Business Administration and Business Economics

Financial Sector Development in Nigeria: Do Output Size, Financial Reform and Resource Dependence Matter?

Frank Iyekoretin Ogbeide[1], **Oluwafemi Mathew Adeboje**[2]

Abstract: The study examined the determinants of financial sector development in Nigeria in an error correction modelling framework, and with OLS for robustness checks, using data from 1980 to 2017. The results show that, banking sector reform, gross capital formation, government expenditure, interest rate spread, output size and trade openness were significant determinants of financial sector development in both the short- and long run. Proxy for economic misery was only significant in the ECM equation, while literacy and human development metric was significant in the long-run equation. Natural resource dependence, proxy by ratio of natural resource rent to GDP, was negatively related to financial sector development in Nigeria, though the coefficient was not significant at conventional levels. Economic misery, interest rate spread and inflation were observed to undermine financial development in Nigeria. The study recommends the continuation of the process of financial liberalization because of its immerse benefits of promoting competition amongst financial institutions with attendant positive effects of reducing interest rate gap. Domestic output, measured by the real GDP, should be enhanced with appropriate stabilising policy, whether fiscal or monetary policy. Additionally, efforts should be enhanced to limit the effects of macroeconomic instability on financial sector development. Lastly, the study recommends efficient management of natural resources to enjoy a non-declining contribution to the development of an inclusive financial system in Nigeria.

Keywords: Financial development; Natural resource dependence; Economic Misery

JEL Classification: E44; F18; O23; Q32

1. Introduction

The benefits of a sound and virile financial system to attain broad-based inclusive growth have been extensively discussed by policy makers, development oriented agencies, and researchers alike. Numerous studies abound justifying the need for developing the financial sector of the economy. A well-developed financial system is crucial for attaining sustainable and balanced growth (Rioja & Valev, 2004;

[1] Senior Research Economist, Nigeria, Address: Deposit Insurance Corporation, Central Business District, Abuja, Nigeria, Corresponding author: ogbeidefi@ndic.gov.ng.
[2] Doctoral Student, Department of Economics, Faculty of Economics, University of Ibadan, Ibadan, Nigeria, Address: Oduduwa Road, Ibadan, Nigeria, E-mail: oadeboje6585@stu.ui.edu.ng.

Roubini & Sala-i-Martin, 1992; Oyaromade, 2005; Iyare & Moore, 2009; Akinlo & Egbetunde, 2010; Shahbaz et al, 2014; Zhang & Naceur, 2019). This is premised on the theoretical transmission that financial system increases the availability of funds by mobilising idle savings, facilitating transactions and attracting foreign investments. A developed financial system can help achieve improved allocation of financial resources and enhanced risk management, transparency and corporate governance practices. Thus, financial development does not only improve growth prospects, it also enhances better distribution of economic opportunities amongst economic agents. This affords new businesses, such as first-time or low-income (with potentially low collateral) borrowers or small- and medium-sized enterprises (SMEs) easy access to financing through the process of financial intermediation.

One of the prominent features of Nigeria's economic growth initiatives is the conscious strategy to develop the financial sector. For instance, in the early 1970s, as a result of the prevailing economic arrangement at that time, the financial sector was highly regulated. The government held controlling shares in most of the financial institutions, especially banking sub-sector. In 1986, the Structural Adjustment Programme (SAP) which was put in place to drive the economy from austerity to prosperity brought about the liberalization of the banking industry. The 2004 banking industry consolidation exercise was a major component of the National Economic Empowerment and Development Strategy (NEEDS) embarked on to drive the economic agenda of the government. In 2009, the global financial and economic crisis affected the Nigerian economy adversely, and part of the broad economic measures to respond to the adverse effects prompted the apex bank, the Central Bank of Nigeria, in collaboration with fiscal authorities, to adopt measures to avert a collapse of the financial system with a view to maintaining a relatively robust economic growth.

The momentum to build an efficient financial system was given a major boost from 1929-1951, and the period is often seen as the first attempt at financial reform in pre-colonial Nigeria. However, the severe banking crisis that occurred between 1940 and 1960 left the nascent financial system prostrate with the closure of several banking institutions (Moh & Eboreime, 2010). The post-independence experience with financial sector development in Nigeria was characterized by weak institutions that operated under the ambit of direct control policies which negatively affected financial intermediation.

Nigeria's efforts at promoting economic growth over the years have indeed highlighted the importance of financial development. However, the level of development of the financial system in Nigeria still remains low, despite government efforts. The low values reported for the various financial development indices in Nigeria confirm that its financial sector is underdeveloped or developing. For instance, credit to the private sector as a percentage of GDP which reflects financial

depth averaged 15.4% between 1981 and 2017. So we might be tempted to ask the following questions: Why is the financial sector yet to be developed despite government efforts? What key factors influence the development of the financial sector? What are the major vehicles to prop-up the domestic financial system? This study seeks to provide answers to these questions.

Some authors have identified financial reform/liberalization, as opposed to financial repression, as a critical factor in broadening financial sector development because it eases access to credit through process of financial inclusion (Mckinnon, 1973; Shaw, 1973; Anyanwu, 1995; Levine, 2005; Guiso, Sapienza & Zingales, 2006; Tressel & Detragiache, 2008; Beck, 2011). Although, a number of economists are increasingly paying attention to the possibilities that domestic financial liberalisation could lead to undesired outcome, like financial crisis/uncertainty (Demirgüç-Kunt & Detragiache, 1998; Prasad, Rogoff, Wei & Kose, 2004; Kose, Prasad, Rogoff, and Wei, 2006). After over three decades of continued financial reform in Nigeria, financial depth and intermediation is still considered relatively low and shallow[1] compared with other global economic regions (Senbet & Otchere, 2005). While numerous studies, using various methodologies, have found evidence that greater financial development has a positive causal impact on growth, what is less clear from existing research, however, is how best to achieve financial sector development and, more specifically, to what extent has policies of financial reform fostered financial development in Nigeria?

Furthermore, some studies have found a unidirectional causation from economic growth to financial sector development, suggesting that finance follows where enterprise leads (Robinson, 1952). In this regard, high level of financial sector development is associated with robust economic growth rate. Hence, economic growth becomes a potent determinant of financial development. Dependence on natural resources, on the other hand, has been found to undermine institutional quality, including efficiency of financial systems in some countries because it hinders incentive to save and invest (Beck, 2011; Kurronen, 2012).

A review of extant studies on determinants of financial sector development in Nigeria have mostly failed to take into account the influence of financial reform, output growth and natural resource dependence in their analysis. This has the potential to lead to bias in results and policy specification/recommendation due to the omission of key variables and thus have dire implication on the design and implementation of financial sector development strategies in the country. This study attempts to bridge this gap in knowledge.

[1] The shallow financial depth applies to almost all SSA countries except for South Africa (Ndikumana, 2000; Levine, Loayza & Beck, 2000).

Following the introduction, section two focuses on the stylized facts on financial development in Nigeria, while section three dwells on the review of literature. Section four provides an exposition on the theoretical framework, methodology and model specification. The fifth section relates to empirical analysis and discussion of findings. Finally, section six summarizes and concludes the paper.

2. Financial Sector Developments: Some Stylized Facts

Financial sector is instrumental to achieving both short and long run economic performance through its intermediating activities in transforming and channelling deposits from the surplus economic units to the deficit units. Financial development connotes improvements in the functioning of the financial sector. These include increased access to financial intermediation, greater diversification of opportunities and options, improved information quality, and better incentives for prudent lending and monitoring and improved risk management practices.

Based on its importance in accelerating economic growth, financial sector development has attracted keen interest of governments of most countries in the performance of their financial markets, (Ewah, Esang & Bassey, 2003). Economic growth in a modern economy hinges on an efficient financial sector that pools domestic savings and mobilizes foreign capital for productive investments, (Bekaert, Harvey & Lundblad, 2005). Financial reform is expected to build and foster a competitive and healthy financial system to support financial development and avoid systemic distress. Pundits argued that as financial sector develops, the benefits trickle down to the poor even as the economy develops (Jalilian & Kirpatrick, 2007; Odhiambo 2010a/b). Since the introduction of SAP in 1986, Nigeria began to implement financial sector reform as part of broader market-oriented reforms. The objective of the reforms was to build a more efficient, robust and deeper financial sector. Although, the financial sector seems to have improved since the commencement of reforms, the depth is still remains questionable.

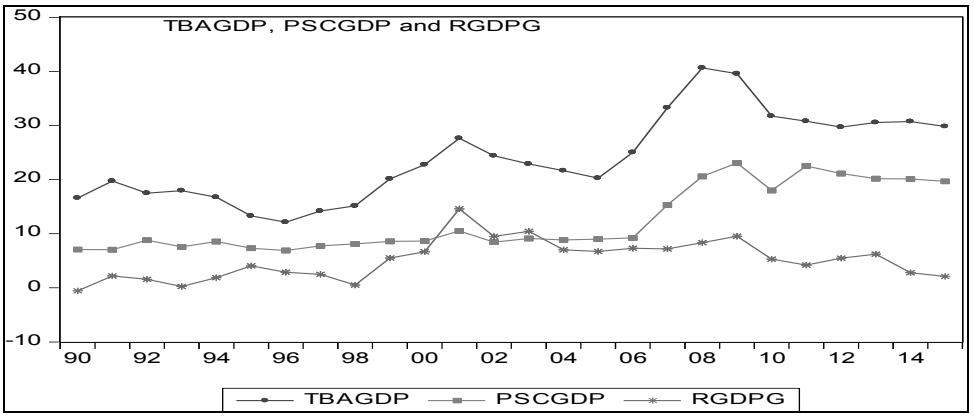

Figure 1. Relationship between TBAGDP, PSCGDP and PSCGDP

Source: Adapted from Eboreime, M.I, et al (2016)

Figure 1 portrays some form of co-movement between total banking assets to GDP (TBAGDP) and real GDP growth (RGDPG). For instance, the respective peaks in TBAGDP in 1991, 2001 and 2009 correspond favourably well to that of RGDPG. Similarly, at several points in time when TBAGDP fell, we note that RGDPG fell as well. Thus, economic growth seems to be a driver of TBAGDP. The trend in TBA largely reflects the performance of savings which has influences the stability of the financial system.

The trend noticed in ratio of private sector credit to GDP (PSCGDP) represents a significant level shift and it shows a steady rise following the banking consolidation exercise in 2005, which resulted in an upswing in economic activities, while the RGDP reveals that the global economic crisis of 2008/2009 triggered slower growth in the Nigerian economy that has persisted to date. Furthermore, the recent plunge in crude oil prices starting from July 2014 affected economic activities in Nigeria to the extent that the economy showed signs of weakness in 2015 and slipped into recession in the first quarter of 2016 up until a dismal economic growth was recorded in the second quarter of 2017, after 4 consecutive quarters of negative growths.

Figure 2 indicates that the co-movement between market capitalization/GDP (MKCGDP) is largely inverse in nature. In the long term (the period covered by the study), the currency in circulation to GDP ratio (CICGDP) and RGDP trended in the same direction, while both the broad money supply to GDP ratio (M2GDP) and the market capitalization to GDP ratio (MKCGDP) diverged from RGDPG in the long-run. This posture is aptly captured in Figure 3, suggesting that level of financial depth may not necessarily reflect the rate of economic growth in most African countries. This calls for the adoption of effective policy thrust to enhance the finance-growth nexus in the continent, like it is for advanced economies, where finance sufficiently explains economic growth trajectory.

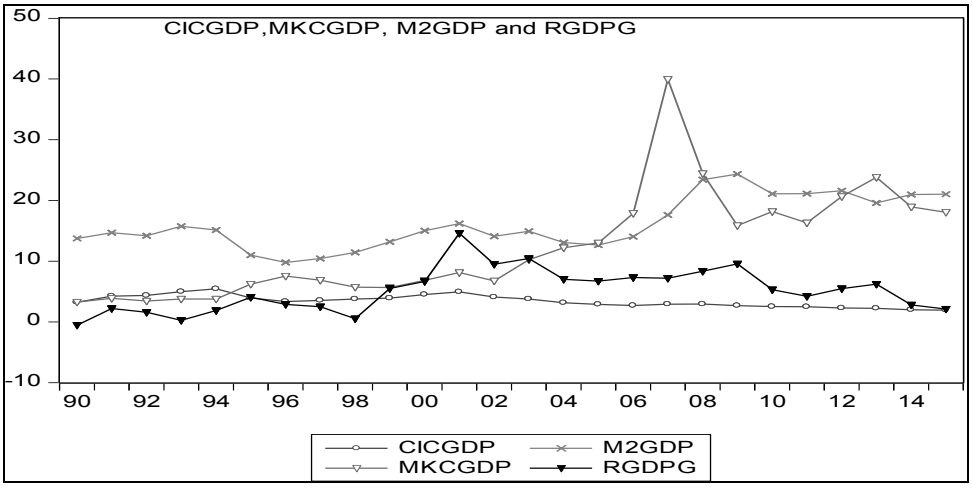

Figure 2. Relationship between CICGDP, M2GDP, MKCGDP and RGDPG

Source: Adapted from Eboreime, M.I, et al (2016)

Trend of CPSGDP (domestic credit to private sector as a % of GDP)and TNRRGDP (total natural resources rents as a % of GDP) showed a relatively inverse relationship, especially in the early 1980s to period before the 2007 global financial crisis, after which credit to private sector falls after a reasonable period lag decline in financial depth. This effectively suggests that the relationship between natural resource rent and financial development is mixed. Some authors like Auty, 2001; Gylfason, 2004; Bakwena and Bodman, 2008; Beck, 2010, believe that natural resource dependence impedes the growth of the financial sector. Others like Iyoha, 1992; Beck, 2011; Kurronen, 2012 observed that collectable revenue from natural resource can effectively be deployed to spur financial sector development. On the other hand, trend in financial reform (FINR) systematically mirrors movements in financial depth, captured by domestic credit to private sector (% of GDP). This may indicate that years of financial sector reform has enhanced the development of the Nigerian financial system.

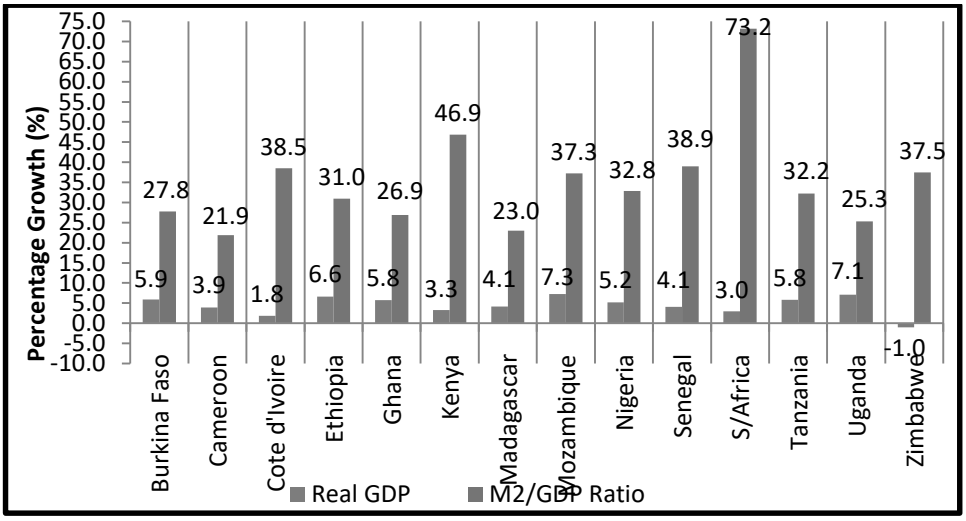

Figure 3. Comparative Statics: Average GDP Growth and Financial Depth, 1990 – 2011

Source: Authors, but underlying data from the WDI (2015)

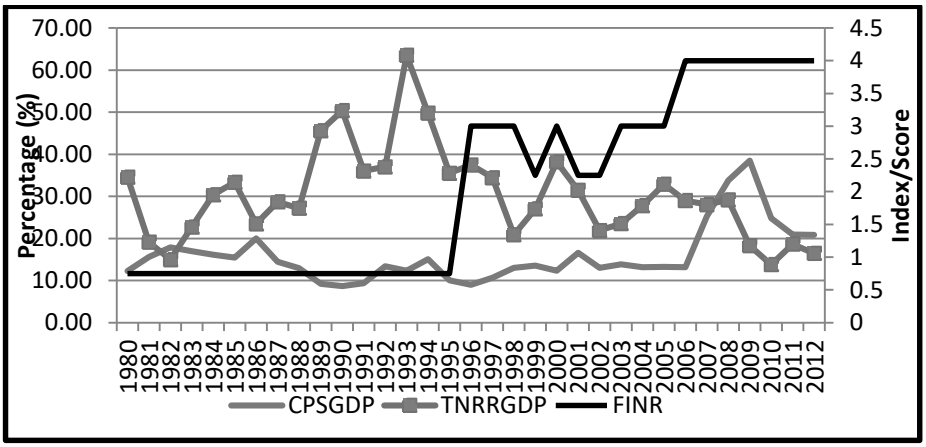

Figure 4. Linking CPSGDP, TNRRGDP and FINR

Source: WDI, CBN

CPSGDP = Domestic credit to private sector (% of GDP); TNRRGDP=Total natural resources rents (% of GDP); FINR = Financial Reform Score.

3. Review of Related Literature

Various authors agree on the importance and benefits of developing the financial system, however, there is no consensus on what constitutes the determinants of financial sector development in various jurisdictions, as different variables have been identified by various authors as significant determinants of financial sector development.

Studies by a number of researchers, known as the proponents of the "demand-following hypothesis" found that economic growth has a unidirectional causation on financial development. These theorists - Jung (1986); Odhiambo (2004); Ang and Mckibbin (2007) – highlighted that economic growth leads to financial development in both developed and developing countries.

Others like Greenwood and Jovanovic (1990) documents that, as the economy grows, the costs of financial intermediation decrease due to rigorous competition, thereby making funds available for investment in the financial sector. The importance of growth for financial development has been addressed in Levine (2005). Blanco's (2009) study found that financial development does not have a causal effect on growth, but economic growth leads to financial development. In a similar vein, Hurlin and Venet (2008), using a data set for 63 countries conducted a Granger causality test and found out that the line of causation flows from financial development to growth.

Mckinnon-Shaw (1973) developed a hypothesis which suggest that interest rate in the case of financial repression negatively affects financial sector development. The vital tenet of this hypothesis is that a low or negative real interest rate will discourage saving. They associate low or negative interest rate with financial repression and posit that a liberalized financial system will induce an increase in saving, thereby promoting financial intermediation and development of banking sector. Hence, the McKinnon-Shaw model of financial repression points out that a lower deposit rate of interest discourage households from holding deposits that would be used to finance productive investment. This implies that government's repressive policy towards financial systems such as interest rate ceilings will retard financial development. However, when the financial sector is deregulated, competition among banks will cause a rise in deposit rate of interest and encourage savings. Thus generally, a rise in interest rate spread- the difference between lending rate and deposit rate, will cause a fall in savings and a decline in financial development.

Empirical works have shown that financial development indicators could be influenced by bank reform or financial liberalisation, economic growth, monetary policy rate, trade openness and remittance inflow. Tressel and Detragiache, (2008) found that banking sector reforms led to financial deepening in 91 countries studies over 1973–2005 periods, but these were countries with institutions that places checks

and balances on political power. Guiso, Sapienza and Zingales, (2006) argued that bank deregulation, specifically the removal of credit and entry constraints in the Italian financial system led to improved access to credit and lower gap between deposit and lending interest rates due to increased competition. Bekaert, Harvey and Lundblad, (2005) find that financial liberalisation deepens the financial system. This is because financial reforms stimulate financial intermediation through improvement in risk management, entrance of efficient foreign banks, while also boosting the offering of new financial instruments and services. Anyanwu, (1995) found financial reform to have deepened the financial sector in Nigeria, using M2/GNP as measure of financial development. Soyibo, (1994) observed that financial depth measured by M2/GDP fell immediately after financial liberalisation in Nigeria, notably 1987-1989, but however rose during the 1990 and 1991 periods.

The literature is replete with studies on financial development and economic growth Studies by Murinde and Eng, (1994) and Obstfeld, (2009) opined that financial development is a concomitant to economic growth. Goldsmith's study in 1969 was the first to describe the existence of a positive relationship between financial development and GDP per capita. King and Levine, (2005) also found a positive and significant relationship between several indicators of financial development and growth in GDP per capita, using mostly monetary indicators to represent banking sector size. Levine and Zervos, (1996) observed a positive partial correlation amongst financial development indicators (stock market, financial depth) and GDP per capita growth.

Odhiambo, (2008), using cointegration and error-correction techniques, reveal that there is a distinct unidirectional causal flow from economic growth to financial development, and warns that any argument that financial development unambiguously leads to economic growth should be treated with extreme caution. Meanwhile, King and Levine, (1993b) work was on the relationship between financial intermediation and economic growth, using cross-country model. Their result suggests that a positive association exist between measures of macroeconomic performance and financial development indicators. The study employed four (4) financial indicators and four (4) growth indicators.

Saaed and Hussain (2015) examine empirically the causal relationship among financial development, trade openness and economic growth by using vector autoregressive techniquein Kuwait for the period 1977-2012. The econometric methodology employed was the Cointegration and Granger Causality test. The stationarity properties of the data and the order of integration of the data were tested using both the Augmented Dickey-Fuller (ADF) test and the Phillip-Perron (PP) test. The variables tested stationary at first differences. The Johansen multivariate approach to cointegration was applied to test for the long-run relationship among the variables. Empirical results showed that all variables are I(I) and are significant at

1percent. Cointegration analysis suggests that there is no cointegration vector among GDP, financial development and the degree of openness of the economy. Granger causality tests based on VAR models show that there is a causal relationship between economic growth and financial development and between the trade openness of the economy and economic growth. Implying support for growth-led financial development and support for trade of openness -led growth. Also, Money supply was the only instrument of financial development that was seen to cause trade openness.

Rehman, Ali and Nasir (2015) in their study investigated the relationship between the financial development, trade openness and economic growth in the Saudi Arabian economy from 1971 to 2012. They employed unit root tests, the co-integration test, the Granger Causality Test and the Vector Error Correction Model (VECM).The results from Johansen and Juselius co integration test underpins for the existence of long run relationship among the purported variables. Granger causality test exhibits unidirectional causality running from the trade openness to the economic growth in Saudi Arabia, economic growth was also found to cause financial development in the country. The results manifest that combined causality exists among the variables. The study advocates for the acceleration of financial development in tandem with enhancing the ambit of trade openness for stimulating the economic growth in the country.

The relationship is also revisited by Shabaz et al (2014) by incorporating trade openness in production function in Banglasdesh economy. Their empirical results suggest that development of financial sector facilitates economic growth but capitalization impedes it. In addition, granger causality results divulge that financial development causes real per capita gross domestic product (GDP) growth, and resultantly, real per capita GDP growth causes financial development in a Granger sense. Furthermore, Law and Habibullah (2009) examined the influence of institutional quality, trade openness and financial liberalisation on financial market development in 27 economies (the G-7, Europe, East Asia and Latin America) during 1980-2001. The empirical results show that real income per capita and institutional quality are statistically significant determinants of banking sector development and capital market development. However, trade openness is more prominent in promoting capital market development. In terms of financial liberalisation, the empirical results suggest that domestic financial sector reforms tend to promote banking sector development, whereas stock market liberalisation is potent in delivering stock market development.

Oke, Uadiale and Okpala (2011) examined the nexus between remittances and financial development in Nigeria from 1977 to 2009. They employed both the ordinary least squares estimation technique and the Generalized Method of Moments (GMM) estimator. Moreover, key diagnostic tests are carried out in order to ascertain model adequacy. They also used two indicators of financial development, namely:

the ratio of money supply to GDP and the ratio of private credit to GDP .The results generally indicate that remittances positively and significantly influence financial development in Nigeria, with the exception of the ratio of private credit to GDP measure of financial development in the GMM estimation where the coefficient is insignificant. This implies that remittances augment liquid liabilities more than loanable funds in Nigeria, as remittances are likely used more for consumption purposes than for productive ventures in the country. They recommended that since remittances provide foreign exchange that is vital to both the internal and the external sectors of the economy, they should be encouraged via appropriate policy formulation and implementation. Financial intermediaries and institutions operating in Nigerian should also intensify the mobilization of remittances with the aim of making them important sources of loanable funds in the country.

Also, Sami (2013) examined the role of remittances and economic growth in banking sector development in Fiji using annual data from 1980-2010. The study found evidence of long-run relationship between banking sector development, remittances and economic growth using bounds testing procedure. In addition, his causality analysis based on vector error correction model (VECM) and Toda Yamamoto Granger Causality test (1995) suggested that there was causality from economic growth and remittances to banking sector development. The study indicated that remittances inflows may not be only important for economic growth but also for development of banking sector. He asserted that it is thus, important for policymakers to ensure that remittances flow through formal-banking channels.

4. Theoretical Framework, Methodology and Model Specification

The theoretical structure of this study on determinants of financial sector development rests chiefly on the 'demand-following hypothesis' which argues that financial development is a by-product or outcome of growth in the real sector of the economy. According to this view, any progress in the financial system is simply a passive response to a growing economy. Proponents of this view like Robinson (1952) posit that financial development follows economic growth as a result of increased demand for financial services. He argues that where enterprise leads, finance simply follows, suggesting that it is economic development which creates the demand for financial services. Therefore, the lack of financial growth is a manifestation of the lack of demand for financial services, thus as the economy develops, the demand for financial services are created. In meeting these new demands, financial sector increases in depth and breadth. Consequently, financial development becomes a function of real GDP growth.

