can be seen as a deeper aspect in living of spirituality in the workplace. It is in the research of Bellingham, Cohen, Jones, and Spaniol (1989) that it is pointed out that the experience of vitality and health is deeply seated in the level of connectedness within the individual. This connectedness is further described by Register and Herman (2010) as an ultimate expression of human existence that comes from within and determines how people engage in the world.

Furthermore, connectedness concerns the growth through and toward relationships, both inside and beyond oneself, and may be understood as the extent to which a human being experiences shared and meaningful relationship, and engage life in meaningful, positive, and purposeful ways (Bellingham et al., 1989; Burkhardt, 1994; Register & Scharer, 2010). Connectedness is also a central feature in the concept of self-transcendence, as found in
human development or maturity based on enhanced awareness of the world around us, and an orientation toward broader perspectives about life.

Teixera (2008) views the essence of self-transcendence as the capacity to connect with self, others, the universe, and beyond. Self-transcendence may foster peace while self – actualisation may result in self-alienation, which is linked to cultural norms of “going it alone” that may lead to increased isolation.

According to Smith and Verrier (2005) connectedness includes a basic feeling of self-acceptance and being connected with one’s inner and outer self, with others and with the entire universe. Connectedness flows from several core spiritual manifestations:
- (a) love for self, others and a Higher Power leads to an interconnectedness relevant within the experience of meaning in the workplace
- (b) living in the now connects one to one’s inner self and other beings in the now;
- (c) stillness enhances connection through disconnection from the ego
- (d) authenticity is self-connectedness; and
- (e) simplicity facilitates connectedness with the self by avoiding division within the self (being).

Nohria and Khurana (2010) likens the connected individual to a drop of water in the ocean – aware of his/her individual self, but also aware of his/her connection to the greater Self. This is an enlightenment to the self in which Tolle (2005, p. 10) defines enlightenment as one’s natural state of “felt oneness with Being… with something immeasurable and indestructible, something that, almost paradoxically, is essentially you and yet is much greater than you”. It is “finding your true nature beyond name and form”.

5. CONCEPTUALISATION AND STRUCTURAL PROCESS

Within the structure of the Meta Theoretical Leadership Development Model (Figure 4) the process of development set out as the frame of learning and the content was positioned for the learning experience. The model was operationalised by way of developing learning interventions. At this point, the model intervention and learning experience were integrated into the process of operationalization (Figure 5).

Figure 5: Core themes in Meta theoretical model

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>COMPETENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Live and adding value with a set of values</td>
<td>• abilities</td>
</tr>
<tr>
<td>• Competency-based principle</td>
<td>• sum of knowledge and skills</td>
</tr>
<tr>
<td>• Living transparently with moral</td>
<td>• performance</td>
</tr>
<tr>
<td></td>
<td>• adapting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CARING</th>
<th>COMMITMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Organisation in mind</td>
<td>• lead by example</td>
</tr>
<tr>
<td>• Not losing sight of organisational vision</td>
<td>• trust</td>
</tr>
<tr>
<td>• Receptive for feedback</td>
<td>• reflected in behaviour</td>
</tr>
<tr>
<td>• Help people to achieve their goal</td>
<td>• responsible for own destiny</td>
</tr>
<tr>
<td></td>
<td>• enthusiasm and devotion.</td>
</tr>
</tbody>
</table>
In establishing the 4 core areas it became evident that the model was lacking! Further research was done and it was realized that a 5th element need to be researched and added to the model for sustainable leadership development not only from within the institution but from within the individual leader – CONNECTEDNESS. Deeper investigation took place and from the data gathering through Naïve sketches connectedness was further analysed to be:

5.1 Colour Psychology Application

The researcher applied the same research strategy in the application on the concept Connectedness as was done with Character, Charing, Competence and Commitment. In the colour orange it was established to be:

- Energising, Expansive, Spontaneous, Optimistic, Communicative, Sociable, Persuasive
- Spirituality and compassion is associated with the colour
- Makes us react by gut feeling
- Brings a high degree of positivism, always rejuvenating us in the most difficult moments
- Will always help us look on the bright side of things, even though reality is often not too bright
- Making people open up and enhance their communication.
- Excellent colour if we want to learn new things and look for new ideas

([https://www.verywellmind.com/the-color-psychology-of-orange](https://www.verywellmind.com/the-color-psychology-of-orange)
[https://www.colorpsychology.org/orange/](https://www.colorpsychology.org/orange/)
6. RESTRUCTURING OF THE META THEORETICAL LEADERSHIP DEVELOPMENT MODEL

Forthcoming from the research process will be the model that represents the core elements of Leadership Development (Figure 6):

- **Character**
- **Charing**
- **Competence**
- **Commitment**
- **Connectedness**

These core concepts were further applied into an adapted model of Kouzes and Posner (Figure 7), towards an application within the Leadership Process. All of the five elements were brought into perspective and so aligned with the Leadership Process:
7. Conclusion

- The researcher derived, modified and redefined the relevant concept and structures from current literature
- Focus was specific on the new concept and showed the relationship with the other four concepts.
- These statements described, explained and predicted the nature of interactions between the concepts of the MLDM.
- The fifth concept connectedness was introduced model
- The direct links between the concepts was shown and the relevance, one to the other, was given as the immediate outcome.
- The MLDM focussed on the development of a model and its operationalisation, in order to facilitate a process of development in a specific context.