Also, the financial liberalisation theorists hold that the process of liberalising a domestic financial system enhances monetary policy effectiveness which should result in improved intermediation efficiency, thereby supporting increased domestic

savings which supports financial sector development. These authors (McKinnon, 1973; Shaw, 1973; Nissanke & Aryeetey, 1998; Guiso, Sapienza & Zingales, 2006) argued that bank deregulation should improve access to credit due to removal of credit constraint, as well as lower interest rate spreads on the back of increased competition.

In addition, some authors observed that resource-based economies are characterised by relatively smaller banking systems and less liquid stock markets. Bakwena and Bodman, (2008); Beck, (2011); Serhan and Mohammad, (2013) provided evidence of resource-curse effect in financial development, showing that resource wealth is a drag on attaining private sector-led economic growth and broadened financial system.

From the theoretical framework and following the "demand-following hypothesis", financial liberalisation theory, as well as the resource-curse hypothesis, Equation 1 shows that financial sector development is a function of output size (measured by RGDP), resource dependence (total natural resource rent as a % of GDP) and financial sector reform. This study employed the ratio of private credit/GDP (CPS) as proxy for financial development. CPS is often preferred to other measures in empirical literature, like M2/GDP, because it shows the extent to which the private sector relies on the financial sector for funds, and it excludes credit to the public sector (Tressel and Detragiache, 2008). The model to evaluate the determinants of financial development in Nigeria would be tested using error-correction modelling (ECM).

$$\Delta LFD_t = \phi_0 + \phi_1 \Delta LRGDP_t + \phi_2 \Delta LFINR_t + \phi_3 \Delta LNRR_t + \delta \left[ECM \right] + \varepsilon_t \quad (1)$$

Where:

FD represents Financial Development, measured by credit to private sector of the economy;

RGDP is real GDP per capita to capture output size;

FINR is Financial Reform measure by IMF's index of policy of financial reform. We computed a simple average of five (5) of the seven (7) categories in the financial reform database developed by Abiad, et al (2010) to depict the extent of domestic financial reforms in Nigeria; and

NRR is natural resource rent as a % of GDP. A succinct discussion on difference between resource dependence and resource abundance can be found in studies by James (2014) and Stevens (2015). ECM is the error-correction term. The symbol L shows that the variables are in their log form, while the operator Δ represents first difference.

Variables included in the study as control are based on extant empirical results: trade openness, inflation, misery index, real GDP, secondary school enrolment rate,

interest rate spread, government expenditure, and gross capital formation. The behaviour and dynamics of these control variables are available in leading journals and articles in economic literature.

Hence, Equation 1 is modified to yield Equation 2, which is our estimated model.

$$\Delta \mathrm{LFD} = \emptyset_0 + \emptyset_1 \Delta \mathrm{LFINR}_t + \emptyset_2 \Delta \mathrm{LMISIND}_t + \emptyset_3 \mathrm{INF}_t + \emptyset_4 \Delta \mathrm{LTRDOP}_t + \emptyset_5 \Delta \mathrm{LRGDP}_t + \emptyset_6 \Delta \mathrm{LSEC}_t + \emptyset_7 \Delta \mathrm{LNRR}_t + \emptyset_8 \Delta \mathrm{LINTSPR}_t + \emptyset_9 \Delta \mathrm{LGEXP}_t + \emptyset_{10} \Delta \mathrm{LGCF}_t + \partial[ECM] + \varepsilon_t ----(2)$$

Where:

FD = Financial Development (measured by credit to private sector of the economy, which shows the actual intermediation of the banking sector, unlike M2/GDP that merely shows extent of monetisation of the domestic economy, which do not reflect the extent of financial intermediation of banks.

RGDP is real GDP (capture output size and level)

FINR is Financial Sector Reform measure by IMF's index of policy of financial reform;

NRR is natural resource rent as a % of GDP (a measure of resource dependence)

GEXP = total government expenditure (representing the fiscal policy stance)

TRDOP = trade openness (representing extend of openness in the economy)

GCF = gross capita formation (a measure of domestic investment level)

INTSPR = interest rate spread (representing the efficiency of the financial sector)

SEC = secondary school enrolment (proxy the extent of literacy and human development)

RGDP = real GDP (representing the size of the economy)

INF = inflation (representing monetary policy environment)

MISIND = misery index (representing the level of macroeconomic stability)

While this study employed the error-correction modelling (ECM) approach to ascertain the speed of adjustment from a short-run distortion to its long-run equilibrium, OLS method was also estimated to ascertain the long-run (level) function. The aim is to compare both results to further enhance policy formation relating to financial sector development in Nigeria. The idea is that, when a long run relationship exist among the variables evidenced by cointegration test results, it will be in order to estimate a long run equation using the conventional ordinary least squares (OLS) technique. On the other hand, the Error correction modelling would

enable the study easily ascertain the speed of adjustment to long run steady state, amidst a short-run distortion in the model.

The study avoids spurious regression by conducting preliminary test for stationarity using the Augmented Dickey Fuller (ADF), while appropriate cointegration technique would be employed to investigate the existence of a long-run relationship amongst economic variables. According to Asteriou and Hall, (2007), if the variables are cointegrated, they move together over time so that any disturbances in the short-run are corrected. This indicates that if two or more variables are cointegrated in the long-term, they may drift at random from each other in the short-run, but will return simultaneously to equilibrium in the long-run.

Annual time-series data employed ranging from 1980 to 2017 were drawn from Nigeria's National Bureau of Statistics (NBS) and Central Bank of Nigeria (CBN), except data on real per capita GDP and natural resource rent/GDP drawn from World Bank's World Development Indicator (WDI).

5. Discussion of Empirical Result

Under this section, we discussed the descriptive properties of the data employed as well as the correlation matrix between the variables of interest. We also discussed findings from empirical models after exploring the time series properties of the dataset to prevent spurious regression without policy implication of findings.

5.1. Descriptive Statistics and Correlation

The details of the data sets employed in this study are summarised in Table 1. Real GDP has the highest mean value, while financial reform index has the lowest mean value. During the period under review, the real GDP showed the highest volatility while misery index series showed the least volatility. The probability values from the Jarque-Bera statistic indicate that we can reject the null hypothesis of normal distribution for all the variables except financial reform index, interest rate spread, secondary school enrolment and trade openness which are normally distributed. In addition, all the data sets are positively skewed except government expenditure and interest rate spread which are negatively skewed.

Table 1. Descriptive Statistics

	FD	FINR	GCF	GEXP	INF	INTSPR	MISIND	NRR	RGDP	SEC	TRDOP
Mean	16.46	2.26	13.25	91.26	19.21	6.16	32.88	28.84	29500.54	30.57	50.78
Maximum	38.49	4.00	34.02	106.79	72.73	11.06	74.70	63.52	68397.10	48.00	81.81
Minimum	8.71	0.75	5.47	67.92	3.23	0.32	12.02	13.79	9441.63	13.60	23.61
Std. Dev.	6.47	1.43	6.92	8.39	17.15	2.87	14.59	11.21	21319.11	9.27	16.05
Skewness	1.57	0.05	1.75	-0.60	1.63	-0.45	1.13	0.97	0.78	0.71	-0.10
Kurtosis	5.77	1.27	5.82	3.58	4.70	2.32	4.05	3.98	2.02	2.55	2.02
Jarque-Bera	27.00	4.63	31.03	2.78	20.93	1.98	9.60	7.30	5.19	3.40	1.54
Probability	0.00	0.10	0.00	0.25	0.00	0.37	0.01	0.03	0.07	0.18	0.46

Source: Authors' computation using EViews9

The correlation matrix for the dependent and independent variables is shown in Table 2. Worthy of note is the negative correlation between the measure of financial development (FD), proxy by credit to private sector and misery index (MISIND), a measure of macroeconomic instability. This shows that high macroeconomic instability could likely hinder financial development. Furthermore, financial reform (FINR), human capacity development, proxy by secondary school enrolment and real GDP are positively correlated to financial development, but natural resource dependence, misery index, trade openness and inflation distort the level of development in the financial sector.

Table 2. Correlation Matrix

	FD	FINR	GCF	GEXP	INF	INTSPR	MISIND	NRR	RGDP	SRC	TRDOP
FD	1.00	0.55	0.10	0.30	-0.33	-0.02	[illegible]	-0.53	[illegible]	[illegible]	-0.17
FINR	0.55	1.00	-0.30	0.03	-0.50	0.65	-0.25	-0.52	0.86	[illegible]	0.15
GCF	0.10	0.30	1.00	0.48	0.11	0.35	0.11	0.26	[illegible]	0.18	0.41
GEXP	0.30	0.03	0.45	1.00	-0.15	-0.15	-0.12	-0.45	0.08	0.00	-0.31
INF	-0.33	-0.50	-0.11	-0.15	1.00	0.02	0.91	0.58	-0.39	-0.31	0.05
INTSPR	-0.02	0.65	-0.35	-0.15	0.00	1.00	0.17	-0.02	[illegible]	[illegible]	0.43
MISIND	-0.07	0.25	0.11	0.12	0.91	0.17	1.00	0.37	0.05	0.02	0.07
NRR	-0.53	-0.52	-0.26	-0.45	0.58	-0.02	0.37	1.00	-0.57	-0.34	0.32
RGDP	[illegible]	0.86	-0.08	0.08	-0.39	[illegible]	-0.05	-0.57	1.00	0.91	-0.11
SRC	[illegible]	[illegible]	-0.18	0.00	-0.31	[illegible]	[illegible]	-0.34	[illegible]	1.00	-0.30
TRDOP	-0.17	0.15	-0.41	-0.31	0.05	0.43	-0.09	0.32	-0.11	-0.30	1.00

Source: Authors' computation using EViews9

5.1. Unit Root and Cointegration Tests

To examine the properties of the data series, both Augmented Dickey-Fuller and Philip-Perron methods of unit root test were employed. The results from the Table 3, therefore, show that all variables are not stationary at level. They are, however, stationary after they were first differenced. In other words, they are integrated of order one, I(1). Having known the order of integration of the variables, the next is to determine whether the variables are cointegrated.

The cointegration tests are done to determine whether our variables of interest are cointegrated or not, that is, whether they have a long-run relationship. From Table 4, we can observe that the variables are cointegrated. The trace test reports two cointegrating equations, while the maximum Eigen value test reports one cointegrating equation. The overall results, therefore, show that the variables of interest are cointegrated at 5% level of significance which implies that, there exists a long run relationship among the variables in the model. The next is to proceed to the estimation of long-run and short-run dynamic models.

Table 3. Unit Root Test Results

	Augmented Dickey-Fuller (Constant		Phillip-Perron (Constant)		
Variable	**Level**	**First Difference**	**Level**	**First Difference**	**Decision**
LGCF	-1.393	-6.403***	-1.323	-6.718***	I(1)
LGEXP	-0.202	-4.972***	0.010	-6.255***	I(1)
LINTSPR	-0.119	-5.486***	-0.459	-5.506***	I(1)
LNRR	-1.262	-4.530***	-1.449	-4.427***	I(1)
LSEC	1.761	-4.248***	1.761	-4.233***	I(1)
LRGDP	-1.584	-4.751***	-2.029	-4.776***	I(1)
INF	-0.714	-5.638***	-1.687	-6.345***	I(1)
TRDOP	-1.579	5.578***	-0.245	-5.745***	I(1)
MISIND	-2.024	-4.252***	-2.207	-4.159***	I(1)
LBANKRE	-1.382	-6.896***	-1.382	-6.924***	I(1)

Source: Authors' computation using EViews9

*Note: ***, ** and * represent 1%, 5% and 10% level of significance respectively.*

Table 4. Johansen Cointegration Test Results

Trace Test k = 2				**Ma**ximum Eigenvalues Test k =2			
Ho	**H_A**	**(λ trace)**	**Critical values**	**Ho**	**H_A**	**(λ Max)**	**Critical values**
r ≤ 0	r > 0	150.460*	95.754	r ≤ 0	r > 0	74.219*	40.078
r ≤ 1	r > 1	76.241*	69.819	r ≤ 1	r > 1	30.514	33.877
r ≤ 2	r > 2	45.728	47.856	r ≤ 2	r > 2	19.564	27.584
r ≤ 3	r > 3	26.164	29.797	r ≤ 3	r > 3	15.063	21.132
r ≤ 4	r > 4	11.101	15.495	r ≤ 4	r > 4	10.891	14.265
r ≤ 5	r > 5	0.210	3.841	r ≤ 5	r > 5	0.2104	3.841

Source: Authors' computation using EViews9

5.2. OLS and ECM Regression Results

We conducted our empirical analysis using the error-correction modelling (ECM) approach to ascertain the speed of adjustment from a short-run distortion to its long-run equilibrium, and OLS method was also estimated to ascertain the long-run (level) function for robustness check. The R-Squared, which is the coefficient of determination, shows that, 80.5% (69.3%) systematic variation in the OLS (ECM) equation is explained by the explanatory variables included in the model. The joint significance of the model put together is highly impressive at the 1% level, showing that, the model has a very good fit and reliable for policy making. The Durbin Watson (DW) statistics shows absence of first-order serial correlation in the model. Additionally, the ECM term carried the appropriate negative sign and was

statistically significant at the 5% level, suggesting that the short run disequilibrium values adjust to their long run equilibrium values by 65.01% per period.

From the empirical results, all the variables included in both the ECM and OLS models conformed to a-priori expectation in terms of sign of parameter estimates.

The coefficient of financial sector reform (FINR) captured by the scope of banking sector reforms (BANKRE) was statistically significant in both models. It was significant in the long-run (static) model and short-run dynamic (ECM) model at the 1% significance level. A 100% rise in scope of banking sector reforms will give rise to about 41.2% - 46.7% improvement in the level of financial development in Nigeria. The result shows that, well-targeted reform in the banking sector would remarkably result in a deepened financial system. .

The coefficient of economic misery (MISIND), representing the level of macroeconomic stability, had a negative sign in both models, but was only significant in the ECM model at the 5% level, suggesting that, financial sector development is severely hampered amidst presence of massive macroeconomic distortions. The result shows that, a unit increase in economic (misery) instability would result in 12.5% distortion in rate of financial development in the short-run.

The coefficient of trade openness (TRDOP), was positive and highly statistically significant in both the OLS and ECM models. The result shows that 100% increase in trade liberalisation would result in 47% growth in financial sector development in Nigeria. This is remarkable, calling for the need to open the economy to attract external capital to bridge the saving-investment deficit in the country.

The coefficient of inflation (INF) was negative in both the long-run model and short-run model, although it was not statistically significant at conventional significance levels in both equations. This shows that, inflationary episode acts as a serious distortional factor on financial sector development. This outcome may be a viewed from the fact that, inflation reduces purchasing power, and hence may cause rational economic agent to hold more money for transactional/precautionary purposes, thereby limiting preferences for savings which hinders the scope of financial intermediation.

The coefficient of real GDP, representing the size of the economy, was positive and highly significant in both the static and dynamic models; while it was significant at the 1% level in the OLS model, it was nonetheless significant at 5% in the model estimated within the ECM framework. The result effectively suggests the importance of output size for financial sector development. This is not far-fetched, as output size increases, employment and income paid to factors of production in generating the output also rises, which may encourage savings in formal financial sector.

The coefficient of secondary school enrolment used in this study to proxy the extent of literacy and human development in Nigeria was positive, but was only significant

at the 10% level in the long run equation. The variable was not significant at conventional significant test levels in the ECM equation, though the sign of the parameter estimate was positive, suggesting level of literacy and human development influences the state of financial sector development in Nigeria.

The coefficient of gross capital formation (GCF), a measure of domestic investment level, was observed to be positive and significant at 10% and 5% levels in the ECM and OLS models, respectively. The results intensify the notion that, domestic investment level is a potent determinant of financial sector development in Nigeria.

The coefficient of government expenditure (GEXP), representing the fiscal policy environment, significant at the 1% significance level, but had mixed performance in terms of the sign of the parameter estimates. While the sign was positive in the long run OLS equation, it was however, negative in the dynamic ECM equation. The result suggests that fiscal policy has both inhibitive and spurring potential for financial sector development. The positive sign may mean that, government expenditures are essentially inward receipt by households, on the other hand, the negative sign may be deduced from the crowding out of private sector investment, with untold effects on households employment and income.

The coefficient representing interest rate spread (INTSPR) is negative and significant at 1% and 5% levels in both the ECM and OLS models, respectively. The results show that, a wider interest rate gap reduces financial sector development by an average of 12 – 20 percentiles at each successive time periods. Interest rate spread is the difference between the lending and deposit rates. A low deposit interest rate relative to the lending rates, for example, may act to discourage savings and financial intermediation.

The coefficient of natural resource rent/GDP, a measure of institutional quality and efficiency, was negative and not significant in both the long-run (static) model and short-run dynamic (ECM) model. The negative sign, however suggests that, dependence on natural resources undermines the development of the financial sector. Some extant studies show that resource-based economies are characterised by relatively smaller banking system, providing evidence of resource-curse effect in financial development, and that, natural resources undermine institutional quality, including efficiency of financial systems in some countries because it hinders incentive to save and invest.

Table 5. Empirical Results (OLS and ECM)

OLS					ECM				
Dependent Variable: LCPS					Dependent Variable: D(LCPS)				
Method: Least Squares					Method: Least Squares				
Sample: 1980 2017					Sample (adjusted): 1981 2017				
Included observations: 38					Included observations: 37 after adjustments				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Variable**	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-1.018461	1.190987	-0.85514	0.4009	C	0.12029	0.072253	1.664845	0.1101
LGCF	0.416009	0.195076	2.132546	0.0434	D(LGCF)	0.317424	0.168701	1.881582	0.0732
LGEXP	0.320764	0.102994	3.114393	0.0047	D(LGEXP)	-0.327344	0.109406	-2.992006	0.0067
LINTSPR	-0.207811	0.068038	-3.05435	0.0055	D(LINTSPR)	-0.128139	0.058336	-2.196579	0.0389
LNRR	-0.244891	0.223605	-1.09519	0.2843	D(LNRR)	-0.203239	0.14647	-1.387579	0.1792
LSEC	0.590613	0.33168	1.78067	0.0876	D(LSEC)	0.021994	0.484621	0.045383	0.9642
LRGDP	0.173157	0.03315	5.22343	0.0000	D(LRGDP)	0.933201	0.418107	2.231966	0.0386
INF	-0.048207	0.013461	-1.39286	0.1764	D(INF)	0.000735	0.001339	0.548654	0.5888
LTRD	0.466984	0.150441	3.104096	0.0058	D(TRD)	0.475244	0.226468	5.547103	0.0000
MISIND	-0.048379	0.034639	-1.39664	0.1753	MISIND	-0.12542	0.051041	-2.45724	0.0241
LBANKRE	0.412501	0.104423	3.95028	0.0012	D(LBANKRE)	0.466984	0.150441	3.104096	0.0058
					ECM(-1)	-0.650686	0.240226	-2.708643	0.0128
R-squared	0.804739	Mean dependent v		2.711341	R-squared	0.69344	Mean dependent va		0.01604
Adjusted R-squ	0.731516	S.D. dependent va		0.352046	Adjusted R-squ	0.554095	S.D. dependent var		0.23108
S.E. of regressic	0.182414	Akaike info criteric		-0.32514	S.E. of regressi	0.154304	Akaike info criterior		-0.63859
Sum squared re	0.798599	Schwarz criterion		0.123786	Sum squared r	0.523812	Schwarz criterion		-0.13975
Log likelihood	15.52745	Hannan-Quinn crit		-0.17205	Log likelihood	21.53668	Hannan-Quinn crite		-0.47074
F-statistic	10.99024	Durbin-Watson sta		1.807038	F-statistic	4.976413	Durbin-Watson stat		1.84895
Prob(F-statistic	0.000001				Prob(F-statisti	0.000825			

Source: Authors' computation using EViews9

6. Conclusion and Recommendation

The study examined the determinants of financial sector development in Nigeria, using data from 1980 to 2017. In order to do this, credit to private sector was used as proxy for financial development. Some variables selected from extant theory on financial development were used as explanatory variables. The OLS was used for long-run analysis following findings from the cointegration result that established the existence of a long run equation. The ECM was used to determine this relationship and correct the discrepancies between short-run disequilibrium and the long-run equilibrium. The study found out that: banking sector reform, gross capital formation, government expenditure, interest rate spread, output size and trade openness are significant determinants of financial sector development in Nigeria, as obtained in both the short- and long run. Proxy for economic misery was only significant in the ECM equation, while literacy and human development metric was significant in the long-run equation. The result also shows that, natural resource

dependence, proxy by ratio of natural resource rent to GDP, was negatively related to financial sector development in Nigeria, though the coefficient was not significant at conventional levels. In turn, economic misery, interest rate spread and inflation were observed to undermine financial development in Nigeria. The study recommends the continuation of the process of financial liberalization because of its immerse benefits of promoting competition amongst financial institutions with attendant positive effects in the reduction of interest rate gap. Output, measured by the GDP, should be enhanced with appropriate stabilising policy, whether fiscal or monetary policy. Additionally, efforts should be enhanced to limit the effects of macroeconomic instability on financial sector development. Lastly, the study recommends efficient management of natural resources to enjoy a non-declining development of an inclusive financial system in Nigeria.

7. References

Akinlo, A.E. & Egbetunde, T. (2010). Financial Development And Economic Growth: The Experience of 10 Sub-Saharan African Countries Revisited. *The Review of Finance and Banking,* Vol. 2, no. 1, pp. 17-28.

Ang, J.B. & McKibbin, W.J. (2007). Financial Liberalization, Financial Sector Development and Growth: Evidence from Malaysia. *Journal of Development Economics*, Vol. 84, pp. 215-233.

Anyanwu, J.C. (1995). Structural Adjustment Programmes, Financial Deregulation and Financial Deepening in Sub-Sahara African Economies: The Nigerian Case. *Journal of Economic and Financial Review,* Vol. 1, pp. 1-23.

Asteriou, D. & Hall, S.G. (2007). *Applied Econometrics*. Revised Edition. New York. Palgrave Macmillan.

Beck, T. (2011). Finance and Oil: Is There a Curse in Financial Development? *European Banking Centre Discussion Paper*, No. 2011-004. Tilburg, Netherlands.

Beck, T.; Demirguc-Kunt, A. & Levine, R. (2002). Law, Endowments, and Finance. *NBER Working,* Papers, w9089.

Bekaert, G.; Harvey, C.R. & Lundblad, C. (2005). Does financial liberalisation Spur Growth? *Journal of Financial Economics*, Vol. 77, no. 1, pp. 3-55.

Blanco, L. (2009). The Finance-Growth Link in Latin America. *Southern Economic Journal*, Vol. 76, No. 1, pp. 224-248.

Greenwood, J. & Jovanovic, B. (1990). Financial development, Growth and the Distribution of Income. *Journal of Political Economy*, 98(5), pp. 1076- 1107.

Guiso, L.; Sapienza P. & Zingales, L. (2006). The Cost of Banking Regulation. *NBER Working Paper No. 12501*. National Bureau of Economic Research, Cambridge, MA.

Hurlin, C. & Venet, B. (2008). Financial Development and Growth: A re-examination using a panel Granger causality test. Working Paper Halshs-003199995_vl.

Iyare, S. & Moore, W. (2009). Financial sector development and growth in small open economies. *Applied Economics*, Vol. 43, no. 10, pp. 1289-1297.

Iyoha, M.A (1992). Oil dependency and the Nigeria's development Problematique: Strategies for Rapid Socio - Economic Transformation by the year 2000. A lecture delivered at the civil service forum, organised by the Edo State Government at Urhokpota hall, Kings Square, Benin City on September 25.

Iyoha, M.A (2004). *Macroeconomics: Theory and Policy*. Mindex Publishing, Benin City.

Jalilian, H. & Kirkpatrick, C. (2007). Does Financial Development Contribution to Poverty Reduction? *Journal of Development Studies,* Vol. 41, No. 4, pp. 636-656.

Johansen S. & K. Juselius (1990), Maximum Likelihood Estimation and Inferences on Cointegration-with Applications to the Demand for Money, *Oxford Bulletin of Economics and Statistics*, Vol. 52, pp. 169-210.

Jung, W.S. (1986). Financial Development and Economic Growth: International Evidence. *Economic Development and Cultural Change*, Vol. 34, no. 2, pp. 333-346.

King, R.G. & Levine, R. (1993). Financial and Growth: Schumpeter might be Right. *The Quarterly Journal of Monetary Economics,* Vol. XXXII, pp. 513-42.

Kose, M.A.; Prasad, E.S. & Terrones, M.E. (2003). Financial Integration and Macroeconomic Volatility. *IMF Working Paper WP/03/50*. Washington, DC: International Monetary Fund.

Kose, M.A.; Prasad, E.S.; Rogoff, K. & Wei, S. (2006). Financial Globalisation: A Reappraisal. *IMF Working Paper WP/06/189.* Washington, DC: International Monetary Fund.

Kurronen, S. (2012). Financial Sector in Resource-Dependent Economies, *BOFIT Discussion Papers 6.2012*. Bank of Finland, Institute for Economies in Transition.

La Porta, R.; Lopez de Silanes, F. & Shleifer, A. (2002). Government Ownership of Banks. *Journal of Finance*, Vol. 57, no. 1, pp. 265–301.

La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A. & Vishny, R. (1998). Law and Finance. *Journal of Political Economy,* Vol. 106, pp. 1113–155.

La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A. & Vishny, R. (1997). Legal Determinants of External Finance. *Journal of Finance,* Vol. 52, pp. 1131–1150.

Law, S.H. & Habibullah, M.S. (2009). The determinants of financial development: institutions, openness and financial liberalisation. *South African Journal of Economics*, Vol. 77, no. 1, pp. 45-58.

Levine, R. (2005). Finance and Growth: Theory and Evidence in Aghion, P and S.N. Durlauf. (eds.), Handbook of Economic Growth, London: Elsevier 1A, pp. 865-934.

Levine, R.; Loayza, N. & Beck, T. (2000). Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics*, Vol. 46, no. 1, pp. 31–77.

Levine, R. (1997). Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature*, Vol. XXXV (June 1997), pp. 688–726.

Levine, R. & Zervos, S. (1996). Stock Market Development and Long-Run Growth. The World Bank Economic Review, Vol. 10, no. 2, pp. 323-339.

Levine, R.; Loazya, N. & Beck, T. (2000). Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics,* Vol. 46 (August 2000), pp. 31-77.

Levine, Ross (2005). *Finance and Growth: Theory and Evidence*. In Philippe Aghion and Steven Durlauf (eds.). *Handbook of Economic Growth*. Amsterdam: Elsevier Science.

McKinnon, R. (1973). *Money and Capital in Economic Development*. Washington, DC: Brookings Institution.

Mckinnon, R.I. (1973). *Money and Capital in Economic Development*. Washington, DC: The Brookings Institution.

Murinde, V. & Eng, F.S.H. (1994). Financial Development and Economic Growth in Singapore: Demand- Following and Supply-Leading? *Applied Financial Economics*, Vol. 4, no. 6, pp. 391-404.

Ndikumana, L. (2000). Financial Determinants of Domestic Investment in Sub-Saharan Africa: Evidence from Panel Data. *World Development, Elsevier,* Vol. 28, no. 2, pp. 381-400.

Obstfeld, M. (2009). International finance and growth in developing countries: What have we learned? *IMF Staff Papers,* Vol. 56, no. 1, pp. 63-111.

Odhiambo, N.M. (2004). Is Financial Development Still a Spur to Economic Growth? A Causal Evidence from South Africa. *Savings and Development,* Vol. 28, pp. 47-62.

Odhiambo, N.M. (2008). Financial Depth, Savings and Economic Growth in Kenya: A Dynamic Causal Linkage. *Economic Modelling,* Vol. 25, No. 4, pp. 704-713.

Oke, B.O.; Uadiale, O.M. & Okpala, O.P. (2011). Impact of Workers' Remittances on Financial Development in Nigeria. International Business Research, Vol. 4, no. 4, pp. 218-225.

Oyaromade, R. (2005). Financial Sector Reforms and Financial Savings in Nigeria. Selected papers from the *Nigerian Economic Society Conference, The Nigerian Journal of Economic and Social Studies.*

Perkins, D.H.; Radelet, S. & Lindauer, D.L. (2006). *Economics of Development*. W.W. London: Norton and Company Ltd..

Rehman, M.I.; Ali, N. & Nasir, N.M. (2015). Linkage between Financial Development, Trade Openness and Economic Growth: Evidence from Saudi Arabia. *Journal of Applied Finance and Banking*, Vol. 5, no. 6, pp. 127-141.

Rioja, F. & Valev, N. (2004). Finance and the Sources of Growth at Various Stages of Economic Development. *Economic Inquiry,* Vol. 42, no. 1, pp. 127-140.

Robinson, J. (1952). *The Rate of Interest and other Essays*. London: Macmillan

Roubini, N. & Sala-i-Martin, X. (1992). Financial Repression and Economic Growth. *Journal of Development Economics*, Vol. 39, pp. 5 – 30.

Saaed, A.J. & Hussain, M.A. (2015). The Causal Relationship among Trade Openness, Financial Development and Economic Growth: Evidence from Kuwait. *Journal of Emerging issues in Economics, Finance and Banking*, Vol. 4, no. 1, pp. 1385-1409.

Sami, J. (2013). Remittances, Banking Sector Development and Economic Growth in Fiji. *International Journal of Economics and Financial Issues*, Vol. 3, no. 2, pp. 503-511.

Senbet, L.W. & Otchere, I. (2005). Financial Sector Reforms in Africa: Perspectives on Issues and Policies. Paper prepared for the annual World Bank conference on development economics (AWBCDE), Dakar.

Serhan C. & Mohammad, R. (2013). Searching for the Finance-Growth Nexus in Libya, *IMF Working Paper WP 13/92.* Washington: International Monetary Fund.

Shahbaz, M.; Rehman, I.U. & Muzaffar, A.T. (2014). Re-Visiting financial development and economic growth nexus: the role of capitalization in Bangladesh. *South African Journal of Economics*, Vol. 83, no. 3, pp. 452-471.

Shaw, E. (1973). *Financial Deepening in Economic Development*. Oxford University Press.

Soyibo, A. (1994). Financial liberalisation and bank restructuring in SSA: Some lessons for sequencing and policy design. Presented at the plenary session of the workshop of the AERC, Nairobi, December 4-9.

Todaro, M.P. & Smith, S.C. (2011). *Economic development*. 11th Edition. Pearson Education, New York.

Tressel, T. & Detragiache, E. (2008). Do financial sector reforms lead to financial development? Evidence from a new dataset, *IMF Working Paper WP/08/265*.Washington: International Monetary Fund.

Zhang, R. & Naceur, S.B. (2019). Financial development, inequality, and poverty: Some international evidence. *International Review of Economics & Finance*, Vol. 61, pp. 1-16.

Financial Globalization and Economic Growth in Sub-Saharan Africa: The Role of Institutional Quality

Tajudeen Egbetunde[1], Anthony Enisan Akinlo[2]

Abstract: The paper examines the role of institutional quality in the effect of financial globalization on economic growth in sub-Saharan Africa (SSA). The study used a dynamic panel Generalised Method of Moment (GMM) test in estimating the data. The paper finds that financial globalization has a negative and significant impact on economic growth in SSA. The results further show that institutional quality (measured by government effectiveness) lessens the negative effect of financial globalization on economic growth in SSA. The paper concludes that institutional quality mitigates the negative effect of financial globalization on economic growth in SSA. Therefore, governments in this region should put in place appropriate mechanism that will stimulate government effectiveness in order to derive the benefits of financial globalization which in turn enhance economic growth.

Keywords: Financial Globalization; Institutional Quality; Economic Growth; GMM; sub-Saharan Africa

JEL Classification: B26

1. Introduction

Financial globalization[3] refers to rising global linkages through cross-border financial flows. In theory, it can be measured in two ways, namely: *de jure* and *de facto* financial globalization. The capital account restrictions measure reflects the existence of *de jure* restrictions on capital flows, while the financial openness measure captures *de facto* financial globalization in terms of realized capital flows (Prasad et al., 2007).

The volume of financial globalization increased significantly in the mid-1980s, and the pace of increase has further accelerated in the 2000s in the wake of financial liberalization in many countries. SSA experienced significant increase in financial globalization in 1980s by average of US$137.03 million. The pace of increase further

[1] The Federal University of Technology Akure, Nigeria, Address: P.M.B. 704, Akure, Ondo State, Nigeria, Corresponding author: tegbetunde@futa.edu.ng.
[2] Obafemi Awolowo University, Nigeria, Address: P.M.B. 13, Ile-Ife, Osun 220282, Nigeria, E-mail: aakinlo@oauife.edu.ng.
[3] Financial globalization and financial integration are used interchangeably in this study.

accelerated in 2000s by average of US$209.54 million, but recorded a fall in financial globalization in 2005 up-to 2008 by average of US$17.59 million; while significant increase in international financial flows was recorded right from 2009 up-to 2014 by average of US$627.02 million.

Financial globalization sometimes considered as a virtue, since they are expected to enhance economic growth through technology transfer, resource reallocation, and capital accumulation. At the same time, they are sometimes blamed for increasing a country's vulnerability to international financial crises, which tend to occur during periods of sudden reversals in international capital flows (Osada & Saito, 2010; Castiglionesi, Feriozzi & Lorenzoni, 2015). Hassen (2018) reveals that foreign direct investment (FDI) flows to countries with better growth performance. Broner and Ventura (2016) contend that financial globalization destroys domestic trade and creates capital flight. If the country is very poor, this does not matter much because this trade was small to start with. Thus, financial globalization still leads to capital inflows and raises investment and growth in very poor countries. If the country is not very poor, capital flight is sizable and leads to capital outflows that lower investment and growth.

For this benefit to be realised in SSA, certain conditions need to be met. It was argued in literature that threshold hypothesis states that certain minimum conditions have to be met before a country can be expected to benefit from financial globalization. Otherwise, the country could experience more crises and lower growth[1]. In theory, financial globalization could raise a country's economic growth rate through a number of channels, including augmenting domestic savings for local investment, improving sharing of consumption risks, disciplining national governments into pursuing better policies in macroeconomic and other areas.

Nguyen, Su and Nguyen (2018) find that institutional quality impedes the positive effects of FDIs and trade openness on economic growth in emerging economies. The era of financial globalization might be associated with high or low growth rates in economic activities in sub-Saharan Africa (SSA). However, there is need to investigate the role that institutional quality plays in the financial globalization – economic growth nexus in SSA. This is necessary in order to guide for effective policy making in the region.

The paper is organized as follows: section one provides the introduction; section two presents the literature review; section three provides methodology; section four discusses the empirical results; and section five provides concluding remark.

[1] See (Prasad et al., 2003; Kose et al., 2006; Kunieda, Okada & Shibata, 2011).

2. Literature Review

Financial globalization and financial integration are, in principle, different concepts. Financial globalization is an aggregate concept that refers to rising global linkages through cross-border financial flows. Financial integration refers to an individual country's linkages to international capital markets. Clearly, these concepts are closely related.

This study makes distinction between *de jure* and *de facto* financial integration. *De facto* financial globalization is associated with policies on capital account liberalization and actual capital flows. For example, indicator measures of the extent of government restrictions on capital flows across national borders have been used extensively in the literature. *De facto* indicates that countries are quite open to global financial flows. By contrast, some countries in Africa have few formal restrictions on capital account transactions but have not experienced significant capital flows (Prasad et al., 2007). The analysis in this study will focus on *de facto* measures of financial globalization, as it is virtually impossible to compare the efficacy of various complex restrictions across countries.

The volume of financial globalization has risen substantially in the last decade. The increase in international capital flows to developing countries is the outcome of both "pull" and "push" factors. Pull factors arise from changes in policies and other aspects of opening up by developing countries. These include liberalization of capital accounts and domestic stock markets, and large-scale privatization programs. Push factors include business cycle conditions and macroeconomic policy changes in industrial countries. From a longer-term perspective, this latter set of factors includes the rise in the importance of institutional investors in industrial countries and demographic changes.

In theory, financial globalization could raise a country's economic growth rate through a number of channels, including augmenting domestic savings for local investment, improving sharing of consumption risks, disciplining national governments into pursuing better policies in macroeconomics and other areas. Yet, a massive body of empirical studies has often found mixed results, suggesting that the benefits are not straight forward. Surveys by Eichengreen (2001) and Prasad *et al*. (2003) suggest that it is not easy to find a strong and robust causal effect from financial globalization to economic growth, especially for developing countries. Kazar1 and Kazar (2016) conclude in their work that within the process of globalization, the fact that some countries have significant gains, whereas others become more sensitive to the financial crises.

Klein (2005) using panel OLS of 71 countries, found that the effect of capital account liberalization on economic growth varies with institutional quality. He also found that there is a strong correlation between institutional quality and income per capita,

and the countries that tend to benefit significantly from capital account liberalization are mostly upper-middle-income countries. Peres, Ameer and Xu (2018) provide evidence that institutional quality positively and significantly impacts FDI in developed countries while the results for the developing countries demonstrate that the institutional quality impact is insignificant because of the weak structure of institutions. Magdalena and Maren (2018) find that growth has a positive impact on FDI inflows in middle income countries, but relationship between institutional qualities and FDI inflows was not found in the countries.

Wei (2006) using a panel OLS for 179 countries, found that financial globalization did not lead to an automatic improvement in many developing countries[1]. Wei further reported in his findings that the threshold and composition effects can be closely related (two sides of the same coin). Wei's findings furnish evidence that these two types of institutions can indeed have different effects on the structure of capital inflows i.e. bad public institutions strongly discourage foreign direct investment (FDI), and possibly foreign debt. In comparison, low financial sector development discourages inward portfolio equity flows but encourages inward FDI. Friedrich, Schnabel and Zettelmeyer (2010) found that the European transition region benefited much more strongly from financial integration in terms of economic growth than other developing countries since the late 1990s. Wako (2018) found that Chinese aid outperforms aggregate aid from traditional donors with respect to growth; however, it has a negative institutional effect. Awoyemi and Jabar (2014) posit that financial globalization integrates the world financial markets and this integration entails uniformity in terms and conditions for raising international loans across national boundaries.

Kunieda, Okada and Shibata (2011) using panel GMM, found that highly corrupt countries impose higher tax rates than do less corrupt countries, thereby, magnifying the negative impacts of government corruption on economic growth in the highly corrupt countries and reducing the impacts in the less corrupt countries if capital account liberalization is enacted. Schularick and Steger (2006) using dynamic panel system GMM, found that financial integration had a statistically significant and robust effect on growth in the first era of global finance. They also reported from their findings that currency stability and low interest rates in the core economies might have been an important factor contributing to stable and long-term capital flows from rich to poor.

Svrtinov, Krume and Vlatko (2013) assert that financial globalization creates tremendous potential benefits for developing countries and emerging markets, as they integrate financially with the rest of the world. They argue further that globalization stimulates the development of financial sector and, in turn, spurs the

[1] Country with minimum threshold and composition hypotheses benefits from financial globalization Wei (2006).

advancement of economies. On the other hand, financial globalization also carries some risks. One well-known risk is that globalization can be related to financial crises. Asongu, Koomson and Tchamyou (2017) reveal that financial globalization uncertainty does not significantly affect money supply, financial system deposits and financial size. Egbetunde and Akinlo (2015) contend that there is a long run relationship between financial globalization and economic growth in sub-Saharan Africa. They further argue that sub-Saharan African economies will benefit from the era of financial globalization in the long run in as much the governments promote and encourage sound macroeconomic policies and strong institutions. Pologeorgis (2016) concludes in his work that globalization brings the reorganization of production, international trade and the integration of financial markets.

Moreover, Tchereni, Sekhampu and Ndovi (2013) found that foreign debt had a statistically insignificant and negative impact on economic growth in Malawi. They recommended that the country should strive to provide incentives to local manufacturers who would want to export rather than relying on borrowing for growth inducement. In another study, Eregha (2012) examined the crowding out or crowding in effect of FDI inflow on domestic investment in Africa and employed a recent panel cointegration estimation technique. He found that FDI inflow crowds out domestic investment in the ECOWAS region and recommended that policy makers in the ECOWAS countries should focus on promotional resources to attract some types of FDI and regulate others. He further recommended that policies should also be directed at putting in place a better targeted approach to screen FDI applications to ascertain their productive base before allowing them. Muye & Muye (2017) find that causality runs from FDI to institutions, and institutions in turn Granger cause financial development specifically in the banking sector in the economic blocs. Ciesielska and Kołtuniak (2017) reveal that in the long term the outward FDI stocks' growth permanently precedes the home country's economic growth.

Nsiah and Wu (2014) argued that the study of the determinants of FDI to Africa which has attracted some attention, the possible impact of neighbouring nations on proximate nation's ability to attract FDI has largely been ignored. The omission of spatial effects regardless of estimation methodology may lead to biased estimates. They used panel data on African countries and tested for local spatial linkages in FDI inflows to Africa. They found that all proximity weights generate statistically significant spatial linkages except for the case where the weight is a combination of regional trade agreements and distance. Tumwebaze and Ijjo (2015) examined the contribution of COMESA integration to economic growth in the region using instrumental variables GMM regression in the framework of a cross-country growth model. They found no significant empirical support for a positive growth impact on the region from the integration. They argued that growth in capital stock, population, world GDP and the level of openness to international trade turned out to be the most

robust drivers of growth in the COMESA region over the period. On the other hand, most economists agree that globalization provides a net benefit to individual economies around the world, by making markets more efficient, increasing competition, limiting military conflicts, and spreading wealth more equally around the world. However, the general public tends to assume that the costs associated with globalization outweigh the benefits, especially in the short-term (Kuepper, 2016).

Summarily, most of studies focused on the developed economies on the role that institutional quality plays in the financial globalization – growth nexus. There is need to investigate the role that institutions play in the nature of relationship between financial globalization and economic growth in SSA, hence this paper.

3. Methodology and Materials

The study relied on secondary data and utilized annual time series data. Empirical investigation was carried out on the basis of the sample covering the period 1980 to 2015 for twenty-one countries in SSA, namely: Botswana, Burundi, Cameroon, Central African Republic, Chad, Congo, Gabon, Gambia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Nigeria, Seychelles, Sierra Leone, South Africa, Sudan, Swaziland, Togo and Zambia[1].

Regarding financial globalization, Kose *et al*. (2009) argue in favour of quantity-based, *de facto* measures and the early literature had used mostly *de jure* measures, such as those based on the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER). However, such measures do not fully capture the degree of enforcement and effectiveness of capital controls as well as regulations in other fields that affect capital flows. In addition, domestic financial markets might not be liquid enough to efficiently diminish price differentials, so that price-based measures may under estimate the true degree of financial integration. Therefore, quantity-based measures were used in this study. Following the study of Friedrich, Schnabel and Zettelmeyer (2010), this paper used four indicators of *de facto* financial globalization. First, we use the standard measure of gross financial globalization, defined as the sum of total foreign assets and total foreign liabilities in percent of GDP (FAI) and sourced from International Financial Statistics (IFF), 2016. Gross measures of financial integration have the advantage that they also capture risk-sharing benefits of financial globalization. Then we consider various measures taking into account only foreign liabilities (capturing only the financing side of financial globalization), distinguishing different types of foreign liabilities: foreign direct investment (FDI) and external debt (EXD), both expressed in percent of GDP and sourced from United Nations Conference on Trade and Development (UNCTAD),

[1] The twenty-one countries included in the study were randomly selected from the list of countries in SSA.

2016. Further, we consider net foreign assets (defined as the difference between foreign assets and foreign liabilities) in percent of GDP (NFA) and sourced from World Development Indicators (WDI), 2016, which serves as a valuation-change adjusted equivalent to the current account.

This paper used two institutional quality indexes (government effectiveness (GEF) and rule of law (ROL) sourced from World Governance Indicators (WGI), 2016) constructed by Kaufmann *et al*. (2004). The criterion that is used in choosing them is a possible linkage between such indexes of the quality of a government and the capital flows into a country. Vector of control variables are trade openness (TRO) sourced from UNCTAD, 2016; domestic credit provided by banking sector (DCB), domestic credit to private sector (DCP), inflation (INF) and interest rate (INT) sourced from WDI, 2016. Real GDP sourced from WDI, 2016 and expressed in log form.

To evaluate the impacts of financial globalisation on economic growth, the study considers a panel of i countries, observed over t periods of time. This paper adopts endogenous growth model in line with Schularick and Steger (2006). Conventionally, the popular Cobb Douglas production function can be written as

$$Y_{it} = A_{it}F(K_{it}, L_{it}) = K_{it}^{\alpha}(AL_{it})^{1-\alpha} \quad 1$$

where □, 1-□ > 0

Y represents output production by combining capital K and efficiency of labour AL and □, 1-□ are the parameters representing the output elasticity of each input. By simple modification and abstracting from the argument of endogenous theory proponent that the labour and capital are embodiment of several other inputs that are also directly responsible to changes in output growth even when the traditional inputs are unchanged. Thus, one of such possible input is the institutional quality committed into production process. In line with this argument, institutional quality can be included in Eq (1) as thus:

$$Y_{it} = K_{it}^{\alpha} IQ_{it}^{\gamma}(AL_{it})^{1-\alpha-\gamma} \quad 2$$

where □, $\gamma \geq 0$

IQ_{it} is the indicator of institutional quality and it is an increasing function designed to capture the three ways by which the model enhances the nature of relationship between financial globalization and output through quality of institutions. We study the model with the variables expressed in terms of effective units of labour, and define y = Y / AL, k = K / AL and iq = IQ / AL. Using these variables, the production function is written as thus:

$$y = k_{it}^{\alpha} iq_{it}^{\gamma} \quad 3$$

The model represented by Eq (3) can be rewritten in log linear form as:

$$y_{it} = \beta_1 + \beta_2 k_{it} + \beta_3 iq_{it} \quad 4$$

In order to incorporate other macroeconomic variables that might also impact on the growth of output, we introduce x in Eq (4). Therefore, Eq (4) can be re-written as follows:

$$y_{it} = \beta_1 + \beta_2 k_{it} + \beta_3 iq_{it} + \beta_4 x_{it} \quad 5$$

where x equals other macroeconomic variables.

Apart from the financial globalization and institutional quality, evidences from previous studies have shown that many other factors are significant determinant of real growth.[1] This paper incorporated other macroeconomic variables in the above model we have

$$y_{it} = \beta_1 + \beta_2 k_{it} + \beta_3 iq_{it} + \beta_4 to_{it} + \beta_5 fd_{it} + \beta_6 if_{it} + \beta_7 in_{it} + \varepsilon_{it} \quad 6$$

Where $\mathbf{y_{it}}$ equals real gross domestic product; $\mathbf{k_{it}}$ equals financial globalisation indicators; $\mathbf{iq_{it}}$ indicates institutional quality indicators; $\mathbf{to_{it}}$ equals trade openness; $\mathbf{fd_{it}}$ equals financial development indicators; $\mathbf{if_{it}}$ equals inflation rate; and $\mathbf{in_{it}}$ equals interest rate. ε_{it} equals error correction terms. to_{it}, fd_{it}, if_{it}, in_{it} are vector of control variables.

In order to capture the role of institutional quality in financial globalization – growth nexus, we interact institutional quality with financial globalization. The rationale behind the interaction term is that institutional quality affects the efficiency of financial globalization and hence economic growth. Therefore, Eq (6) can be written as thus:

$$y_{it} = \beta_1 + \beta_2 k_{it} + \beta_3 (k_{it} * iq_{it}) + \beta_4 iq_{it} + \beta_5 Z_{it} + \varepsilon_{it} \quad 7$$

where Z_{it} is a matrix of control variables.

The responsiveness of steady state level of economic growth to financial globalization can be determined by differentiating Eq (7) with respect to financial globalization. This will give marginal effect of financial globalization on economic growth as thus:

$$\frac{\partial y_{it}}{\partial k_{it}} = \beta_2 + \beta_3 * iq_{it} \quad 8$$

[1] See (Eichengreen et al., 2009; Quinn & Toyoda, 2008; Schularick & Steger, 2006; Luca & Spatafora, 2012).

From Eq (8), we calculate the threshold level of institutional quality i.e. β_2/β_3 (Greene, 2008; Bailliu, 2000).

The objective of this paper is captured through the use of the Generalized Method of Moments (GMM) estimators for estimation suggested for the dynamics of adjustment that were developed by Arellano and Bond (1991), and Blundell and Bond (1998). The choice of this technique is to correct for endogeneity problem in the model. The estimated models are specified as thus

$$y_{it} - y_{i,t-1} = \delta(y_{i,t-1} - y_{i,t-2}) + \alpha(fg_{i,t-1} - fg_{i,t-2}) + \beta(iq_{i,t-1} - iq_{i,t-2})$$

$$+ \beta^{'}(X_t - X_{i,t-1}) + (\varepsilon_t - \varepsilon_{i,t-1}) \qquad 9$$

The objective of this paper is captured by examining the interaction of institutional quality on the relationship between financial globalization and economic growth in SSA and Eq (9) can be re-written as thus:

$$y_{it} - y_{i,t-1} = \delta(y_{i,t-1} - y_{i,t-2}) + \alpha(fg_{i,t-1} - fg_{i,t-2}) + \gamma(fg_{i,t-1} - fg_{i,t-2}) * (iq_{i,t-1} - iq_{i,t-2})$$

$$+ \vartheta(iq_{i,t-1} - iq_{i,t-2}) + \beta^{'}(X_t - X_{i,t-1}) + (\varepsilon_t - \varepsilon_{i,t-1}) \qquad 10$$

4. Empirical Results

This section captures the econometric technique of analysis and shows the role that institutional quality plays in the nature of relationship between financial globalization and economic growth in SSA. This is the gap that this paper covers in the existing literature. Table i below showed the descriptive statistics summary of the variable under study.

Table I. Descriptive Statistics Results

Source: Ratios computed by the author

Table i showed that all the series display a high level of consistency as their mean and median values fall within the maximum and minimum values of the series. Also, the standard deviation of the data series is very low which implies that the deviation of actual data from its mean value is very small. For a further test of normality, we can test whether the mean and median of the distribution are nearly equal, whether the skewness is approximately zero, and whether the kurtosis is close to 3. A more formal test of normality is the one given by the Jarque-Bera (JB) statistic. The Jarque-Bera statistic follows a chi-square distribution with 2 degree of freedom, all the data series used in the study rejects the assumption of normal distribution at 1% due to the high value of JB and a small p-value.