Reference List


Assessing the Cost of Redistributive Pressure: Evidence from Côte d'Ivoire

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Abstract  
Recent studies have shown that kinship and social networks, based on strong sharing norms, could create constraints for some households and induced informal transfers considered as a tax. In this paper, we use recent data from Côte d'Ivoire Living Standards Survey (2015) combined with a qualitative survey to evaluate the direct monetary cost of this induced tax and its effects. We find that 28% of Ivorian household are under pressure to redistribute their income and the average tax of these households is about 8% of their monthly budget which is significantly higher than others which face no pressure. These findings suggest that redistributive pressure is an important determinant of involuntary giving and household composition.
Child Support Grant and Child-bearing in South Africa: Is there a perverse incentive?

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Abstract
Studies on the fertility impact of child support grant (CSG) in South Africa has been for the large part been restricted to its impact on teenage pregnancy and spacing between the first and second child birth. This study analyses the impact of CSG on higher order fertility of women across age groups using the fourth waves of national income dynamics survey data covering women from age 15 to 50 years. Covariate matching and propensity score matching techniques utilized to analyse the relationship reveal that, while there is no discernible impact of child support grant on the fertility behavior of women under the age of 20, women between the age groups of 30 and 50 years who receive child support grant tend to have more number of children than women who do not receive child support grant even after controlling for other relevant precursors and factoring in self-selection issues. This hints at the existence of perverse incentive that can result in perpetuation of inter-generational poverty and increased burden on future fiscus. There is hence the need to consider phasing in a new child support grant strategy such that the support received is not directly proportional to the number of children.
Marketing Analytics Adoption in Ghana: A Qualitative Insight of Service Firms

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Abstract

This study examines the intention of managers in the Ghanaian service sector to adopt marketing analytics. The study adopts a qualitative technique using six service managers to investigate the effect of perceived performance expectations, perceived effort expectancy, and social norm on intentions to use marketing analytics. A multiple case study approach used found that perceived performance expectations, perceive effort expectancy, and social norms affect intentions to adopt marketing analytics. In the Ghanaian service sector, the telecommunication, hospitality, and banking sector are seen as marketing analytic prevalent industries. Among the variables used to predict intention to adopt marketing analytics, social norms seem to have the least effect. This implies there is low level of external influence from competitors, consultant, researchers, and other managers to affect intentions to adopt marketing analytics. This study contributes to research on the use of marketing analytics in developing country context, and to marketing as it provides practical use of marketing analytics in a number of service industries in Ghana.
Towards the validation of the five-factor CEESCALE of Consumer Ethnocentrism: Evidence from Ghana

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Abstract
Since its conceptualization in 1987, Consumer ethnocentrism is by far the most extensively utilized construct in the international marketing literature, generally assessed through the CETSCALE. Recently, however, the view that the construct is multidimensional has fuelled intense scrutiny into the CETSCALE, culminating into the new consumer ethnocentrism extended scale (CEESCALE) by Siamagka and Balabanis (2015). This study validates the CEESCALE using data from a Ghanaian sample. The findings confirm that consumer ethnocentrism is characterized by five dimensions: prosociality, cognition, insecurity, reflexiveness, and habituation, confirming its extensive cross-national validity. The results also indicate that the new scale better explains customer evaluations and preference for domestic brands relative to foreign brands. Consumer cosmopolitanism, perceived customer value of local products and brand expressiveness are also established as constructs that fall within the nomological network of consumer ethnocentrism to explain consumers’ preferences for local and foreign brands. The authors conclude with theoretical and managerially relevant implications for domestic and foreign brand managers. Limitations and future research direction are discussed.
Impact of Uniqueness of Brand Associations and Brand Love on Online Customer Brand Engagement in Business-to-Business in an Emerging Market

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Abstract
A number of conceptual models have been developed for online customer brand engagement. A conceptual model, which fully captures the antecedents and consequences of online customer brand engagement in a business-to-business context within an emerging market, is required. Comparative customer brand engagement research across industries and cultures is needed to make the nature of the construct clearer. This research will use literature review to develop a model of online customer brand engagement for emerging markets in a business-to-business context and validate the model using the decision-making unit as the unit of study. The research will contribute to the call of doing empirical studies in business-to-business branding within emerging markets. Companies can integrate information from different channels to enable effective customer engagement. It will use the customer engagement lens to understand better complex decision-making groups. Online customer brand engagement comprise of cognitive, emotional and behavioural. This paper discusses the impact of uniqueness of brand associations and brand love on online customer brand engagement.