In order to capture the objective of this paper, tables ii and iii below are presented.

Table II. Dynamic Panel GMM Results [Foreign Assets plus Liabilities (FAL) and External Debt (EXD)]

Variable	1	2	3	4	Variable	1	2	3	4
GDP_{t-1}	0.149*** (5.089)	0.180*** (4.459)	0.260 (1.369)	0.310*** (2.701)	GDP_{t-1}	0.144*** (2.871)	0.144* (1.924)	0.292*** (4.765)	0.210*** (4.493)
FAL	-0.166** (-1.982)	-0.202* (-1.766)	-0.291*** (-3.308)	-0.144*** (-2.405)	EXD	1.226* (1.681)	2.612* (1.656)	2.197* (1.954)	1.672* (1.750)
FAL*GEF	0.206** (2.451)	0.231* (1.955)	---	---	EXD*GEF	2.105*** (2.927)	2.221** (2.295)	---	---
FAL*RQL	---	---	-0.260** (-1.998)	-0.301* (-1.915)	EXD*RQL	---	---	3.163** (2.419)	4.152** (1.981)
GEF	-0.326* (-1.905)	-0.265 (-1.596)	---	---	GEF	-0.144* (1.073)	-0.092 (-1.065)	---	---
RQL	---	---	0.743** (1.862)	0.749* (1.921)	RQL	---	---	0.780* (1.851)	1.444** (2.232)
DCP	---	-0.174 (-1.622)	---	-0.015 (-1.644)	DCP	---	-0.261*** (-3.393)	---	-0.277*** (-3.544)
DCR	-0.342*** (-5.741)	---	-0.157* (-1.939)	---	DCR	-0.217*** (-4.121)	---	-0.166*** (4.346)	---
TRO	0.262*** (5.231)	0.332*** (5.452)	0.214*** (5.595)	0.223*** (5.612)	TRO	0.444*** (4.044)	0.252*** (2.516)	0.420*** (5.152)	0.262*** (4.349)
INF	-0.004 (-0.354)	-0.078 (-0.531)	-0.006 (-0.764)	-0.005 (-0.554)	INF	-0.617 (-0.779)	-0.070 (-0.588)	0.011 (0.883)	0.107 (0.435)
INT	0.075*** (3.961)	0.115*** (7.741)	0.031* (1.811)	0.082*** (4.003)	INT	0.062*** (2.225)	0.144*** (3.741)	0.028*** (5.967)	0.019*** (3.462)
C	-0.244** (-2.157)	-2.627 (-2.579)	-0.703 (-1.351)	-0.175 (-0.614)	C	-0.367** (-2.078)	-2.652 (-2.179)	-0.412** (-3.339)	-0.795 (-0.477)
Instrument Rank	15	15	15	15	Instrument Rank	15	15	15	15
J-statistics	19**	13**	16**	17**	J-statistics	16**	15**	17**	15**
Obs.	[illegible]	[illegible]	[illegible]	[illegible]	Obs.	[illegible]	[illegible]	[illegible]	[illegible]

*, **, *** *indicate 10%, 5% and 1% level of significance. Figures in parenthesis are t-statistic. Obs. indicates observation*

Table III. Dynamic Panel GMM Results [FDI and Net Foreign Asset (NFA)]

Variable	1	2	3	4	Variable	1	2	3	4
GDP_{t-1}	0.583*** (3.975)	0.580*** (3.227)	[illegible]*** (2.949)	[illegible]*** (2.468)	GDP_{t-1}	[illegible] (3.025)	[illegible] (2.212)	[illegible] (2.817)	[illegible] (2.394)
FDI	-0.261*** (-4.796)	-0.212*** (-3.509)	-0.082*** (-3.131)	-0.17*** (-3.331)	NFA	-0.065** (-2.515)	-0.052*** (-3.13)	-0.112*** (-4.240)	[illegible]*** (-4.57[illegible])
FDI*GEF	0.822** (1.875)	0.51*** (3.156)	---	—	NFA*GEF	0.38** (2.538)	0.258** (2.240)	—	—
FDI*ROL	---	---	0.182* (-1.067)	0.275* (-1.02[illegible])	NFA*ROL	—	—	0.206** (-2.193)	0.071** (-2.382)
GEF	-0.354** (-2.245)	-0.348*** (-2.719)	---	---	GEF	-1.110*** (-3.158)	-0.11*** (-3.245)	—	—
ROL			1.52* (-1.066)	1.120** (-2.344)	ROL			1.561 (-2.884)	1.682 (-2.732)
DCP	---	-0.223*** (-5.199)	---	-0.29*** (-5.706)	DCP	—	[illegible] (0.580)	—	-0.254*** (-2.778)
DCB	-0.117*** (-6.216)	---	-0.156*** (-7.945)	—	DCB	1.08 (1.284)	—	-1.08 (-2.467)	—
TRO	0.121* (1.899)	0.139*** (3.117)	0.191*** (2.08[illegible])	0.233*** (3.5[illegible])	TRO	[illegible] (-1.732)	-0.068 (-0.50[illegible])	0.068 (0.873)	[illegible] ([illegible])
INF	0.021 (1.445)	0.014 (0.976)	0.018 (1.255)	0.001 (0.11[illegible])	INF	[illegible] (-2.113)	[illegible] (-0.0[illegible])	[illegible] (-2.10[illegible])	[illegible] (-2.217)
INT	0.009*** (5.379)	0.015*** (6.19[illegible])	0.012*** (6.9[illegible])	0.062*** (6.2[illegible])	INT	0.281*** (5.453)	0.094*** (6.03[illegible])	0.247*** (7.05[illegible])	0.291*** (5.74[illegible])
C	-0.226 (-0.213)	-0.389 (-0.577)	0.061 (0.512)	0.048 (0.295)	C	-0.027 (-2.154)	-0.028 (-0.232)	0.028 (0.278)	0.048 (2.284)
Instrument Rank	15	15	15	15	Instrument Rank	15	15	15	15
J-statistic	16***	18***	17***	18***	J-statistic	16***	17***	14***	16***
Obs	588	588	588	588	Obs	588	588	588	588

, **, * indicate 10%, 5% and 1% level of significance. Figures in parenthesis are t-statistic. Obs. indicates observation*

We test for the validity of the instrument used and examine the value of the J-statistic and instrument rank of the GMM estimate. From tables ii and iii, the instrument rank (15) is greater than the number of estimated coefficients (07), we may use it to construct the Sargan test of over-identifying restrictions. Constructing the Sargan test of over-identifying restrictions, it was also confirmed that the instruments used in the technique of analysis are valid.

In tables ii and iii, we estimated four models in order to avoid serial correlation in the model. From table ii above, financial globalization (foreign assets plus foreign liabilities) has a negative and significant effect on economic growth and institutional quality (government effectiveness) mitigates the negative effect of financial globalization on economic growth in SSA. Based on the estimated coefficients for the financial globalization variable and the interaction term, it is found that 0.80 was the threshold value that institutional quality would attain before it could mitigate the negative effect of financial globalization on economic growth in SSA. This implies that government effectiveness lessens the negative effect of financial globalization on economic growth in SSA.

Furthermore, from table ii, financial globalization has a negative and significant effect on economic growth and institutional quality (rule of law) aggravates the negative effect of financial globalization on economic growth in SSA. It is found that 0.72 was the threshold value that institutional quality would attain before it could

aggravate the negative effect of financial globalization on economic growth in SSA. This indicates that rule of law in the region is not well entrenched and hinder the economies to derive the benefits of financial globalization.

From table ii above, financial globalization (external debt) has a positive and significant impact on economic growth and institutional quality favourably influence the positive relationship between financial globalization and economic growth in SSA. It is found that 0.57 was the threshold value that institutional quality would attain before it could favourably affect the positive impact of financial globalization on economic growth in SSA. This implies that institutional quality enhances and contributes positively on financial globalization – growth nexus in SSA.

Moreover, the results in table ii showed that financial globalization (external debt) has a positive and significant impact on economic growth and institutional quality (rule of law) favourably affect the positive relationship between financial globalization and economic growth in SSA. It is found that 0.81 was the threshold value that institutional quality would attain before it could favourably affect the positive impact of financial globalization on economic growth in SSA. This implies that financial globalization (external debt) boost economic activities in SSA which further accelerated by efficient rule of law.

The findings in table iii above showed that financial globalization (i.e. FDI) has a negative and significant impact on economic growth, and institutional quality mitigates the negative and adverse effect of financial globalization on economic growth in SSA. It is found that 0.70 was the threshold value that institutional quality would attain before it could mitigate the negative impact of financial globalization on economic growth in SSA. This implies that institutional quality lessens the negative effect of financial globalization (i.e. FDI) on economic activities in SSA.

In addition, the results in table iii showed that financial globalization (i.e. FDI) has a negative and significant impact on economic growth, and institutional quality aggravates the negative effect of financial globalization – growth nexus in SSA. It is found that 0.23 was the threshold value that institutional quality would attain before it could aggravate the negative impact of financial globalization on economic growth in SSA. This implies that SSA lack efficient rule of law that can address security threat on foreign investors' property which in turn worsen the negative effect of FDI on economic growth in the region.

The results in table iii above showed that net foreign asset (financial globalization) has a negative and significant impact on economic growth and the institutional quality (government effectiveness) mitigates the negative effect of financial globalization on economic growth in SSA. It is found that 0.30 was the threshold value that institutional quality would attain before it could mitigate the negative impact of financial globalization on economic growth in SSA. This implies that net foreign assets crowd out investment activities in SSA but government policies

deteriorate the negative effects by putting in place appropriate mechanism that drive the benefits of financial globalization.

Furthermore, the results in table iii showed that financial globalization (net foreign asset) has a negative and significant impact on economic growth and institutional quality (rule of law) aggravates the negative effect of financial globalization on economic growth in SSA. It is found that 0.43 was the threshold value that institutional quality would attain before it could aggravate the negative impact of financial globalization on economic growth in SSA. These results can be explained by the fact that the spill-over effect of the value of the assets that SSA owned abroad could not be counteracted by the value of the domestic assets owned by foreigners in the region and this spill-over effect worsened by weak rule of law, which in turn impede economic activities of the region.

In tables ii and iii above, the results showed that institutional quality (government effectiveness) has a negative and significant impact on economic growth in SSA. The results revealed that government effectiveness in SSA is associated with a lower economic growth in the region. This implies that the government participation in the economy is ineffective and hence inimical to economic growth. Moreover, rule of law (i.e. institutional quality) has a negative and significant impact on economic growth in SSA. The result showed that rule of law is not well entrenched in the region; and hence associated with a lower economic growth. This also indicates that the judicial system in the region is weak and property rights might not receive adequate protection; thus, local and international investors are discouraged from investing heavily in the economies. This explains why the economy has not witnessed significant growth.

On the other hand, table ii and iii revealed the financial globalization – growth nexus. The results showed that financial globalization (foreign assets plus foreign liability) has a negative and significant impact on economic growth in SSA. This implies that SSA did not derive the benefits of financial globalization due to weak institutional quality. It was also evidenced from the table that financial globalization (i.e. external debt) has a positive and significant impact on economic growth in SSA. This finding can be explained by the fact that high debt flows in SSA often go along with credit booms and other types of vulnerabilities, which may make a country more prone to adverse shocks. This result was in line with the existing literature such as Kose *et al* (2009) and Friedrich, Schanabel and Zettelmeyer (2010).

To further examine the impact of financial globalization on economic growth in SSA, the results showed that financial globalization (i.e. foreign direct investment) has a negative and significant impact on economic growth in SSA. This contradicts what obtained in developed countries where FDI positively impacted on economic growth. This could be as a result of repatriated capital flight from SSA economies which would hamper economic growth in the region. These results were in line with

the findings of Frankel and Wei (2005). They reported that the share of FDI in a country's total capital inflow is negatively associated with the probability of a currency crisis which in turn impede economic growth.

Also, the findings showed that financial globalization (i.e. net foreign asset) has a negative and significant impact on economic growth in SSA. These results can be explained by the fact that the spill-over effect of the value of the assets that SSA owned abroad could not be counteracted by the value of the domestic assets owned by foreigners in the region which in turn impede economic activities of the region. These findings were consistent with the results of Kose *et al* (2009) and UNCTAD (2012), who argued that less developed countries often did not experience massive inflow surges but did experience massive outflows and affect the growth rate of the economies negatively.

The results in tables ii and iii showed that, financial development has a negative and significant impact on economic growth in SSA. This indicates that financial institutions in SSA is still underdeveloped and discourage economic prosperity in the region. Also, trade openness has a positive and significant effect on economic growth in SSA. It could be inferred from these results that openness of SSA to international trade would help a lot in improving economic activities in the region. Interest rate has significant and positive impact on economic growth in SSA. This implies that an economy with high interest rate will attract capital inflows because every investor or lender is looking for economy where returns on their funds are encouraging which in turn accumulate more capitals to develop the region.

5. Concluding Remark

The study aimed at establishing the role that institutional quality plays in the effect of financial globalization on economic growth in SSA. Results of the dynamic panel GMM show that the institutional quality (measured by government effectiveness) mitigates the negative effect of financial globalization on economic growth in SSA. On the other hand, institutional quality (measured by rule of law) plays an adverse role in the negative effect of financial globalization on economic growth in SSA. Furthermore, the results reveal that institutional quality had a negative and significant impact on economic growth in SSA.

One of the implications of this study is that SSA derived the benefits of financial globalization through government effectiveness, and thereafter improves economic activities of the region. It is important to further enhance effectiveness of government participation in the financial globalization – growth nexus in SSA. Therefore, governments in this region should put in place appropriate mechanism that will stimulate government effectiveness in the use of financial globalization in promoting economic growth.

The paper also indicates that SSA's rule of law is not well entrenched and capital-rich economies repatriate capitals from the region which in turn hinder economic growth. This serves as wrong indication to foreign investors to invest heavily in the economies because they afraid if their properties are secured. Therefore, governments in the region should ensure efficient rule of law that will assist the economies to derive the benefits of financial globalization.

References

Arellano, M. & Bond, S. (1991). Some tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *Review of Economic Studies,* 58 (2), pp. 277-297.

Asongu, S.A.; Koomson, I. & Tchamyou, V.S. (2017). Financial globalization uncertainty/instability is good for financial development. *Research in International Business and Finance*, Vol. 41, pp. 280–291.

Awoyemi, B.O. & Jabar, A.A. (2014). Financial globalization: Economic Implications for Nigeria. *IOSR Journal of Humanities and Social Science*, Vol. 19, Issue 4, Ver. III (Apr. 2014), pp. 113-117.

Bailliu, J.N. (2000). Private capital flows, financial development and economic growth in Developing countries. Bank of Canada Working Paper.

Blundell, R. & Bond, S. (1998). Initial Conditions and Moment Restrictions in Dynamic Panel Data Models. *Journal of Econometrics*, 87, pp. 115-143.

Broner, F. & Ventura, J. (2016). Rethinking the effects of financial globalization. *The Quarterly Journal of Economics*, Vol. 131, no. 3, pp. 1497–1542. Oxford University Press. doi:10.1093/qje/qjw010.

Castiglionesi, F.; Feriozzi, F. & Lorenzoni, G. (2015). Financial integration and liquidity crises. Mimeo, North western University.

Ciesielska, D. & Kołtuniak, M. (2017). Outward foreign direct investments and home country's economic growth. *Physica A,* Vol. 482, pp. 127–146.

Egbetunde, T. & Akinlo, A.E. (2015). Financial globalization and economic growth in sub-saharan africa: evidence from panel cointegration tests. *African Development Review*, Vol. 27, no. 3, pp. 187–198.

Eichengreen, B.J. (2001). Capital account liberalization: what do cross-country studies tell us? *World Bank Economic Review,* (15), pp. 341–65.

Eichengreen, B.; Gullapalli, R. & Panizza, U. (2009). Capital account liberalization, financial development and industry growth: a synthetic view. *Working paper*, n. 144.

Eregha, P.B. (2012). The dynamic linkages between foreign direct investment and domestic investment in ECOWAS Countries: A Panel Cointegration Analysis. *African Development Review* Vol. 24, Issue 3, pp. 208–220.

Franke l. J. & We i. S.J. (2005). *Managing macroeconomic crises: policy lessons*. In: Aizenman, J., Pinto, B. (Eds), *Managing Economic Volatility and Crises: A Practitioner's Guide.* New York: Cambridge University Press.

Friedrich, C.; Schnabel, I. & Zettelmeyer, J. (2010). Financial integration and growth- Is emerging Europe different? *European Bank for Reconstruction and Development (EBRD)*, Working paper No. 123.

Greene, W.H. (2008). *Econometric analysis*. 6th Edition. New York University.

Hassen, A.W. (2018). Economic Globalization, Institutions and Development: Essays on Aid, Foreign Direct Investment and Trade. Published *Ph.D Thesis* at Maastricht University, Netherland.

Kaufmann, D.; Kraay, A. & Mastruzzi, M. (2004). *Governance Matters: Governance Indicators for 1996-2002*. The World Bank.

Kazar1, A. & Kazar, G. (2016). Globalization, financial development and economic growth. *International Journal of Economics and Financial Issues*, Vol. 6(2), pp. 578-587.

Klein, M. (2005). Capital account liberalization, institutional quality and economic growth: theory and evidence. *NBER* Working Papers 11112. National Bureau of Economics Research. Cambridge, MA.

Kose, M.A.; Prasad, E.S.; Rogoff, K. & Wei, S.J. (2006). Financial globalization: a reappraisal. *IMF* Working Paper 06/189. International Monetary Fund. Washington. Forthcoming in IMF Staff Papers.

Kose, M.A.; Prasad, E.; Rogoff, K. & Wei, S.-J. (2009). Financial globalization: a Re-appraisal. *IMF*, Staff Papers 56(1), pp. 8-62.

Kose, M.A.; Prasad, E.; Rogoff, K. & Wei, S.-J. (2009). Financial globalization and economic policies. *Global Economy & Development*, Working Paper 34.

Kuepper, J. (2016). *Globalization and its impact on economic growth*. Book on how globalization impacts international investors**.**

Kunieda, T.; Okada, K. & Shibata, A. (2011). Corruption, globalization, and economic growth: theory and evidence. Munich Personal RePEc Archive, Online at http://mpra.ub.uni-muenchen.de/35355/ MPRA Paper No.35355, posted 12. December 2011/03:44.

Luca, O. & Spatafora, N. (2012). Capital Inflows, Financial Development, and Domestic Investment: Determinants and Inter-Relationships. *IMF,* Working Paper, WP/12/120.

Magdalena, G. & Maren, S. (2018). Do property rights matter to FDI? A cross-sectional study of property rights, institutions and FDI in middle income countries. *Bachelor Thesis in Economics*, International Business School, JÖNKÖPING University.

Muye, I.M. & Muye I.Y. (2017). Testing for causality among globalization, institution and financial development: Further evidence from three economic blocs. *Borsa Istanbul Review* xx, pp. 1-16.

Nguyen, C.P.; Su, T.D. & Nguyen, T.V.H. (2018). Institutional quality and economic growth: the case of emerging economies. *Theoretical Economics Letters*, 8, pp. 1943-1956. https://doi.org/10.4236/tel.2018.811127.

Nsiah, C. & Wu, C. (2014). The role of spatial dynamics in the determination of foreign direct investment Inflows to Africa. *African Development Review,* Vol. 26, no. 3, pp. 494–507.

Osada, M. & Saito, M. (2010). Financial integration and economic growth: An empirical analysis using international panel. *Bank of Japan Working Paper Series*.

Peres, M.; Ameer, W. & Xu, H. (2018). The impact of institutional quality on foreign direct investment inflows: evidence for developed and developing countries. *Economic Research-Ekonomska Istraživanja,* 31(1), pp. 626-644. DOI:10.1080/1331677X.2018.1438906

Pologeorgis, N. (2016). *How Globalization Affects Developed Countries*. Investopedia.http://www.investopedia.com/articles/economics/10/globalization-developed-countries.asp#ixzz4XLoaKxek

Prasad, E.S.; Rogoff, K.; Wei, S.J. & Kose, M.A. (2003). Effects of Financial Globalization on Developing Countries: Some Empirical Evidence. *IMF Occasional*, Paper 220. International Monetary Fund. Washington.

Prasad, E.S.; Rogoff, K.; Wei, S.J. & Kose, M.A. (2007). *Financial Globalization, Growth and Volatility in Developing Countries*. University of Chicago Press, http://www.nber.org/chapters/c0114.

Quinn, D.P. & Toyoda, A.M. (2008). Does capital account liberalization lead to growth? *Review of Financial Studies*, 21(3), pp. 1403-1449.

Schularick, M. & Steger, T.M. (2006). Does financial integration spur economic growth? New evidence from the first era of financial globalization. *Institute of Economic Research (WIF)*, economic working paper series.

Svrtinov, G.V.; Krume N. & Vlatko, P. (2013). Positive and negative effects of financial globalization on developing and emerging economies. *International Scientific Conference Regional Economic Cooperation in the Process of Globalization*, pp. 127-128.

Tchereni, B.H.M.; Sekhampu, T.J. & Ndovi, R.F. (2013). The impact of foreign debt on economic growth in Malawi. *African Development Review,* Vol. 25, no. 1, pp. 85–90.

Tumwebaze, H.K. & Ijjo, A.T. (2015). Regional economic integration and economic growth in the COMESA Region. *African Development Review,* Vol. 27, no. 1, pp. 67–77.

UNCTAD (2012). Capital account management in developing countries. New York and Geneva: United Nations Commission on Trade and Development.

Wako, H.A. (2018). Aid, institutions and economic growth in sub-Saharan Africa: Heterogeneous donors and heterogeneous responses. *Review of Development Economics*, Vol. 22, Issue 1, pp. 23–44.

Wei, S.J. (2006). Connecting two views on financial globalization: Can we make further progress? *Journal of the Japanese and International Economies,* 20(4), pp. 459-481.

Financial Inclusion Condition in Africa

Tough Chinoda[1], Farai Kwenda[2]

Abstract: This study assessed the financial inclusion condition in Africa and its determinants. We used the Financial Inclusion index computed through the Principal Component Analysis to study countries for the period 2004 to 2016. We found wide discrepancies in financial inclusion amongst the 49 African countries under study. Only two countries had an average financial inclusion index above 50 percent, and the majority are below 40 percent validating the argument that the African region need immediate intervention. Hence, we concluded that the African region has financial inclusion gaps and is contestable. We also found a significant positive relationship between financial inclusion and other variables such as its lagged value, financial development, income level, and availability of credit and a negative association with money supply, inflation and population size. As such, we recommended that policy makers should device measures to ensure an ongoing financially inclusive environment while stimulating other variables which acts as barriers to financial inclusion.

Keywords: Financial inclusion; Africa; Financial Inclusion index; Principal Component Analysis. Generalised Method of Moment

JEL Classification: G21; L10

1. Introduction

The last decade has witnessed the international development community and policy makers making renewed efforts towards enhancing financial inclusion. An additional savings of approximately $157 billion could be generated world-wide if the unbanked channel their informal savings into the formal financial system (Allan, Massu & Svarer, 2013). This has steered more than 50 countries to set formal targets of attaining universal financial access by 2020 and many more countries tasking their supervisory and regulatory agencies with encouraging financial inclusion (Sahay et al., 2015). The African region has progressed well from these efforts, but whether the progress has translated into the much anticipated financially inclusive environment still leaves a lot to be desired. According to Dermiguc Kunt *et al.*, (2015), more than 75 per cent of the adult population in Africa remained unbanked

[1] Lecturer, PhD, Banking and Finance, Women's University in Africa, Zimbabwe, Address: 549 Arcturus Road, Harare, Zimbabwe, Tel.: +2632424596011, Corresponding author: tchinoda@wua.ac.zw.
[2] Senior Lecturer, PhD, Department of Finance, Swaziland, E-mail: kwendaf28@gmail.com.

in 2014. The region is also characterised by a wide heterogeneity in account ownership across countries. Whilst 82 percent, 75 percent and 70 percent of the adult population in countries like Mauritius, Kenya and South Africa are respectively banked, only 7 percent have a formal bank account in Burundi, Guinea and Niger (Demirgüç-Kunt et al., 2015).

There is scarcity of information on the condition of financial inclusion across the globe. This according to Triki and Faye (2013) has limited the ability of financial service providers and policy makers to locate where opportunities lie, what is working and what is not working, thereby hindering policy. Musau, Muathe and Mwangi (2018) have contended that the aspirations for development in Africa will be unpacked once issues of financial inclusion are addressed. Then the question is, how financial inclusive are African economies? This study adds to the emerging financial inclusion literature by centring on African countries where financial inclusion is predominantly low. Our contribution to literature is three-fold. First, we documented topical financial inclusion trends for 49 African countries by showing the progress from 2004 to 2016. This study diverges from previous studies on financial inclusion as it covers almost the entire continent. Second, we focused on comprehensive indicators of financial inclusion making the study unique. Thirdly, unlike most existing studies, we considered both macro and micro-level factors of financial inclusion. This allows the understanding of their importance as contributing factors of financial inclusion. The rest of the paper is structured as follows. Section 2 reviews theories of financial inclusion and previous empirical literature. The data and methodology of the study is considered in Section 3. Section 4 presents the results of the study. Section 5 presents the conclusions as well as policy implications of the paper.

2. Concepts and Measurement of Financial Inclusion

There is no consensus over the definition of financial inclusion as differences emanate from the context wherein the term is used, the state of economic development and geographical location of the area. Sarma (2008) defines financial inclusion as a process of ensuring ease access to, availability, and usage of formal financial systems to all members of an economy. In contrast, Amidžić, Massara and Mialou (2014) and Clamara and Tuesta (2014) define financial inclusion as the process of maximising access and usage while minimising involuntary financial exclusions. The World Bank concurred with Sarma (2008) and defined an inclusive financial system as one that ensures easy access to or use of affordable financial services and products (transactions, credit, savings, payments, and insurance) that meets the necessities of businesses and individuals, conveyed in a responsible and viable manner (World Bank, 2017). Although different definitions of financial inclusion have been put forward, they all seem to concur that financial inclusion

ensures easy access to and usage of formal financial services. This study follows the definition by Sarma (2008) and the World Bank (2017) which includes numerous dimensions such as availability, accessibility, and usage, which can be discussed separately. The definition is also measurable and can be easily incorporated into theoretical and empirical work.

For policy makers to understand the concept of financial inclusion and be able to design policies to improve financial inclusion, they require reliable information on the prevailing state of financial inclusion. The information can be used for monitoring and also to deepen understanding around factors of financial inclusion and successively, the effect of policies (Porteous, 2009). There appears to be no standard method of measuring financial inclusion (Young & Mercado, 2015). The difficulties in differentiating between voluntary and non-voluntary financial exclusion brought challenges in measuring financial inclusion (World Bank, 2008). Voluntary financial exclusion denotes the population that has the capacity to access financial services, but does not do so voluntarily. This population segment needs to be excluded from financial exclusion estimations, posing measurement challenges.

Honohan (2008) constructed estimates of the proportional formally banked households for more than 160 countries using average deposit size, household access and GDP per capita and subsequently compared them to inequality and poverty. He found that Latin America and the Caribbean had the highest mean percentages, but countries in Africa and Eastern Europe and Central Asia had the lowest mean percentages. Each of the indicators used by Honohan (2008) provides useful and important information on financial system outreach of an economy. While used individually, they however fail to offer a comprehensive measure on the inclusiveness of the banking system. The use of singular indicators may correspondingly lead to wrong interpretation of the results on financial inclusion in an economy. A country may be well positioned in one dimension, but not in the other.

To fill the above gap, Sarma (2008) applied an econometric approach to create a financial inclusion measure. He proposed a multidimensional financial inclusion index on the banking sector outreach using macroeconomic data in an effort to combine meaningfully several indicators, such as availability, accessibility and usage of banking services. Sarma (2008) adopted the Human Development Index (HDI) concept and used one usage variable and three accessibility variables to compute a comprehensive financial inclusion index which is easy to compute and is comparable across countries or provinces at a particular point in time. The measure also enforce non-varying weights for each dimension. A number of researchers have also borrowed from Sarma (2008) to compute an index of financial inclusion for specific countries and states and examined how it relates to other social factors such as inequality, urbanisation, income, or even literacy (Sarma & Pais, 2008; Kumar &

Mishra, 2009; Mehrotra et al., 2009; Arora, 2010; Gupte et al., 2012; Sarma, 2010; 2012; Kumar, 2016; Tan, 2017). Pal and Chakravarty (2010) improved upon Sarma's method by employing the axiomatic measurement approach to establish how various factors contribute towards inclusion. Cáamara and Tuesta (2014) measured financial inclusion levels at country level using the supply-and-demand information for eighty-two countries. They used a two stage PCA to compute a composite index of financial inclusion. In addition, the global Findex database which was initiated by the World Bank make available indicators of financial inclusion based on a primary survey conducted 148 countries on 150 000 adults during 2011 (Dermiguc-Kunt & Klapper, 2012). Amidžić, Massara, and Mialou (2014) computed a financial inclusion index as a compound indicator of variables in relation to outreach (demographic and geographic penetration), usage (lending and deposit), and quality (cost of usage, disclosure requirement, and dispute resolution). Following the argument made by Sarma (2008) and Gupte *et al*. (2012), this study constructed a multidimensional index of financial inclusion to measure the level of financial inclusion between countries. The study used several dimensions and current time trend which were omitted in previous studies and tested whether adding more indicators and dimensions to the index makes it more holistic and comprehensive. The index is built across many years (2004–2016) and several countries (49), a time-series estimation, which, to the best of the researcher's knowledge has not been done before. This study also contributed to literature by constructing a unique financial inclusion index and combining the normalised weights from Camara and Tuesta's (2014) principal component analysis with Sarma's (2008) multidimensional approach to address the weaknesses of each methodology.

3. Methodology

3.1. Model Specification

We computed a new index of financial inclusion by combining Sarma (2008) and Camara and Tuesta (2014) approaches to overcome the weaknesses of each methodology. Like Sarma (2008), the study used usage, access, and availability as dimensions of the financial inclusion index. The study computed the indicator for each dimension as:

$$\wp_{i,d} = \frac{\varkappa_{i-m_i}}{M_{i-m_i}} \quad (1)$$

Where $\varkappa_i$ is the value of indicator i, m_i is the minimum (lowest) value of indicator *i*, M_i is the maximum (highest) value of dimension *i*. $\wp_{i,d}$ is the standardised value of indicator *i* with d being the dimension. We followed the footsteps of Camara and Tuesta (2014) in using PCA in aggregating each indicator to a dimension index denoting λ_k ($k = 1 \ldots p$) as the k^{th} eigenvalue, subscript *k* is the number of principal

components that also matches with the number of standardised indicators p. we assumed that $\lambda_1 > \lambda_2 > \cdots \lambda_p$ and denote P_l (k = 1… p) as the l^{th} principal component. The study derived each dimension index in line with the weighted averages:

$$\mathfrak{H}_d = \frac{\sum_{k,l=1}^{p} \lambda_k P_l}{\sum_{l=1}^{p} \lambda_k} \quad (2)$$

Where $\mathfrak{H}_d$ is dimension d index and $P_l = \Re\lambda_k \,.\, \lambda_k$ signifies the variance of the principal component (weights) and $\Re$ is the indicators matrix. Following Camara and Tuesta (2014), we also took into account 100 percent of the total variation in the indices of dimensions to avoid dumping information that could precisely estimate the overall financial inclusion index of a country. Having established the dimension indices, another principal component analysis is run as in Equation 3 below to compute the dimension weights for the overall financial inclusion.

$$FII_i = \frac{\sum_{k,l=1}^{p} \lambda_k P_{li}}{\sum_{l=1}^{p} \lambda_k} \quad (3)$$

Where FII_i is the aggregate financial inclusion index for country i. $P_l = \Re\lambda_k \,.\, \lambda_k$ is the variance of the k^{th} principal component (weights) and $\Re$ is the dimensions matrix. Decreasing weights were assigned to each component and the financial inclusion index for the sampled size was computed as the weighted average of individual dimensions.

3.2. Generalised Method of Moments

The application of the regression of the link between financial inclusion and other determinants in Africa banks is done using the GMM regression. The conventional estimators of dynamic panel data like; pooled OLS, first difference, and generalise least squares are inept in handling dynamic panel bias, thus the proposed use of instrumental variables to alleviate endogeneity issues in the lagged endogenous variables. The GMM is free from normality and has greater assumptions of data generating process and adaptability in the presence of lagged variables. The estimation model is based on Arellano and Bond (1991) and Arellano and Bover (1995) GMM. This allows the application of the economies specific variables that drives financial inclusion while controlling for various macroeconomic variables.

3.3. Data

To compute the degree of financial inclusion of African countries, we used a panel of 49 countries from the African region sourced over the period 2004-2016. The choice of period is informed by the availability of data on the World Development Indicators (WDI) Databases, which provides data for 189 countries across the globe thereby facilitating better comparison across countries. We excluded countries with issues on data integrity.

For the purpose of the determinants of financial inclusion in Africa, we used population density, population size, broad money, financial development, income level, and inflation rate and credit availability in line with Beck and Feyen (2013). They argued that changes in these variables changes the ability of individuals and businesses to save, deposit money and insure their products, thus hypothesise a logical link to financial inclusion.

3.4. Empirical Results

Table 1 below provides a summary of the indicators of financial inclusion used in this study. The data shows the presence of great discrepancies between various indicators of financial inclusion. For example, the mean number of ATMs per area in Africa is only 12 which differs greatly from East Asia and Pacific and Middle East which have 215 and 125 respectively. This figure is also far from the average World figure of 75, thereby providing evidence why financial exclusion is high in Africa. Generally, the African region ranks lowest on almost all indicators of financial inclusion, except on branches of commercial banks per 1 000 km^2 and the number of ATMs per 1000 adults where it is ranked second lowest and also the indicators of financial inclusion in the African region rank far below world average and even when compared to other regions in line with Demirgüç-Kunt, Beck, and Honohan, 2008; Beck *et al*., 2008; Allen *et al*., 2011; and Aterido *et al*., 2013. On average the East Asia and Pacific continent and Europe and Central Asia have recorded the highest levels of financial inclusion over the period under review. Although financial inclusion has been contemplated as a universal challenge, the situation in Africa requires immediate action. These large discrepancies may be as a result of a number of political or socio-economic reasons like regime durability and transition, levels of autocracy, executive and legislative electoral competitiveness, checks and balances, gender, age, bank concentration in rural areas, but it is still interesting to realise that these differences and are widespread in almost all the variables.

3.4.1. Pearson Correlation and Multi-collinearity Test

We inspected the pairwise correlation among the indicators of financial inclusion to examine the magnitude and nature of co-movements between them and Table 2 below shows the results. A strong significant correlation exists among the financial inclusion indicators. The 0.96 significant correlation coefficient between ATMs per 1000 km^2 and bank branches per 1000 km^2 indicates a near perfect multi-collinearity scenario. It simply indicates that ATMs per 1000 km2 and bank branches per 1000 km^2 have a 0.96 significant positive relationship. There was a 0.87 and 0.96 significant positive correlation between ATMs per 1000km^2, outstanding loans as a percentage to GDP and bank branches per area. The variable ATMs per 1000 km^2 was dropped to deal with the problem of multicollinearity.

3.4.2. Trends in Indicators of Financial Inclusion

Although the African region ranks lowest in all financial inclusion indicators, the data indicates a steady increase over the years, in basically all the indicators as shown in Figure 1 below. There were 7 ATMs per 1 $000km^2$ in 2004; no increase from 2004 to 2005; increased from 7 to 9 in 2009 then to 12 in 2013 before increasing by slightly less than 50 percent to 17 in 2016. There has been a tremendous improvement in increase of ATMs per 100 000 as they increased by 100 percent from 2004 to 2009; no increase from 2009 to 2011 and increased by 70 percent from 2011 to 2016. Access to financial services measured by bank branches per 1 $000km^2$ increased by approximately 150 percent from 4.1 in 2004 to 10.4 in 2016. Bank branches per 100 000 adults improved from 4.3 in 2004 to 9.41 in 2016 an increase of slightly more than 100 percent. The number of commercial bank branches abruptly increased between 2007 and 2008, which is the same period the World Bank published the first global financial inclusion report which gave emphasis to financial inclusion and this could have stirred the need for increased financial inclusion for countries in Africa, as suggested by the data. Generally, all the dimensions show that financial inclusion has been improving from 2004 to 2016.

Table 1. Summary Statistics-Indicators of Financial Inclusion

Variable	World			EAP	LAC	ECA	ME	SA	NA	Africa	LICS
	Mean	Max	Min	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
Outstanding deposits with comm. banks (% of GDP)	55.9	498.8	1.2	72.2	[illegible]	28.4	63.6	45.9	90.2	[illegible]	36.1
ATMs per 1 000 km2	74.8	2984	0.01	214.2	35.8	84.1	124.2	16.5	18.4	9.7	12.0
ATMs per 100 000 adults	60.0	288.6	0.01	47.2	41.5	67.6	47.6	8.9	198.3	17.2	18.6
Branches of commercial banks per 1 000 km2	34.8	1415	0.01	73.7	15.1	[illegible]	53.5	31.8	5.3	6	8.6
Commercial banks branches per 100 000 adults	18.8	287.2	0.1	14.3	25.1	34.9	17.4	9.1	29.5	6.5	13.8
Borrowers at commercial banks per 1 000 adults	198.9	1203	0.01	235.1	250.5	306.8	321.6	67.6	N/A	52.6	80
Deposit accounts per 1 000 adults	1152	7986	1.3	1515	953.6	2083	1322.7	842.6	N/A	425.7	508
Depositors per 1 000 adults	623.3	3882	0.4	784	676.6	1108	751.3	438	N/A	250.3	101.1
Commercial banks loan accounts per 1 000 adults	307.9	1851	0.4	265.3	421.2	601.8	472.5	83.1	N/A	81.5	119.5
Number of countries		184		24	32	49	20	8	2	45	77

Source: Financial Access Survey -International Monetary Fund (2017)

Key: EAP- East Asia and Pacific, ME- Middle East, LAC- Latin America and Caribbean, LICs- Low Income Countries, SA- South Asia, ECA- Europe and Central Asia, NA- North America

Table 2. Correlation Financial Inclusion Indicators

	ATMs per Pop.	ATMs per area	Bank Branches per pop.	Bank Branches per area.	Outstanding Loans(% GDP	Bank Accounts per pop.
ATMs per pop.	1.0000					
ATMs per area.	0.6899*	1.0000				
Bank Branches per pop.	0.6432*	0.3115 *	1.0000			
Bank Branches per area	0.5716*	0.9584 *	0.2427*	1.0000		
Outstanding Loans (% GDP)	0.7407*	0.8756 *	0.5520*	0.8902*	1.0000	
Bank Accounts per pop.	0.7676*	0.6606 *	0.6415*	0.5490*	0.7472*	1.0000

Source: Authors' calculations from World Bank Development Indicators (2017)

Standard error in parentheses; * $p < 0.05$

As much as penetration is concerned, it is seen that generally the number of deposits accounts with commercial banks have increased by more than 100 percent from 2004 to 2016. From 2004 to 2005, the number of accounts decreased from 322 to 309 but gradually increased between 2005 and 2016. This might have been caused by closure of inactive bank accounts due to requests by central banks regulators. The loan accounts per 1 000 adults which is another indicator of penetration shows an increase of more than 200 percent from 2004 to 2016. Loan accounts only decreased in 2010 possibly due to the global financial crisis and continued to increase until 2016. Unlike Ndlovu (2017) and Yorulmaz (2016), the study included bank accounts per 1000 adults which is another indicator of penetration. Generally, the number of bank accounts has increased by more than 250 percent from 151 in 2004 to 407 in 2016.

Figure 3 below shows the usage of financial services. It is a significant dimension of financial inclusion as it compares outstanding loans and deposits with GDP. In line with Sharma (2016), the indicators reflect an important contribution of commercial banks in Africa to the economic growth as both outstanding loans and deposits with commercial banks have increased from 2004 to 2016.The period 2010 and 2011 saw the number of borrowers largely unchanged compared to a striking element within the same period where a sharp increase in loan accounts was witnessed. This action increases the number of loan accounts without growing the number of borrowers. This may also signal customers' credit kite flying where multiple loan accounts are opened by a single customer. However, the number of loan accounts evens out

between 2011 and 2012 as they remain fairly stable, whilst there was a notable increase in the number of borrowers in the same period, hence reversing the anomaly thus validating the inclusion of both usage and access indicators in capturing financial inclusion. Generally the usage trend is increasing.

3.4.2.1. Access Indicators

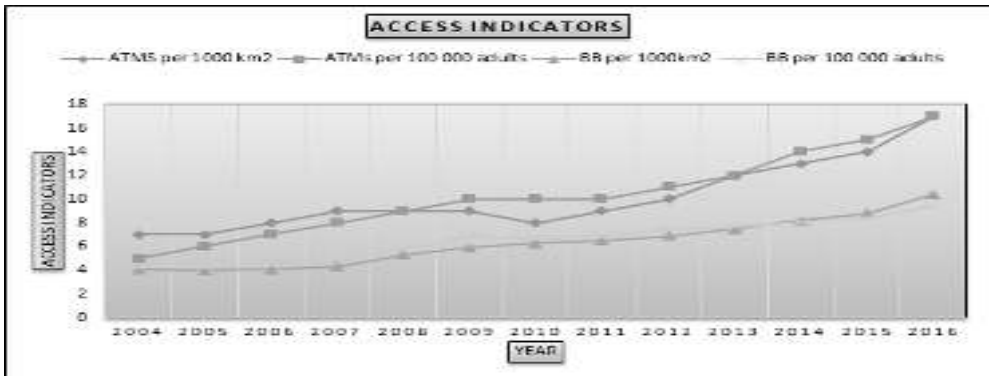

Figure 1. Trend in Access to Finance Indicators

Source: World Development Indicators Database, World Bank (2017)

3.4.2.2. Penetration Indicators

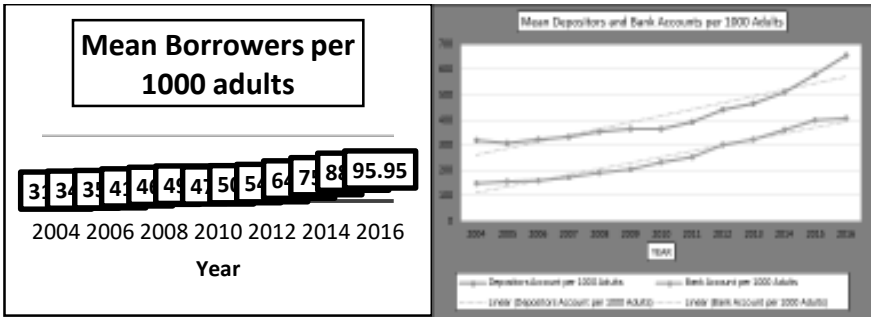

Figure 2. Trend in Penetration Indicators

Source: World Development Indicators Database, World Bank (2017)

3.4.2.3. Usage Indicators

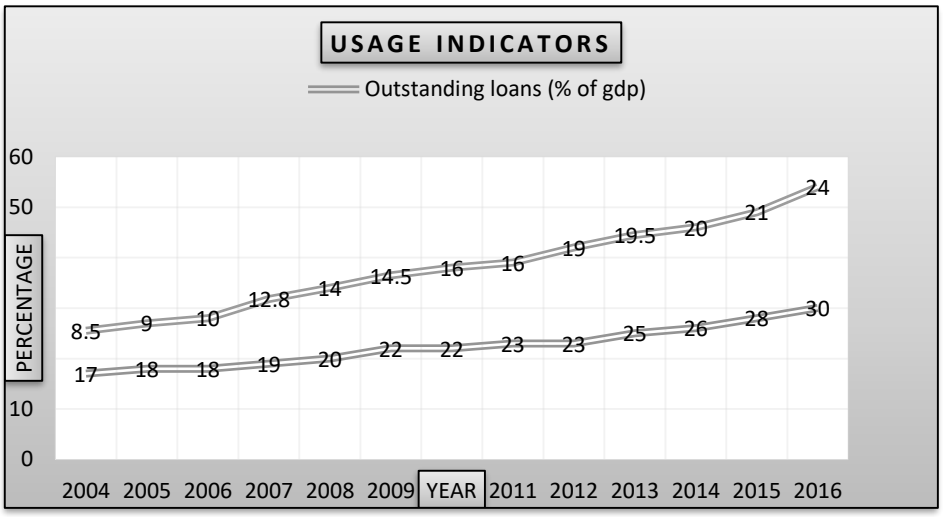

Figure 3. Trend in Usage Indicators

Source: World Development Indicators Database, World Bank (2017)

3.4.2.4. Regional Comparison-Indicators of Financial Inclusion

(a) Access Indicators

African countries should come up with strategies to overcome the barriers that hinder people from accessing formal financial services. The region has the lowest number of ATMs per area and per capita, with 9.83 ATMs per area and 10.29 ATMs per capita compared to other regions such as East Asia and Pacific with 214 ATMs per area and North America with 199 ATMs per capita (World Bank, 2017).

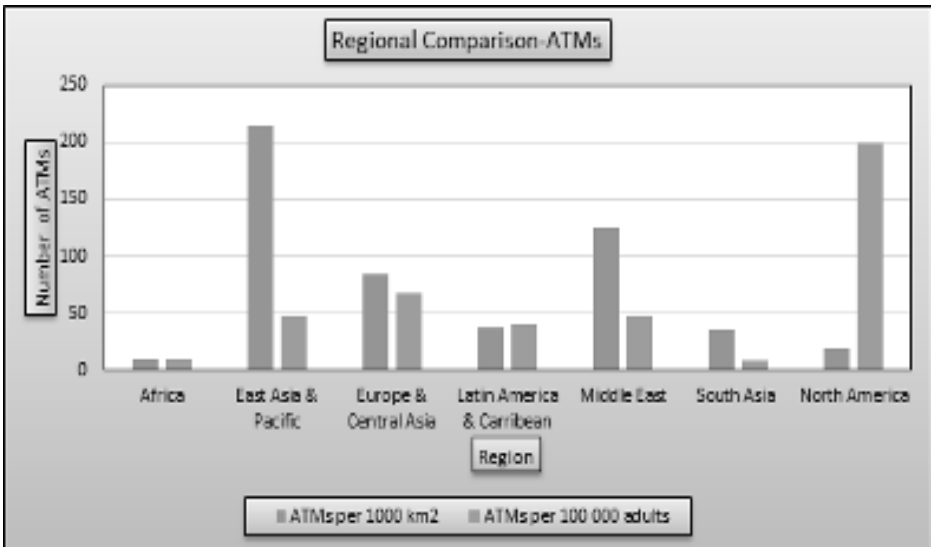

Figure 4. Trend in Access Indicators (Regional)

Source: World Development Indicators Database, World Bank (2017)

b) Penetration Indicators

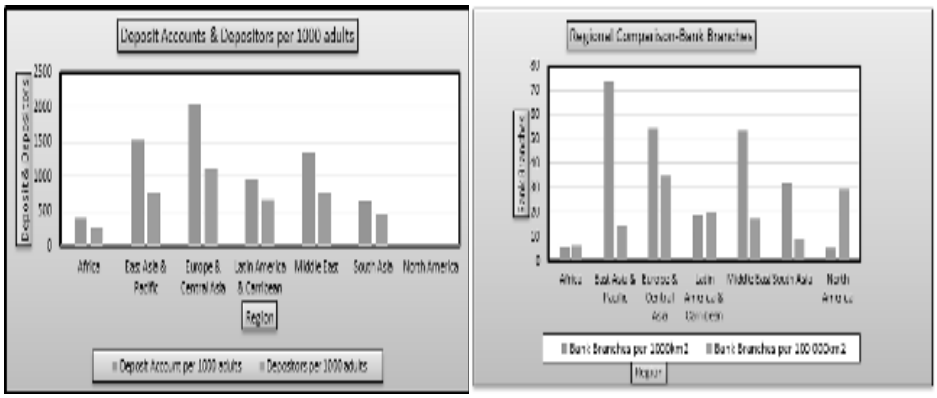

Figure 5. Trend in Penetration Indicators (Regional)

Source: World Development Indicators Database, World Bank (2017)

The penetration rate in Africa was lowest compared to other regions. The region had 6 bank branches per area and per capita compared to East Asia and Pacific with 74 branches per area and North America with 30 branches per capita. Presumably, the low bank branch penetration in Africa could be due to difficulties in achieving minimum viable scale in low-income areas and sparsely populated areas, though

technological innovations is rising to meet that challenge (Beck & Cull, 2013). The trend is also the same for depositors' accounts and deposits per 1000 adults.

Usage Indicators

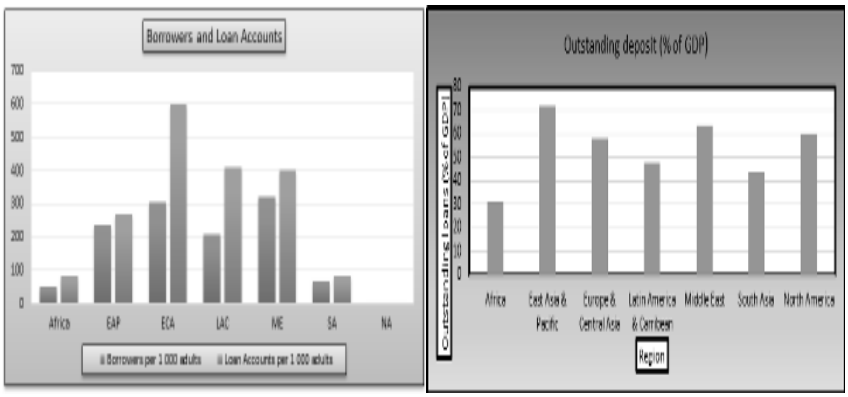

Figure 6. Trend in Usage Indicators (Regional)

Source: The World Bank-Global Financial Development Database June 2017

As shown above and below, the region lags behind all global regions, in all dimensions of financial inclusion.

3.4.3 Financial Inclusion Index Results

Table 3 below shows the summary statistics of the financial inclusion indices for the African countries for the period 2004-2016. This summary shows some remarkable features of the nature of financial inclusion in the African region. The study found that the average financial inclusion in Africa ranging between 0 in 2011-2013 and 0.88 in 2016 as portrayed by the maximum and minimum values. The implication is that despite the fact that some countries have low financial inclusion levels, others have high degrees of financial inclusion supporting the view that Africa is characterised by severe financial inclusion disparities (Ndlovu, 2017). However, despite the existence of large disparities in financial inclusion within Africa, their mean values are close to the standard deviation than to the minimum value. Two possible implications can be construed from this. Firstly, it is implied that there are very few countries with high financial inclusion levels. This is in keeping with literature; using the Boone indicator, the study found that banking sectors in Africa are somehow concentrated. Secondly, the closeness of the means to the standard deviation suggest some kind of financial inclusion within the region as the minimum values are near to zero which meant a financially exclusive region. The standard deviation confirms this suspicion providing credibility to the conclusion of a region characterised by low levels of financial inclusion. The descriptive statistics also show severe gaps between the maximum values and minimum values thereby

confirming the presence of wide variations in all sample indicators across economies. These figures index the existence of severe financial exclusion within the African region.

Table 3. Financial Inclusion Index Summary Statistics-Africa

Year	Mean	Standard Deviation	Maximum	Minimum
2004	0.13	0.16	0.80	0.01
2005	0.14	0.17	0.84	0.01
2006	0.10	0.17	0.17	0.00
2007	0.14	0.18	0.82	0.01
2008	0.15	0.18	0.83	0.01
2009	0.16	0.18	0.78	0.01
2010	0.16	0.18	0.77	0.01
2011	0.16	0.18	0.75	0.00
2012	0.16	0.18	0.79	0.00
2013	0.16	0.19	0.86	0.00
2014	0.17	0.18	0.86	0.02
2015	0.17	0.18	0.87	0.03
2016	0.17	0.19	0.88	0.02
Average	0.15	0.18		

Source: Author's Estimation (2018)

3.4.4. Financial Inclusion Analysis

Figure 7, Figure 8, and Table 4 below portrays the financial inclusion index results, giving a picture of the analysis of the financial inclusion trend in the regions between the periods 2004 to 2016. Precisely, Figure 7 indicates the country analysis of financial inclusion providing a pictographic view of the descriptions of financial inclusion. It serves to say that the graph clearly shows wide discrepancies in financial inclusion among the countries of the region, with Chad and Guinea having the least at 0.01 and Seychelles and Cape-Verde with the highest at 0.82 and 0.63 respectively. Over the period 2004 to 2016, only Cape-Verde and Seychelles had an average financial inclusion index above 50 percent as shown in Figure 7, and the majority were below 40 percent. This validates further the argument this study raised earlier that, the African region is characterised by very high levels of financial exclusion and also confirms the argument that most African countries need immediate intervention although financial exclusion is a global concern. These findings are also consistent with those obtained by Ndlovu (2017) who used less indicators and data span in his study. Mauritius was however excluded from the sample due to unavailability of data on bank accounts per 1000 adults; however, it had higher values for the other indicators of financial inclusion. The average index of financial inclusion is 0.15, which would suggest that the average financial

inclusion level is at 15 percent based on the index. Figure 8 portrays the evolution of year-on-year access to finance in the African region from 2004 to 2016. The indices were highest in 2016 at 0.17 and least in 2004 at 0.13. The study noted an upward trend in financial inclusion from the graph over the period as shown by the trend line. This upward movement continued between 2004 and 2016.

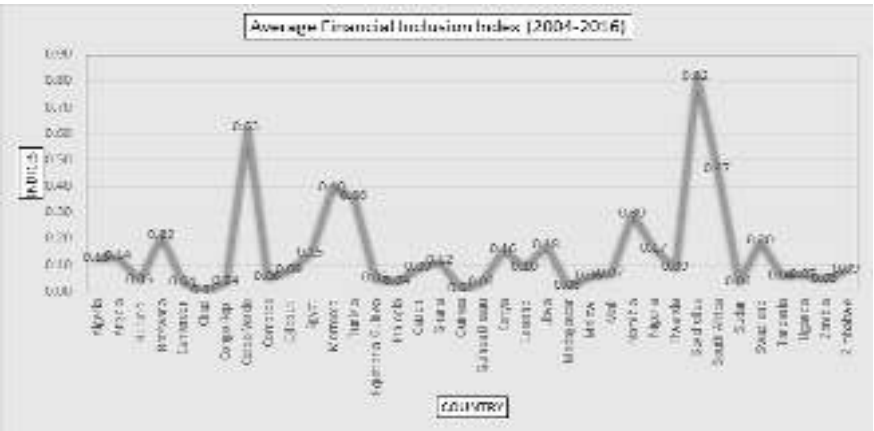

Figure 7. Average African Financial Inclusion Index by Country (2004-2016)

Source: Own Calculations from International Monetary Fund - Financial Access Survey (2017)

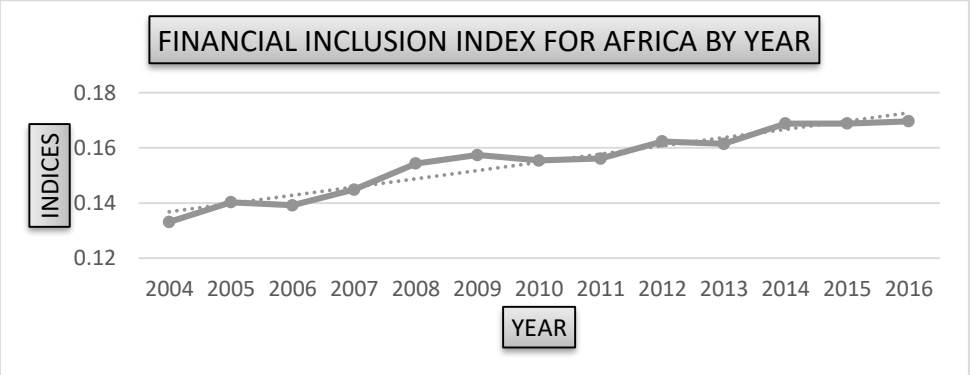

Figure 8. Average African Financial Inclusion Index by Year (2004-2016)

Source: Own Calculations from International Monetary Fund - Financial Access Survey (2017)

Table 4. Ranking of Countries according to Financial Inclusion Index

Country	2004	Ranking	2005	Ranking	2006	Ranking	2007	Ranking	2008	Ranking	2009	Ranking	2010	Ranking
Algeria	0,15	19	0,14	18	0,13	11	0,14	11	0,13	12	0,14	11	0,12	12
Angola	0,08	20	0,06	15	0,07	15	0,20	14	0,12	24	0,15	10	0,14	11
Burundi	0,06	26	0,05	16	0,05	17	0,25	13	0,05	18	0,04	20	0,05	17
Botswana	0,22	6	0,21	7	0,21	7	0,27	6	0,25	5	0,24	7	0,22	6
Cameroon	0,05	29	0,04	17	0,04	13	0,24	19	0,04	19	0,04	20	0,04	18
Chad	0,01	31	0,01	20	0,01	20	0,21	21	0,01	22	0,01	23	0,01	20
Congo Rep	0,01	31	0,01	20	0,01	20	0,22	20	0,02	21	0,03	22	0,03	19
Cape Verde	0,46	2	0,49	2	0,53	2	0,59	2	0,62	2	0,65	2	0,69	2
Comoros	0,04	27	0,03	18	0,03	19	0,23	20	0,03	20	0,04	20	0,05	17
Djibouti	0,06	28	0,05	16	0,06	17	0,26	17	0,07	16	0,09	13	0,10	12
Egypt	0,20	3	0,20	8	0,17	9	0,35	10	0,12	20	0,13	12	0,12	12
Morocco	0,29	5	0,35	5	0,38	5	0,36	5	0,37	4	0,43	4	0,45	4
Tunisia	0,37	8	0,38	4	0,37	4	0,38	4	0,37	4	0,37	5	0,38	4
Equatorial Guinea	0,05	20	0,05	18	0,04	18	0,24	19	0,05	18	0,05	19	0,05	17
Ethiopia	0,06	26	0,06	15	0,05	17	0,25	18	0,05	18	0,04	20	0,04	18
Gabon	0,08	24	0,09	13	0,08	14	0,33	15	0,08	15	0,08	16	0,07	15
Ghana	0,11	22	0,12	11	0,11	12	0,32	12	0,12	11	0,12	11	0,10	11
Guinea	0,01	31	0,01	20	0,01	20	0,21	21	0,01	22	0,01	23	0,01	20
Guinea Bissau	0,01	31	0,01	20	0,01	20	0,22	20	0,03	20	0,04	20	0,03	19
Kenya	0,10	23	0,10	12	0,10	13	0,31	13	0,14	11	0,15	10	0,16	9
Lesotho	0,10	24	0,10	12	0,10	12	0,29	14	0,08	13	0,06	16	0,09	14
Libya	0,21	7	0,19	8	0,18	8	0,27	9	0,15	9	0,16	9	0,15	10
Madagascar	0,03	29	0,03	18	0,03	19	0,23	20	0,03	20	0,03	21	0,04	18
Malawi	0,04	28	0,05	16	0,05	17	0,26	17	0,05	17	0,07	17	0,07	15
Mali	0,07	25	0,07	14	0,07	15	0,27	16	0,07	14	0,06	13	0,06	16
Namibia	0,21	7	0,22	6	0,22	6	0,22	7	0,28	6	0,30	6	0,31	5
Nigeria	0,12	21	0,12	11	0,11	12	0,35	10	0,32	8	0,34	7	0,13	8
Rwanda	0,02	30	0,04	17	0,05	19	0,34	19	0,10	13	0,10	14	0,10	13
Seychelles	0,80	1	0,81	1	0,82	1	0,82	1	0,83	1	0,75	1	0,77	1
South Africa	0,41	3	0,45	3	0,45	3	0,47	3	0,51	3	0,52	3	0,50	3
Sudan	0,01	31	0,02	19	0,04	18	0,24	19	0,04	19	0,04	20	0,04	18
Swaziland	0,18	18	0,21	7	0,21	7	0,21	8	0,22	7	0,20	8	0,19	7
Tanzania	0,06	26	0,08	13	0,08	16	0,26	17	0,07	16	0,06	18	0,07	15
Uganda	0,06	27	0,06	15	0,06	16	0,26	17	0,08	15	0,07	17	0,07	15
Zambia	0,03	29	0,04	17	0,04	18	0,23	18	0,07	16	0,06	18	0,05	17
Zimbabwe	0,14	20	0,14	10	0,14	10	0,29	14	0,08	13	0,06	18	0,07	15

Source: Own computation from World Development Indicators Database

Country	2011	Ranking	2012	Ranking	2013	Ranking	2014	Ranking	2015	Ranking	2016	Ranking	overall	Ranking
Algeria	0,12	12	0,11	12	0,12	12	0,13	12	0,15	12	0,11	15	0,13	12
Angola	0,14	11	0,18	10	0,17	9	0,17	10	0,18	10	0,28	8	0,15	12
Burundi	0,03	17	0,02	21	0,03	19	0,02	17	0,04	20	0,21	21	0,03	17
Botswana	0,22	7	0,21	7	0,21	7	0,19	7	0,23	8	0,43	5	0,22	7
Cameroon	0,04	18	0,04	22	0,04	20	0,04	18	0,04	20	0,23	19	0,04	18
Chad	0,02	22	0,00	25	0,00	24	0,00	20	0,01	21	0,21	21	0,01	19
Congo Rep	0,03	19	0,07	23	0,04	20	0,14	12	0,07	17	0,11	17	0,04	18
Cape Verde	0,69	3	0,70	3	0,67	3	0,65	3	0,61	3	0,65	4	0,61	2
Comoros	0,10	13	0,08	18	0,08	16	0,07	15	0,07	15	0,34	18	0,06	16
Djibouti	0,08	14	0,09	17	0,09	15	0,13	13	0,10	15	0,13	13	0,08	14
Egypt	0,15	10	0,14	12	0,14	11	0,13	13	0,15	12	0,21	10	0,16	13
Morocco	0,45	4	0,43	4	0,43	4	0,42	4	0,42	4	0,37	7	0,39	4
Tunisia	0,37	2	0,29	2	0,28	2	0,18	9	0,46	2	0,41	6	0,37	3
Equatorial Guinea	0,03	17	0,01	22	0,04	20	0,06	16	0,08	16	0,12	14	0,05	17
Ethiopia	0,03	19	0,01	22	0,04	20	0,01	18	0,04	20	0,20	22	0,04	18
Gabon	0,07	15	0,10	16	0,11	13	0,15	11	0,11	14	0,20	11	0,09	15
Ghana	0,13	13	0,12	14	0,12	12	0,13	13	0,15	13	0,27	17	0,12	13
Guinea	0,01	21	0,01	24	0,01	23	0,02	19	0,09	21	0,32	21	0,01	13
Guinea Bissau	0,04	18	0,04	22	0,04	20	0,15	12	0,02	19	0,38	18	0,04	18
Kenya	0,17	9	0,17	11	0,19	8	0,22	6	0,22	7	0,22	14	0,16	12
Lesotho	0,10	13	0,10	16	0,10	14	0,10	14	0,10	15	0,21	10	0,09	13
Libya	0,19	8	0,20	8	0,19	8	0,13	13	0,21	7	0,34	18	0,13	9
Madagascar	0,02	20	0,03	24	0,02	25	0,03	19	0,05	22	0,15	20	0,05	19
Malawi	0,06	16	0,08	18	0,07	17	0,07	15	0,06	19	0,27	17	0,06	16
Mali	0,06	16	0,07	19	0,07	17	0,13	13	0,08	16	0,34	18	0,07	15
Namibia	0,39	6	0,35	6	0,36	6	0,34	5	0,35	6	0,30	3	0,29	5
Nigeria	0,17	9	0,17	11	0,16	10	0,17	10	0,17	11	0,23	9	0,16	12
Rwanda	0,12	12	0,12	12	0,12	12	0,12	12	0,12	12	0,27	17	0,09	13
Seychelles	0,75	1	0,79	1	0,98	1	0,98	1	0,99	1	1,30	1	0,82	1
South Africa	0,48	3	0,47	3	0,44	3	0,46	3	0,48	3	0,48	2	0,47	3
Sudan	0,03	19	0,03	23	0,03	21	0,13	13	0,02	25	0,38	18	0,04	18
Swaziland	0,19	8	0,19	9	0,17	9	0,19	8	0,19	9	0,45	7	0,19	8
Tanzania	0,06	16	0,06	20	0,06	18	0,06	16	0,07	17	0,33	16	0,06	16
Uganda	0,07	15	0,07	19	0,06	18	0,13	13	0,06	18	0,35	19	0,07	15
Zambia	0,05	17	0,06	20	0,05	19	0,05	17	0,06	18	0,15	12	0,05	17
Zimbabwe	0,07	13	0,07	19	0,08	18	0,13	13	0,06	18	0,23	19	0,09	13

Source: Own computation from World Development Indicators Database

More than 95 percent of the African countries falls within the low financial inclusion range thereby justifying the call for immediate action in Africa. The FII values that the study computed across the African countries is consistent with other studies which concluded that financial exclusion is high in Africa (Ndlovu, 2017). The study

computed the mean FII by aggregating the index of financial inclusion values for each country between 2004 and 2016 and dividing by 13 which is the time interval between 2004 and 2016. The ranking of countries is done according to the alphabetical order of the sampled countries.

3.4.5. Econometric Analysis

The analysis of the determinants of financial inclusion in the African region is presented in Table 6 below with the correlation between the exogenous and endogenous variables reported in Table 5. We found a generally positive association between financial inclusion and other variables such as financial development, income level, and money supply (M2GDP) and a negative association with inflation and population size. Overall, the correlations suggest that there is no problem of multi-collinearity among the estimation variables employed for estimation.

Table 2. Cross Correlation between Variables

	1	2	3	4	5	6	7	8
Financial Inclusion	1.000							
Fin Development *p-Value*	0.546*** 0.000	1.000						
Inflation *p-Value*	-0.017 0.724	-0.092** 0.020	1.000					
Log GDP per capita *p-Value*	0.535*** 0.000	0.370*** 0.000	-0.0438 0.2690	1.000				
Population Density *p-Value*	0.027 0.582	0.247*** 0.000	-0.0221 0.5822	0.0055 0.8907	1.000			
Log Pop Size *p-Value*	-0.361*** 0.000	-0.064* 0.102	0.0156 0.6927	-0.31*** 0.0000	-0.249* 0.000	1.000		
Money Supply *p-Value*	0.597*** 0.000	0.740*** 0.000	-0.08*** 0.0566	0.543*** 0.0000	0.21*** 0.000	-0.18*** 0.0000	1.000	
Private-Credit (GDP) p-Value	0.681 (0.000)	0.868 (0.000)	-0.0871 (0.0311)	0.460 0.0000	0.325 (0.000)	-0.0848 (0.0352)	0.796 (0.00)	1.000

Table 6. GMM Regression Result

Dependent Variable: FII	Arrelano-Bond GMM Model (FII)	Arrelano-Bover/ Bundell-Bond	Economic Implication-Regression
Lagged FII p-Value	0.121*** (0.000)	0.549*** (0.000)	
Financial-Development Index p-Value	0.062*** (0.004)	0.189*** (0.000)	0.0426
Money (M2GDP) p-Value	-0.0001 (0.184)	-0.0005 (0.332)	-0.0696
Inflation p-Value	-0.0385*** (0.000)	-0.0426*** (0.000)	-0.3087
Population (log Pop) p-Value	-0.022 (0.149)	-0.101*** (0.000)	-0.4011
Population Density p-Value	0.0001 (0.184)	-0.00001 (0.617)	-0.0068
Income (log GDP per capita) p-Value	0.024*** (0.000)	0.059*** (0.000)	0.1609
Credit (% GDP) p-Value	0.003 (0.128)	0.002 (0.294)	0.2117
Constant	0.118 (0.239)	0.488*** (0.000)	
Observations	360	395	
Wald (Chi^2)	6374.99	10732.83	
Prob.>F/Chi^2 =	0.000	0.000	
Sargan Test	0.130	0.285	
AB Test	0.516	0.702	

Source: Author's Estimation (2018)

Standard error; ** $p < 0.05$, *** $p < 0.01$

Contingent to the regression coefficients signs, the values in Table 6 indicate how in percentage one standard deviation increase in the independent variables economically impacts on financial inclusion. A glance at the results showed that the economic implication of the lagged value of financial inclusion (L.FII) is positive and strongly significant indicating that financial inclusion in the past period has a significant effect in certifying financial inclusion in the current period and is persistent over time. Statistically significant lagged FII estimates mean that lagged financial inclusion has a significant impact on contemporary financial inclusion and would hence indicate a "catch-up effect." A zero coefficient implies a full catch-up, and a between zero and one coefficient would denote partial catch-up, which is the case in the models of this study. Since the lagged financial inclusion estimates falls between zero and one, it implies that countries with undersized financial inclusion have a propensity to recover most of any financial inclusion deficit incurred in the past. In fact, the lagged financial inclusion has an impact of up to 0.42 percent on the current financial inclusion of the African continent.

We also found financial development to be positive and strongly related to financial inclusion. In fact, the economic implication indicates that a one standard deviation increase in financial development increases financial inclusion by 4.3 percent in line with Ndlovu (2017) and Lenka and Barik (2018). The economic implication of the outcome of the regression of money supply (M2GDP) and financial inclusion shows that a one standard deviation increase in money supply result in a fall of 7 percent in financial inclusion. This could have been caused by too much money that is circulating in the informal financial system.

We found a significant inverse relationship between inflation and financial inclusion as a one standard deviation increase in inflation significantly reduced financial inclusion by 31 percent. The inverse relationship signifies that economic volatility and price increase lower the level of financial access. Since inflation erodes the time value of money, lenders normally increase interest rates to compensate for the loss. The significant inverse relationship signifies that an increase in financial inclusion reduces inflation which is at times used to proxy the effectiveness of the monetary policy in Africa. This is in keeping with Hung (2016) who found the same results in his study.

Similarly, we found a significant inverse association between population and financial inclusion and also between population density and financial inclusion though the effect was insignificant. This is consistent with Allen *et al*. (2014) despite their coefficient being insignificant. This shows that countries with large population size are not immune to challenges in enhancing financial inclusion. This could be a result of high dependency from the high population, which may be caused by negative externalities like unemployment, reduced savings and poverty, which reduces the demand and supply of financial services. Beck and De la Torre (2007) found that most African countries are characterised by a lower bankable population than the banked. This suggests the implementation of policies aimed at improving financial inclusion by focusing on increasing the bankable population, by either taking advantage of economies of scale or by encouraging banks to expand services to the unbanked or by liberalising the market to increase foreign market and/or non-bank participation.

We also found a significant positive economic impact of the level of income on financial inclusion. This also reiterates the literature rooting for levels of income as the fundamental reasons for financial inclusion (Chithra & Selvam, 2013; Tuesta, et al., 2015; Fungáčová & Weill, 2015). This shows that countries with high income per capita have financial systems which are highly inclusive. Countries with low income levels have comparatively lower literacy rates and poorer connectivity and appear to be more financially exclusive. High income is expected to be correlated with higher usage of formal credit and accounts. It is thus vital for policy makers to craft and implement policies that facilitate productive employment thereby boosting

income and increased use of financial services to spur economic growth. Financial status of people always plays a fundamental role in accessing financial services. Poor people with low income face challenges in accessing financial services. Finally, the economic implication of credit availability on financial inclusion is significant and positive. This was anticipated and could be as a result of variables such as lack of credit information and collateral amongst others which extremely subdue credit in Africa. This result contradicts Chithra and Selvam (2013) who found a significant association between credit and deposit penetration and the level of financial inclusion in India. Policy makers should come up with credit registry or other means of identifying credit worthy customers such as 'know your customer' so as to enhance the distribution of credit. Overall, the results are in agreement with the GMM regression models requirements as shown in Table 6 above. The fitness of the overall result is good as shown by the Wald test probability, and the Hansen J statistics results gives the confidence that the instruments are not over identified and AR(2) confirms the absence of serial correlation.

4. Conclusions

We constructed a new index of financial inclusion for 49 African economies using weights derived from principal component analysis in aggregating indicators for access, availability, and usage. Using the World Bank's Global Findex database, we combined Sarma's (2008) multidimensional approach with the normalized weights from principal component analysis of Camara and Tuesta (2014) in deriving our index. The financial inclusion index shows that there exists wide discrepancies in financial inclusion among the 49 African countries, with Chad and Guinea having the least at 0.01 and Seychelles and Cape-Verde with the highest at 0.82 and 0.63 respectively. Over the period 2004 to 2016, only Seychelles and Carbo-Verde had an average financial inclusion index above 50 percent, and the majority are below 40 percent. This validates further the argument that, the African region is characterised by very high levels of financial exclusion and thus needs immediate intervention. We also found that the lagged financial inclusion, financial development, income, credit and inflation are significant factors in explaining financial inclusion. Interestingly, we found an insignificant inverse link between financial inclusion and population density and population size.

We recommend policy makers to device measures to ensure an ongoing financially inclusive environment while stimulating other variables which acts as barriers to financial inclusion. Policy makers should also not just focus on enhancing financial inclusion, without corresponding improvements in financial sector development, income levels and credit availability as they positively contribute to financial inclusion.

5. References

Allan, A.; Massu, M. & Svarer, C. (2013). Banking on change: Breaking barriers to financial inclusion. *Plan, Barclays and Care*.

Amidžić, Goran; Massara, Alexander & Mialou, André (2014). Assessing Countries' Financial Inclusion Standing—A New Composite Index. *International Monetary Fund*, Working Paper No. 14/36.

Beck, T.; Demirgüç-Kunt, A. & Honohan, P. (2009). Access to financial services: Measurement, impact, and policies. *The World Bank Research Observer*, 24, pp. 119-145.

Cámara, N. & Tuesta, D. (2014). David Measuring Financial Inclusion: A Multidimensional Index. *BBVA Research*. Working Paper, Nº 14/26.

Chakravarty, S. & Pal, R. (2010). Measuring Financial Inclusion: An Axiomatic Approach. *Indira Gandhi Institute of Development Research*, Working Paper No. WP 2010/003.

Chithra, N. & Selvam, M. (2013). *Determinants of financial inclusion: An empirical study on the inter-state variations in India.*

Clamara, N.P.X. & Tuesta, D. (2014). *Factors that matter for financial inclusion: Evidence from Peru.*

Demirgüc-Kunt et.al (2015). The Global Findex Database 2014: Measuring Financial Inclusion around the World. *Policy Research Working Paper*, World Bank, Washington, DC.

Evans, O. (2016). *Determinants of Financial Inclusion in Africa: A Dynamic Panel Data Approach*. https://mpra.ub.uni-muenchen.de/81326/1/MPRA_paper_81326.pdf.

García, N.; Grifoni, A.; López, J.C. & Mejía, D. (2013). *Financial Education in Latin America and the Caribbean.*

Honohan, Patrick (2007). Cross-Country Variation in Household Access to Financial Services. *World Bank Paper prepared for the Conference*. Access to Finance. March 15−16. Washington, DC.

Kim, D.W.; Yu, J.S. & Hassan, M.K. (2018). Financial inclusion and economic growth in OIC countries. *Research in International Business and Finance*, 43, pp. 1-14.

Korynski, P. & Pytkowska, J. (2017). Measuring Financial Inclusion in the EU: Financial Inclusion Score Approach. *Journal of Microfinance.*

Lenka, S.K. & Sharma, R. (2017). Does Financial Inclusion Spur Economic Growth in India? *The Journal of Developing Areas*, 51(3), pp. 215-228.

Moïse, B. & Xu, H. (2018). Financial Inclusion in Rwanda: an Analysis of Role Played by Commercial Banks. *International Journal of Management Science and Business Administration*, 4(2), pp. 25-31.

Ndlovu, G. (2017), Access to financial services: Towards an understanding of the role and impact of financial exclusion in Sub-Saharan Africa. *Doctoral thesis*, UCT.

Nkwede, F. (2015). Financial inclusion and economic growth in Africa: Insight from Nigeria. *European Journal of Business and Management*, 7(35), pp. 71-80.

Sarma, Mandira (2008). Index of Financial Inclusion. Indian Council for Research on International Economic Relations Working Paper No. 215.

Sharma, D. (2016). Nexus between financial inclusion and economic growth: Evidence from the emerging Indian economy. *Journal of Financial Economic Policy*, 8(1), pp. 13-36.

World Bank, Global Financial Inclusion Database. http://www.worldbank.org/en/programs/globalfindex, (accessed on November 2018).

Remittances, Financial Development and Economic Growth: A Case of Southern African Development Community

Witness Nyasha Bandura[1], James Zivanomoyo[2], Kunofiwa Tsaurai[3]

Abstract: Remittances play an important role in poverty reduction especially in developing countries. The goal of this research was to determine the association of remittances inflow with financial development and economic growth in Southern African Development Community (SADC). A sample period between 2006 and 2016 on 14 countries in the region was considered with the utilization of GMM dynamic panel techniques. The findings present evidence of a positive impact of remittances on economic growth, while a negative association between remittances and financial development is also found. The results are unique since many previous studies established a positive relationship between remittances and financial development. The negative relationship between remittances and financial development in SADC implies investment is mainly financed through remittances inflow since access to bank financing is very difficult. These results support the substitution hypothesis and they are in line with findings by Paola and Ruiz-Arranz (2009) and Calderon et al (2007) who found similar results. We recommend that inflows of remittances should be encouraged in SADC since they can be channeled to the most productive sectors of the SADC economies. Besides, the development of the financial sector would eventually shift the reliance of private financing on remittances in favour of banking services which ensure sustainable development in the long-run.

Keywords: Remittances; Financial Development; Economic Growth; SADC

JEL Classification: F24; O16; F43; N67

1. Introduction

The need to determine the association of remittances with economic growth and financial development is pivotal as remittances have become a major source of foreign exchange earnings for many nations. This need is particularly huge in low-middle income countries to which remittances represent a more stable and major part

[1] Lecturer, PhD, Department of Economics, Midlands State University, Zimbabwe, Address: Gweru, Zimbabwe, Zimbabwe, E-mail: witnessbandura22@gmail.com.
[2] Senior Lecturer, PhD, Department of Economics, Great Zimbabwe University, Address: Zimbabwe, Zimbabwe, E-mail: witnessbandura22@gmail.com.
[3] Associate Professor, Department of Finance, Risk Management and Banking, University of South Africa, South Africa, Address: P.O. Box 392, UNISA 0003, Pretoria, South Africa, Corresponding author: tsaurk@unisa.ac.za.

of private capital flows in relation to foreign direct investment and official development assistance as of 2017 (World Bank, 2018).

There has been contrasting evidence on the impact of remittances towards financial development which comprise the substitution and complementarity hypothesis. Those who argue for substitute hypothesis believe that remittances fill-in the gap on effectiveness of financial system by providing poor people with alternative financial resources for investment in high return projects. Calderon et al (2007), observed that the effect of remittances on growth is inversely related to financial development as remittances reduce credit problems in countries with weak credit markets. Paola and Ruiz-Arranz (2009), also confirmed evidence of positive impact of remittances inflow on growth and a negative association of remittances and financial depth. As such, remittances contribute significantly in countries with less developed financial system and their impact is strong in areas with well-developed financial system. Consequently, remittances act as a stabilizer of a failing financial systems on effective financial service provision to promote growth. The complementarity hypothesis, however, implies that there is a positive relationship between remittances and financial development. The developed financial sector helps migrants to send money home which stimulates the sector and brings competition in financial intermediaries and this ensures that that funds are channeled to the most productive investments (Mookerjee & Roberts, 2011). Aggarwal et al (2011), also show the positive impact of remittances inflow on financial development in recipient countries through the increased demand for banking services and the increase in loanable funds. Besides, a more developed financial sector attracts low costs of transferring money which increase the levels of remittance inflow (Freund & Spatafora, 2008). The confidence of migrants is also boosted by a well-developed financial sector which encourages them to remit more (Chami et al., 2005).

The need to determine the association of remittances and financial development is motivated by critical role which financial development plays in ensuring sustainable economic growth (King & Levine, 1993; Levine et al, 2000). Banking services are described as a perquisite for rapid economic growth as they provide credit to the most productive sectors. Behind this notion, remittances are believed to perform the same role as complement or to fill-in the gap of financial market ineffectiveness as substitute.

On the other hand, questions on whether remittances are a form of capital transfer or simply income are also discussed in the literature. Canales (2002), posit that remittances are mainly directed towards household consumption as the economic hardships in the receiving countries constraint the productive use of such funds. This means a less than expected impact of remittances on economic growth. Ahortor and Adenutsi (2009), also argued for a negative impact of the lost skilled workers from migration as well as over-dependence on external economies on economic growth.

As such, the level of remittance inflow from high migrants is associated with a negative economic growth. Contrary, Woodruff and Zenteno (2001), and Giuliano and Ruiz-Arranz (2009) established a positive impact of remittances on growth as remittances increase development through investment. Dustmann and Kirchamp (2001), also found that an important source of startup capital for microenterprises is through remittances. The evidence of the positive impact of remittances to economic growth is also paramount in studies by Catrinescu et al (2009), Mundaca (2009). This then implies a significant impact of remittance inflow on economic growth through investment.

Despite elementary evidence on remittances, financial development and economic growth in the literature, none of them have narrowed down their focus to economies in Southern Africa Development Community (SADC) alone. This study also considers the most effective financial development indicator (credit to the private sector by banks over GDP) which allows us to determine the level of dependence by local investors on banks with respect to inflow in remittances. This has provided us with the gap in the literature as many studies have not analyzed remittances, financial development and economic growth together.

The rest of the paper is organized as follows: Section 2 discusses the study background. Section 3 discusses the theoretical framework and literature review. Sections 4 and 5 focus on methodology and analysis of results, respectively. Section 6 discusses the conclusion and policy recommendations.

2. Study Background

The cost of remittance transfers reflects the level of financial development of the receiving nations. This idea is supported by Freund and Spatafora (2008), who observed that highly developed financial system will attract low costs of transferring money. This would consequently lead to increased level of remittance inflows. Over the period 2011Q1 and 2016Q1, the Southern Africa Development Community (SADC) region has been experiencing the highest level of remittances transfer costs relative to other regions as shown in Figure 1. This also reflects high levels of banking services exclusion which includes remittance transfers services through the formal channels. As such, there is high probability of losing so much money through the use of such expensive financial system with a consequent losing of the hard-earned foreign income. This leads to loss of confidence on the financial system which further weakens the level of financial development in such economies. Chami et al (2005), also supported the view by asserting that confidence of migrants on the use of formal financial system is increased by well-development financial sector.

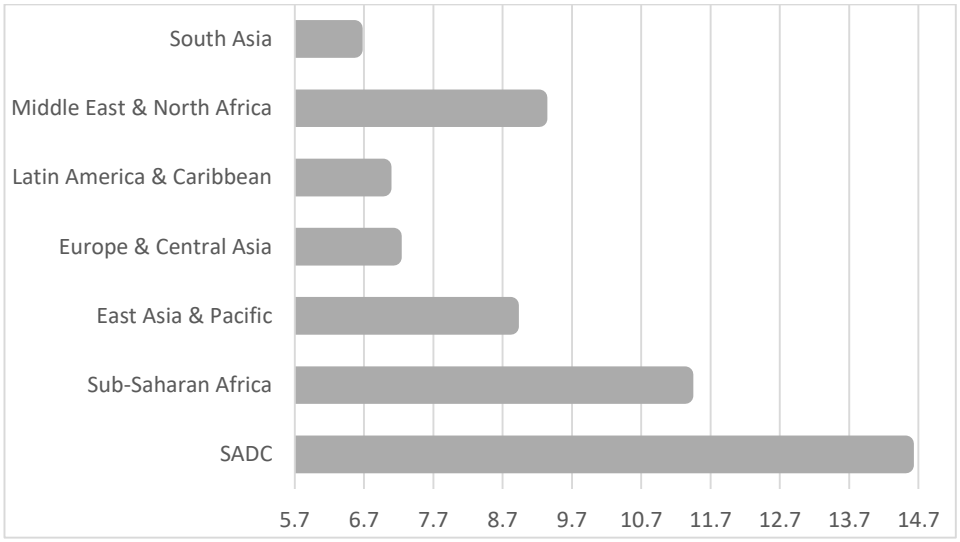

Figure 1. Average Regional Comparison of Remittance Price (2011Q1-2016Q1)

Source: Researchers' computations based on Remittance Price Worldwide Database (2018)

Figure 1 also shows that South Asia and Latin America and Caribbean exhibit the lowest average costs structures on remittance inflows of 6.57% and 6.98%, respectively. This demonstrates the high level of development in their financial sectors. Given that SADC and Sub-Saharan Africa exhibit the highest average remittance inflow transfer costs structure of 14.22% and 11.34%, respectively. This implies the existence of weak financial systems and hence weak complementarity with remittances, consistent with Tsaurai (2018a). The benefits of remittances inflow on financial development will not be fully realised in this condition. Instead, private investment would alternately source alternative financial services from remittance inflow which is in line with the substitution hypothesis. Remittances would then begin to perform the role of the failing financial system. Over the same period (2011Q1 to 2016Q1), Malawi, Botswana and Mozambique are the countries in SADC with the highest average remittance inflows of 19.98%, 19.21% and 18.88%, respectively. While the countries with better financial systems within the region are Congo Rep and South Africa which exhibit the lowest remittances inflows of 8.68% and 8.80%, respectively.

Besides, over the same period of analysis of 2006 to 2016, there has been a continuous decline in the levels of remittances received as a ratio of GDP as shown in Figure 2. This shows that the amount of foreign exchange generation through remittances has been on the decline. This could be attributed to the high costs of using formal channels or the general lack of confidence by migrants with the use of

domestic financial systems. This raise worries given that remittances occupies a significant part on the international capital generation for the SADC region.

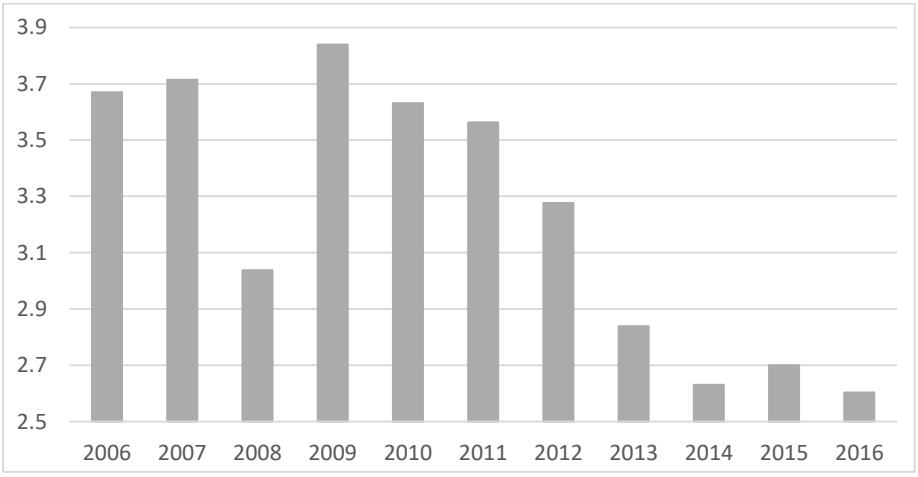

Figure 2. Average Personal Remittances Received in SADC (%GDP) over 2006-2016)

Source: Researchers' computations based on World Development Indicators (2018)

Within the SADC region, the highest earners of personal remittances received as a ratio of GDP by 2016 were Lesotho (15.0%), Zimbabwe (11.2%), Swaziland (2.6%), Madagascar (2.5%), Seychelles (1.5%) and Tanzania (0.9%). While Angola (0.004%), Congo Dem Rep (0.05%), Botswana (0.16%), Zambia (0.18%) and South Africa (0.26%) exhibits the least proportion of remittances on their GDP levels. Zimbabwe and South Africa reported the highest absolute values of personal remittances amounting to US$1856 million and US$755 million, respectively. In Zimbabwe this is related to its high migrating population in search for greener pastures while the general size of South Africa's economy and its migrating population also leads to high remittance inflows. Lesotho was the found to have relative high levels of remittances both as a share of GDP (15%) and in actual value (US$343 million). This is attributed to its high reliance on South Africa's labour market and other critical economic activities. In terms of actual remittances value, Angola, Congo Dem Rep, Seychelles, and Botswana received the lowest in SADC as of the year 2016 with US$3 million, US$15 million, US$22 million, and US$24 million, respectively.

Over the same period of analysis, we observe that the economic growth of the SADC region was continuously falling. This was closely conforming to the decline in the level of remittances received as a share of GDP over the same period 2006 to 2016, as shown in Figure 3. This might imply causation of the two indicators and hence the need to also analyze the relationship in this study. The Figure 3 shows that from the year 2010 both the economic growth and remittances as a ratio of GDP were

gradually falling. The personal remittances received as a share of GDP are plotted on the secondary axis.

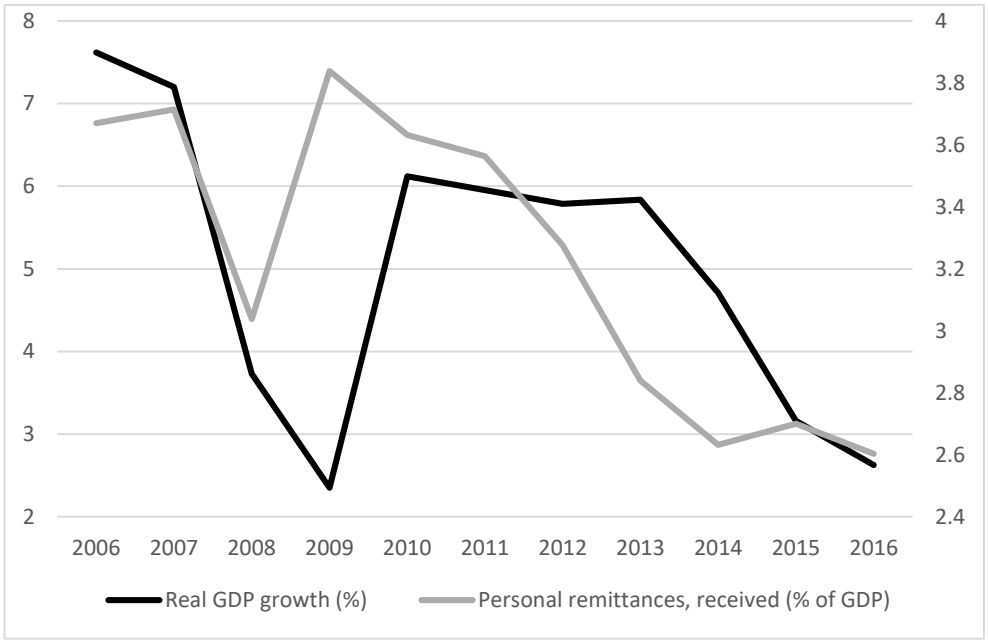

Figure 3. Real GDP Growth (%) and Remittances received (%GDP) for SADC over 2006-2016)

Source: Researchers' computations based on World Development Indicators (2018)

A continuous decline in GDP growth on the background of declining levels of remittances inflow as a ratio of GDP and a weak financial system as reflected by the high costs of remittances inflow, we are inspired to identify the association of these variables over this period under review. A stable positive economic growth is always healthy for sustainable development of any region.

3. Literature Review

Theoretical Framework: A strong theoretical framework has been built on the impact of financial development and economic growth over the years. Evidence on the significance of remittances on financial development and economic growth can also easily be linked. Financial development has been described as the engine to economic activities through credit creation and their allocation to the most productive sectors (Levine et al., 2000; King & Levine, 1993). Financial development provides a market for trading financial services which makes it easy to link financial resources with the areas they are needed the most for the successful

story of development (Modigliani & Miller, 1963). Besides, the credit creation and its economic allocation promotes innovation as stressed by Schumpeter (1982). As such, the development in the financial sector has a direct impact on economic growth. Given the compensation and substitution hypothesis of remittances and financial development, we can learn that remittances can improve the financial system, or they can work as alternative for financial services. This shows that the long-standing theory on financial development and economic growth can easily be related with remittances.

Taking advantage of the substitute and complementary hypothesis of remittances and financial development, we can fit the prominent growth models with remittances. The neo-classical growth theories which includes the Solow growth model and Harrod-Domar AK growth model shows that financial sector has a common channel through which economic growth is affected by speeding up of capital accumulation as well as by increasing the rate of technological progress (Solow, 1997). This works by promoting growth through mobilizing savings for investment, facilitating and encouraging capital inflows and allocating capital efficiently among competing uses. As such, high remittances inflows will translate into progressive development in the financial system of the economies which then feeds into sustainable economic growth.

Empirical Literature: There is an extended discussion on remittances, financial development and economic growth in the literature. Giuliano and Ruiz-Arranz (2009) determined the relationship that exist between remittances and economic growth with respect to levels of financial development. They considered a sample period from 1975 to 2002 on 100 developing countries utilizing OLS, Fixed Effects and SGMM methods. Their findings show that remittances are effective in increasing growth in countries with less developed financial system. This is so as there would be need for alternative way to finance investment and reducing the liquidity challenges. The study, however, did not consider a direct relationship between remittances and financial development. In this study we are considering the direct relationship between remittances and growth as well as remittances and financial development.

Besides, a positive impact of workers' remittances on financial development was also found by Aggarwal et al (2011) in 109 developing countries over the period 1975 to 2007. Bank deposits over GDP and bank credit over GDP were the financial development indicators used. The study utilized the fixed effect, system GMM and IV regression. The study, however, did not consider the most effective measure of financial development which is private sector credit over GDP. In this study we are therefore going to determine the relationship that exist on remittances and the availability of financial resources to the most effective private sector from the banks.

Aggarwal et al (2011) also observed a positive impact of remittances on financial development on 99 developing countries over the period 1975 to 2003. They considered bank deposits/GDP and ratio of bank credit to the private sector as indicators for financial development. The relationship was discovered by utilizing fixed effects, random effects and GMM techniques. In this study we are more concerned about activities in a homogenous region of SADC alone.

A study in European countries (Austria, Greece, Finland, Norway, Sweden, Hungary, Italy, Spain and Portugal) over the period 1870 to 1913 shows that remittances contributed positively on financial development (Esteves & Khoudour-Casteras, 2011). The period was associated with mass migration. They utilized pooled OLS with robust standard errors and they also consider deposits/GDP and M1/GDP as measures of financial development. They concluded that remittances were channeled into financial sector mainly through longer maturity accounts. This study, however, may not effectively reflect the current activities in the developing and emerging countries in SADC and hence the need for us to undertake this research.

In panel analysis of 25 countries from Latin America and the Caribbean, Mundaca (2009) found that workers' remittances have a positive impact on economic growth. Controlling for fixed time effect and country effect, they also found that the financial intermediation is more likely to increase the responsiveness of growth to remittances. The sample period was from 1970 to 2002 and domestic credit from banks over GDP was the financial indicator used. As such, they conclude that making financial services available leads to effectiveness of remittances. In this study we are, however, aiming at determining the direct impact of remittances on financial development as well as on economic growth.

Agir et al (2011) also investigated the relationship between remittances, financial development and economic growth in the 9 MENA countries over the period 1980 to 2007. Their findings supported unidirectional relation from economic growth to financial development. They also found that workers' remittances provide a channel to improve financial development. The study uses a financial development index made up of ratio of money to income, the ratio of quasi money to income, ratio of broad money, ratio of deposit money bank liabilities to income, ratio of private sector credit to income and ratio of domestic credit to income. In our study we are, however, considering the private sector credit provided by banks separately.

A time series analysis in Bangladesh was also carried out by Chowdhury (2011) on the relationship between workers' remittances and financial development. Vector Error Correction Model was utilized with the annual data for the period 1971 to 2008. Private domestic deposits to GDP, bank credit/GDP and M2/GDP were the financial development indicators used. The findings supported the positive impact of remittances on financial development. This study, however, did not consider the

most critical indicator of credit availability to the most productive private sector. Tsaurai (2018b) revealed that remittances were a panacea for poverty reduction and economic growth in emerging markets.

Kumar (2011) also utilized bounds test over the period 1980 to 2009 to determine the relationship between remittances, exports and financial development on economic growth in Pakistan. A positive impact of remittances on economic growth was found in long-run only. This was attributed to the flowing of remittances through the informal channels and accumulated at home for later investment. This study, however, pay attention on the impact of remittances on financial growth and economic growth.

4. Methodology and Data

One step difference and system Generalized Methods of Moments (GMM) approach was utilized in this panel analysis of Southern Africa Development Community (SADC) region. The model specification takes the form:

$$y_{it} = \propto + y_{it-1} + \omega_k \sum_{k=1} x_{it} + year + \emptyset \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Where; y_{it} is the dependent variable, $\propto$ represents the constant, y_{it-1} is the lag of the dependent variable, x_{it} is the vector of explanatory variable, $year$ represents the year dummy, $\emptyset$ represents the composite error term.

To avoid the problems associated with the conventional Arellano and Bond (1991) difference GMM, the study also reported the results from the system GMM perfected by Blundell and Bond (1998). The original Arellano and Bond estimator produces poor instruments for first difference when the variables are random walk and when autoregressive parameters are large. The system estimator is also more efficient as it does not have a downward bias as compared to the difference GMM (Blundell & Bond, 1998). There may be loss of necessary information by using only differenced equation in difference GMM in relation to system which includes the equation in levels.

Personal remittances received as a share of GDP (REM%GDP) was the main indicator representing remittances inflow used in the analysis. The variable is the widely used indicator for remittances inflow in the literature (Aggarwal et al., 2011; Giuliano & Ruiz-Arranz, 2009). We are expecting it to have a positive impact on economic growth. The variable comprises personal transfers and compensation of employees. Alternately, we also consider the personal remittances received in current US dollars (REM$US) and the variable also comprises personal transfers and

compensation of employees. Domestic credit to private sector as a ratio of GDP (FD) is the financial development indicator used in this study. The variable has been proved to be the best indicator in studies by Levine et al (2000) and King and Levine (1993). On the control variable, exports of goods and services as a share of GDP (EXPORTS) was also used. A positive impact on economic growth is expected. A negative impact of depreciating official exchange rate in local currency units per US dollar (EXCHANGE) is expected in this study. The annual percentage inflation (GDP deflator) is also expected to have a negative impact on financial development. Real GDP in local currency unit (GDP) is also expected to have a positive impact on financial development. The measure of economic growth used is Real GDP growth rate (GDP growth). All the dataset used were obtained from the World Development Indicators.

5. Results and Discussion

The summary statistics in Table 1 shows that we are working with unbalanced panels since there are varying numbers in observations from the variables considered. Real GDP growth rate and inflation are the only variables with negative values and hence they their logarithms are not generated in the regressions.

Table 1. Summary Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
GDP growth	154	5.027839	4.344507	-17.66895	22.59305
GDP	154	3.55e+12	9.15e+12	5.61e+09	4.72e+13
REM%GDP	149	3.21677	6.842325	0.000197	35.04764
REM$US	149	2.74e+08	4.49e+08	162358.5	2.11e+09
FD	143	23.02727	17.88575	2.069764	78.29413
EXPORTS	151	40.45843	18.24911	17.10083	107.9944
Inflation	154	8.714948	8.67452	-7.418799	74.29818
EXCHANGE	146	4.60e+07	5.56e+08	3.603072	6.72e+09

The variables in logarithm are prefixed with “ln”. The data was tested for unit root test before it was incorporated in model specifications. Different panel unit root test was used and only the Fisher type chi-squared based on the Augmented Dickey Fuller (ADF) tests were able to compute data which is not strongly balanced. Findings shows that all the variable are stationary in levels. The lnEXCHANGE become stationary after subtracting cross section means and lnGDP become stationary with a trend.

Table 2. Panel Unit-root Test Results

Variable	Levin-Lin-Chu (p-values)	Im-Pesaran-Shin (p-values)	Breitung (p-values)	ADF-Fisher chi-squared (p-values)
GDP growth	0.0000	0.0042	0.0199	0.0000
lnGDP	0.0000	0.1654	0.5400	0.0000
lnREM%GDP	-	-	-	0.0000
lnREM$US	-	-	-	0.0000
lnFD	-	-	-	0.0000
lnEXPORTS	-	-	-	0.0108
Inflation	0.0001	0.0001	0.0001	0.0000
lnEXCHANGE	-	-	-	0.0004

The model specifications were also tested for multicollinearity using VIF. Given that the acceptable level for no multi-co should be less than 10 according to Kennedy (2008), we conclude that the majority of the models are valid. As shown in Table 3 the inclusion of lnEXCHANGE in economic growth regression and the inclusion of lnGDP in financial development regression renders the models being affected by problems of multicollinearity. This is attributed to the strong association between the exchange rate and exports in the growth regression. The relationship between GDP and remittances also causes multicollinearity problems in the financial development regressions. The results for all model specifications are, however, presented despite the existence of multicollinearity for the analysis' sake. The regression results shown in Table 4 are showing more of less the same results

Table 3. Multi-collinearity Test Results

Variable	VIF GDP	VIF lnFD	VIF GDP	VIF lnFD	VIF GDP	VIF lnFD
lnGDP	-	-	-	-	-	256.02
lnREM%GDP	7.79	6.83	-	-	6.73	6.88
lnREM$US	-	-	4.85	4.03	-	-
lnEXPORTS	7.44	-	7.44	-	8.23	-
Inflation	-	1.21	-	1.24	-	1.28
lnEXCHANGE	-	-	-	-	61.40	-
Mean VIF	6.67	4.99	4.39	2.87	14.64	44.42

Table 4. The One-step Difference GMM Results (Robust Regressions)

The *p-values* in parentheses; *, ** and *** represents significance at 10%, 5% and 1%, respectively.

The dynamic results following the one-step difference GMM by Arellano and Bond (1991) and system GMM (Arellano & Bover, 1995; Blundell & Bond, 1998) are shown in Table 4 and Table 5, respectively. On the diagnostic checks, Wald statistic with the null hypothesis that all the coefficients except the constant are zero is rejected implying model significance. Arellano-Bond test for first order serial correlation also fails to reject the null hypothesis of no second order autocorrelation in all specifications. The first-differenced errors are serially correlated in second order which implies that the moments are valid since the idiosyncratic errors are independently and identically distributed (Arellano & Bond, 1991).

Table 5. The One-step System GMM Results (VCE-Robust Regressions)

The *p-values* in parentheses; *, ** and *** represents significance at 10%, 5% and 1%, respectively.

Findings from both the difference and system GMM approach suggests a positive impact of remittances on economic growth. This is attributed to the increase in domestic credit for investment and the general increased domestic consumption which supplies into the aggregate national income. The results are in line with the majority of findings in the literature which include Giuliano and Ruiz-Arranz (2009) and Mundaca (2009). Domestic investment of remittance receiving countries are highly developed as these earnings are used as capital transfers to the most productive private sector (Woodruff & Zenteno, 2001). As such, remittances are critical for sustainable economic growth. On the other hand, the difference GMM presented a negative and significant relationship between remittances and financial development. Even though the system GMM also exhibited a negative association between remittances and financial development, the results were not significant at any level of significance. The negative association results are unique to this region as many studies have established a positive relationship. The negative relationship in SADC implies the resorting of private financing for investment purposes on remittances as access to banking services is tight. These results are in line with findings by Giuliano and Ruiz-Arranz (2009) who suggested a positive impact of remittances inflow on growth and a negative association of remittances and financial

depth. The substitution hypothesis holds in this case as private investors are opting for readily available and cheap non-banking services through remittances.

On the control variables, a positive impact of exports on economic growth is also established. This coincide with the evidence provided by Ajmi et al (2015) in South Africa. The depreciation of the domestic currency against the greenback is also supported which also concur with the observations in MENA region by Ncube et al (2013). Inflation rate as measured by the deflator shows a negative impact on financial development. This is supported by the readily available literature which include the work by Boyd et al (2001). There was also evidence of a positive impact of GDP on financial development. This reflect the demand following hypothesis by Patrick (1966) which states that the level of economic development would attract the demand of financial services and their improvement.

6. Conclusion and Recommendations

The research aims to determine the link between remittances inflow, financial development and economic growth in Southern Africa Development Community (SADC). A sample period between 2006 and 2016 on 14 countries in the region was considered with the utilization of GMM dynamic approach. Findings presented evidence of a positive impact of remittances on economic growth while a negative association between remittances and financial development was also observed. The results are unique to this region as many studies have established a positive relationship on remittances and financial development. The negative relationship in SADC implies the resorting of private financing for investment on remittance inflow as access to banking services is tight. These results suggested an inverse association between financial development and remittances. The substitution hypothesis holds in this case as private investors are opting for alternative credit sources which are non-banks.

Given that remittances are strong and positively contributing to the increase in economic growth in the region under study, it's recommended to put remittance incentives through cheap remittance charges. A negative relationship between remittances and financial development implies the existence of financial markets failure as private investors shift from banking services to the remittance earnings. High cost structures, lack of banking sector confidence and lack of bank access may be the major contributing factors. The authorities are then recommended to restore the primary role of the banking sector through provision of credit to the private sector. In order to fully benefit from the positive contribution of remittances, there must be well developed financial system in place.

7. References

Aggarwal, R.; Demirgüç-Kunt, A. & Peria, M.S.M. (2011). Do remittances promote financial development? *Journal of Development Economics,* Vol. 96, no. 2, pp. 255-264.

Agir, H.; Kar, M. & Nazlioglu, Ş. (2011). Do remittances matter for financial development in the MENA region? Panel cointegration and causality analysis. *Empirical Economics Letters,* Vol. 10, no. 5, pp. 449-456.

Ahortor, Christian R.K. & Deodat E. Adenutsi, (2009). The Impact of Remittances on Economic Growth in Small-Open Developing Economies. *Journal of Applied Sciences,* Vol. 9, no. 18, pp. 3275–86.

Ajmi, A.N.; Aye, G.C.; Balcilar, M. & Gupta, R. (2015). Causality between exports and economic growth in South Africa: Evidence from linear and nonlinear tests. *The Journal of developing areas*, Vol. 49, no. 2, pp. 163-181.

Arellano, M. & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, Vol. 68, no. 1, pp. 29-51.

Blundell, R. & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics,* Vol. 87, no. 1, pp. 115-143.

Boyd, J.H.; Levine, R. & Smith, B.D. (2001). The Impact of Inflation on Financial Sector Performance. *Journal of Monetary Economics,* Vol. 47, no. 2, pp. 221-248.

Calderón, C.; Fajnzylber, P. & López, H. (2007). *Remittances and growth: the role of complementary policies*. In Fajnzylber, P. & López, H. (eds.). *Remittances and Development: Lessons from Latin America*. Washington, DC: World Bank, pp. 335–68.

Canales, A.I. (2002). El papel de las remesas en la capacidad de ahorro e inversión de los hogares en México. In Jaciel Montoya (Ed.). *Memorias del Encuentro Nacional: La Población en México, Cambio Demográfico y Consecuencias Sociales*. Universidad Autónoma del Estado de México.

Catrinescu, N.; Leon-Ledesma, M.; Piracha, M. & Quillin, B. (2009). Remittances, institutions, and economic growth. *World Development,* Vol. 37, no. 1, pp. 81-92.

Chami, R.; Fullenkamp, C. & Jahjah, S. (2005). Are immigrant remittance flows a source of capital for development? *IMF Staff papers*, Vol. 52, no. 1, pp. 55-81.

Chowdhury, M.B. (2011). Remittances flow and financial development in Bangladesh. *Economic Modelling,* Vol. 28, no. 6, pp. 2600-2608.

Dustmann, C. & Kirchamp, O. (2001). The Optimal Migration Duration and Activity Choice after Re-Migration. *IZA Discussion Paper* 266.

Esteves, R. & Khoudour-Castéras, D. (2011). Remittances, capital flows and financial development during the mass migration period, 1870–1913. *European Review of Economic History,* Vol. 15, no. 3, pp. 443-474.

Freund, C. & Spatafora, N. (2008). Remittances, transaction costs, and informality. *Journal of Development Economics,* Vol. 86, no. 2, pp. 356-366.

Giuliano, P. & Ruiz-Arranz, M. (2009). Remittances, financial development, and growth. *Journal of Development Economics,* Vol. 90, no. 1, pp. 144–52.

Kennedy, P.A. (2008). *Guide to Econometrics*. 6th Ed: Wiley-Blackwell.

King, R.G. & Levine, R. (1993). Finance and growth: Schumpeter might be right. *The Quarterly journal of Economics*, Vol. 108, no. 3, pp. 717-737.

Kumar, R.R. (2011). Do remittances, exports and financial development matter for economic growth? A case study of Pakistan using bounds approach. *Journal of International Academic Research*, Vol. 11, no. 1, pp. 18-27.

Levine, R.; Loayza, N. & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *Journal of monetary Economics,* Vol. 46, no. 1, pp. 31-77.

Modigliani, F. & Miller, M.H. (1963). Corporate income taxes and the cost of capital: a correction. *The American Economic Review*, Vol. 53, no. 3, pp. 433-443.

Mookerjee, R. & Roberts, J. (2011). Banking services, transaction costs and international remittance flows. *Applied Economics Letters,* Vol. 18, no. 3, pp. 199-205.

Mundaca, B.G. (2009). Remittances, financial market development, and economic growth: the case of Latin America and the Caribbean. *Review of Development Economics*, Vol. 13, no. 2, pp. 288-303.

Ncube, M.; Anyanwu, J.C. & Hausken, K. (2013). Inequality, Economic Growth, and Poverty in the Middle East and North Africa (MENA). *Working Paper*, No 195.

Patrick, H.T. (1966). Financial Development and Economic Growth in Under Developed countries. *Economic Development and Cultural Change,* Vol. 14, no. 2, pp. 174-189.

Schumpeter, J.A. (1982). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle (1912/1934)*. Transaction Publishers. –1982.–January 1, 244.

Solow, R.M. (1997). *Learning from "Learning by doing": lessons for economic growth'*. Stanford University Press.

Tsaurai, K. (2018a). The impact of remittances on poverty alleviation in selected emerging markets. *Comparative Economic Research,* Vol. 21, no. 2, pp. 51-68.

Tsaurai, K. (2018b). An empirical study of the determinants of banking sector development in the SADC countries. *The Journal of Developing Areas,* Vol. 52, no. 1, pp. 71-84.

Woodruff, C. & Zenteno, N. (2001). *Remittances and Micro-Enterprises in Mexico*. Mimeo, University of California San Diego.

Woodruff, C. & Zenteno, R. (2001). Remittances and microenterprises in Mexico. UCSD Working Paper.

World Bank (2018). *Remittance Prices Worldwide.* World Bank, Washington, DC, https://remittanceprices.worldbank.org.

Institutional Structure, IFRS Adoption and Foreign Portfolio Investment in Africa

Adewale Atanda Oyerinde[1]

Abstract: This paper examines institutional structures, IFRS adoption and Foreign Portfolio Investment FPI among some selected African countries. Previous studies have focused only on IFRS adoption and FPI but literature have shown that institutional structure may likely affect their relationship, so this study assesses the moderating effect of institutional structure. Panel data analysis is applied to estimate the formulated model and analyze the data. The results show that adoption of IFRS have significant impact on FPI and that Institutional variables plays important roles on the extent to which IFRS affects FPI. Findings further reveal that institution variables are more significant in the countries that fully adopted IFRS thus aiding its effect on FPI. It shows that countries should look beyond adoption of IFRS to attract FPI but to also focus on their institution structures as it serves as catalysis for efficient implementation of IFRS. The study has contributed to the existing literature by examine the moderating effect of institutional structure which no study has done before.

Keywords: Institutional Structure; IFRS adoption; Foreign Portfolio Investment

JEL Classifications: G11; G14; G18

Introduction

Over the years institutions have been seen as very germane to conception, formulation and implementation of policies in different countries. The situation is no different in the Sub Sahara African SSA countries where there have been documented evidences of a lot misnomers in the institutional frameworks and this has taken its toll on effectiveness of government policies in the sub region (Wehrfritz & Haller, 2014).

Cieslewicz (2014) observed, the accounting system of a country is administered via documentations referred to as accounting principles and this does not exist independently of the influences of that particular country's underlying institutions. This implies that quality institutions are important for the accounting system of a country to function. According to Wysocki (2011), the form,

[1] Department of Accounting, University of Lagos, Nigeria, Address: Akoka Rd, Yaba, Lagos, Nigeria, Corresponding author: adewaleoyerin8@gmail.com

efficiency, and quality of any accounting system are influenced in part by other institutions. In some literatures institutions effect on policy implementation is termed "political will" which is the interest of government institution to implement a particular policy.

In the same vein, without strong support from institutions, the financial reporting in a country is likely to be ineffective. Wehrfritz and Haller (2014) argued that institutional factors may directly influence the application of the IFRS and its economic outcomes. Based on the above arguments, prior studies (Soderstrom & Sun, 2007; Wysocki, 2011; Wehrfritz & Haller, 2014) have suggested that examining the economic consequences of changing accounting standards should not be done in isolation of the underlying institutions.

International Financial Reporting Standards (IFRS) is one of those accounting standards that scholars believe will need a virile institutional framework for it to be effectively implemented and monitored. The adoption of IFRS is born out of the need to have a global set of accounting standards that can be uniformly applied by all has been a contentious issue in financial reporting for decades. It is believed that the differences in national accounting standards and practices affect cross-national comparisons of financial information. This issue has been recognized as an important informational barrier to cross-border investment (Ahearne, Griever & Warnock, 2004). Previous studies (Ahearne et al., 2004; Tweedie & Seidenstein, 2005; Brennan & Cao, 1997) suggest that a greater comparability of accounting information facilitates international transactions, minimizes exchange costs and provides a more efficient allocation for resources. This is why foreign portfolio investment is also affected by the implementation of IFRS.

Foreign portfolio investment (FPI) consists of securities and other financial assets passively held by foreign investors. It does not provide the investor with direct ownership of financial assets and is relatively liquid depending on the volatility of the market. However, FPI in the Sub Sahara Africa countries have been dwindling within the last two decades. For instance, total FPI in the sub region fell by 2.1% in 2014 and also fell further by 2.4% in 2016. Some authors believed that allowing IFRS to be effectively implemented via institutional support will go a long way to improve FPI in the SSA.

While the impact of IFRS on FPI have enjoyed much patronage from authors in the past, the effect of institutional structure on FPI is just gaining attention from researchers. This study will contribute to the existing literatures by examining the impact of institutional structures on FPI within the contest of countries that have fully adopted IFRS and those that have not fully adopted it. This will provide insight in to the moderating role of institutional structure in promotion FPI among different SSA countries. In all based on data availability twenty countries that have not fully adopted and fifteen countries in the SSA that have fully adopted

IFRS thus, making a total of thirty five countries are covered in the study. The rest of the paper is divided into methodology, results and discussion, then, conclusions and recommendations.

Methodology

This section of the paper describes the research method embraced to achieve the objective of the study. The model specification, definition of variables, sources of data and method of analysis or estimating techniques are also included.

Model Specification

Following the work of Rahim, Vijay& Mostafa (2014) additional variable (COR_{it} *$IFRS_{it}$) is added to the equation that describes the relationship between institutional structure and FPI. The variable justifies the significance of institution relative to the relationship between IFRS and FPI. This helps to capture the changes in the institutional environment of each country. Corruption is considered as one of important measures of institutional structure. It envisaged that if the level of corruption is reduced in an economy; it would affect the efficiency and good performance of all other institutional variables such as regulatory quality index, rule of law, political system. The model to be estimated is stated as follows:

$$LnFPI_{it} = f\ (\beta_0 + \beta_1 IFRSFA_{it} + \beta_2 IFRSNA_{it} + \beta_3 INF_{it} + \beta_4 INT_{it} + \beta_5 lnEXR_{it} + \beta_6 EG_{it} + \beta_7 TOP_{it}$$

$$B_8 TAX_{it} + \beta_9 lnMCAP_{it} + \beta_{10} REG_{it} + \beta_{11} COR_{it} + \beta_{12} COR_{it} * IFRS_{it} + \mu_{it}) \ldots\ldots\ldots\ldots (1)$$

Definition, Measurements and Sources of Variables

$LnFPI_{it}$ is the natural log of foreign portfolio investment in country i at period t. It represents the inflows of investment in equity and debt. The source is the Balance of Payments and International Investment Positions of IMF data warehouse on portfolio investment in millions of US Dollars. It shows the stock of foreign assets and liabilities and their subcomponents, such as portfolio debt, portfolio equity and foreign direct investment. Cyrus *et al*. (2006) apply this variable to determine how it influences the investor protection. The data were captured using natural logarithm.

$IFRSFA_{it}$ represents a country i at period t that has fully adopted IFRS. The variable is measured using count data, starting from the date the country adopted IFRS. This is done to categorise countries according to the time they adopted IFRS. The application of counting variable index as basis of measuring IFRS adoption permits for differentiation among the countries the time they fully adopted IFRS. For the purpose of this study the total maximum count variable index will be 11 points for those countries that have fully adopted IFRS from 2005 over 2015 and less if year

of fully adoption is not starting from 2005. Efobi *et al*. (2014) report that the method brings the time dimension into estimating the IFRS variables. This measurement, count variable index, is employed in this study to determine the value of IFRS adoption to achieve objective one. Thus, employing binary values or ordinal values to achieve objective one may not be proper since the focus is to compare FPI inflows before and after adoption of IFRS among countries that have fully adopted IFRS. Data for IFRS were sourced from Deloitte (2017), IASB/IFRS databases and PwC database. These websites and databases provide relevant information in relation to IFRS status of different countries and year of adoption.

$IFRSNFA_{it}$ represents IFRS not fully adopted (IFRSNA). In view of this, the IFRS variable is treated as ordinal variable (ranking higher or lower) to determine the status of adoption as follows: Code 1 for countries not permitted IFRS, while code 2 measured IFRS permitted. Likewise, code 3 measured countries that required IFRS for some domestic listed companies and code 4 is for countries that required IFRS for all domestic listed companies that is fully adopted IFRS for all their listed companies (Judge et al., 2010 as well as Nandi & Soobaroyen, 2015). Thus, the IFRS not permitted is coded "1", the IFRS permitted is coded "2", the IFRS required for some is coded "3", whilst the IFRS fully required for all domestic companies is coded "4" This will assist the study to achieve the second objective in order to determine the significant inflows of FPI among countries that have fully adopted IFRS and countries that have not. Data were sourced from Deloitte (2017) and extract from Table 3.2, status of IFRS adoption in Africa.

INF_{it} stands for the rate consumer price index inflation of country i at period t. It is one of the macroeconomic variables that influence foreign investment. If the rate is higher, foreign investors tend to be discouraged from investing in such economy. The expectation is that if the rate is low, it would encourage the flow of foreign portfolio investment. Data were obtained from the World Development Indicators.

INT_{it} denotes interest rate in country i at period t and it is proxy with the real rate of interest. The high rate of interest will be attractive to investors. Data were sourced from IMF database.

$lnEXR_{it}$ is the foreign exchange rate of a country i at period t using national currency per special drawing rights (SDR) yearly period average. This variable is more significant to the foreign investors in equity investment since an unfavourable rate would affect the conversion of the returns from investment. This shows that if the exchange rate is too high, this would discourage investment. Data were sourced from the IMF Publication on International Financial Statistics.

EG_{it} represents the economic growth of country i at period t using Gross Domestic Product per capital of a country in US Dollars as proxy. The assumption is that when the economy is experiencing economic growth, it will affect the standard of living

and attract more patronage of foreign investors. Data were sourced from World Development Indicators database.

TOP_{it} captures the trade openness in country i at period t measured by each country's exports plus imports, divided by each country's GDP. This measurement is common as a measure of trade openness (Matadeen et al., 2011). It is also referred to as trade liberalisation or free trade. Data were collected from the World Development Indicators database.

TAX_{it} was proxy with annual corporate tax rate in i country at period t. A country with high rate of corporate tax would not be attractive to foreign investors. This will have a negative effect on FPI. Data were collected from the IMF database.

$LnMCAP_{it}$ is the value of market capitalisation and captured by using the logarithm of it in country i at period t. It is expected that the adoption of IFRS would improve international liquidity, since it enables comparison of financial statements worldwide and reduces the information asymmetry. Thus, the expectation is that countries that adopt IFRS would have an increase in FPI compared to non-adopting countries due to flow of more liquidity. Data were sourced from World Development Indicators database and various websites of individual country's stock exchanges in Africa.

REG_{it} represents how proactive a government is in formulating and implementing policies in country i at period t. The index captures the extent of the government to formulate and implement regulations that influence private sector development. It is measured in units that range from -2.5 to 2.5. The higher value reflects the competency of the government to formulate and implement the policies. The data were sourced from World Governance Indicators database, The Global Economy database and Kaufmann *et al,* (2009). The data was divided by 100.

COR_{it} represents the degree of perception of level of corruption in the public sector in country i at t period on a scale of 0 to 10. Where a scale of "0" indicates a highly corrupt country while 10 means the country is very clean. Adoption of IFRS is assumed to improve the financial reporting quality, which would reduce the rate of corruption. It is therefore assumed that in IFRS adopting countries the rate of corruption would be reduced. The data is sourced from Transparency International Development Corruption Perception Index.

$COR_{it}*IFRS_{it}$ indicates the interactive of the corruption as a variable that measure the institution and IFRS to determine how effective the government institution impact on accounting environment in a country that will influence inflow of FPI. The importance of this variable is tested in the model to determine the degree of its coefficient either positive or negative. If it is positive, it implies that the adoption of IFRS will enhance more flows of FPI in economy that is less corrupt and institutionally efficient.

Estimating Techniques

The study adopts the panel data regression to analyze the relationship between Instituional structure, FPI and IFRS among SSA countries. There are four possibilities and options when it comes to panel data regression which is reviewed below:

The Fixed Effect Model

The term "fixed effect" is due to the fact that although the intercept may differ among firms, each firm's does not vary overtime, that is time-variant. This is the major assumption under this model i.e. while the intercept are cross-sectional variant, they are time variant.

i. Within-Group Fixed Effects

In this version, the mean values of the variables in the observations on a given firm are calculated and subtracted from the data for the individual, that is;

$$Y_{it} - \hat{Y}_i = \sum_{1=2}^{k} \beta_i \left(X_{ijt} - X_{ij}\right) + \partial(t - \bar{t}) + E_{it} - \bar{E}_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

And the unobserved effect disappears. This is known as the within groups regression model.

ii. First Difference Fixed Effect

In the first difference fixed effect approach, the first difference regression model, the unobserved effect is eliminated by subtracting the observation for the previous time period from the observation for the current time period, for all time periods. For individual *i* in time period *t* the model may be written:

$$Y_{it} = \beta_i + \sum_{1=2}^{k} \beta_j X_{ijt} + \partial t + \infty_i + E_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

For the previous time period, the relationship is

$$Y_{it} = \beta_i + \sum_{1=2}^{k} \beta_j X_{ijt} - 1 + \partial(t - 1) + \infty_i + E_{it-1} \ldots\ldots\ldots\ldots\ldots\ldots\ldots(3)$$

Subtracting (2) from (3) one obtains.

$$\Delta Y_{it} = \beta_i + \sum_{1=2}^{k} \beta_j \Delta X_{ijt} + \partial t + E_{it} - E_{it-1} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(4)$$

and again unobserved heterogeneity has disappeared.

iii. Least Square Dummy Variable Fixed Effect

In this third approach known as the least squares dummy variable (LSDV) regression model, the unobserved effect is brought explicitly into the model. If we define a set of dummy variables A_i, where A_i is equal to *1* in the case of an observation relating to firm *i* and *0* otherwise, the model can be written

$$Y_{it} = \sum_{j=2}^{k} \beta_j X_{ijt} + \partial t + \sum_{t=1}^{n} \infty_j A_i + E_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(5)$$

Formally, the unobserved effect is now being treated as the co-efficient of the individual specific dummy variable.

Results and Discussion

Under this section, various data collected on the variables are subjected to data analysis and interpretation. The results are also discussed and appropriate inferences made. However, the descriptive statistics are presented first.

Descriptive Statistics

The summary of statistics describing the distribution of data collected on the variables in terms of their means and standard deviations are presented in table 1.

Table 1. Summary of statistics of IFRS fully adopted and non-fully adopted countries

Variables	Observations	Mean	Standard Deviation	Minimum	Maximum
LNFPI	385	7.393129	3.04687	0	11.34707
IFRSFA	385	1.464935	1.8637	0	4
IFRSNFA	385	.6285714	.6371439	0	3
INF	385	.0729503	.0731259	-.358	.5
INTR	385	.0718077	.0764282	-.4231	.35211
LNEXR	385	4.426546	2.996339	-4.3125	9.29759
EG	385	.0263989	.0349856	-.22331	.18876
TOP	385	.9745103	.9318407	0	7.22018
TAX	385	.2906364	.0506743	.15	.4
LNMCAP	385	4.027316	4.658619	0	11.9744
REG	385	-.0042775	.0054438	-.01577	.0166
COR	385	.0323818	.011073	.011	.066
CORIFRS	385	.0805117	.061363	.011	.264

The mean values of the FPI for both the fully and adopted and non-fully adopted countries is 7.393129. While the maximum value is 11.34707, the minimum value is 0. The implication is that on the average the FPI is fairly closer to the maximum limit than the minimum limit indicating relatively above average levels of FPI among the countries sampled in the study. For the standard deviation, the value is 3.04687 implying that the standard deviation value is closer to the minimum than the maximum thus indicating that the data on FPI did not exhbit much variance across the countries during the period under review. All 3.04687 macroeeconomic variables captured in the analsyis are with relatively low mean except inflation rate which record a mean that is closer to the maximum limit than the minimum limit.

Panel Data Analysis

The panel data analysis starts with the investigation of the variables for stationarity test using the panel unit root test. The results is presented in table 2

Table 2. Unit root test

Variables	Panel unit root test method			
	Im, Pesaran and Shin IPS		ADF Fisher	
	IPS statistics	Order of integration	ADF Fisher statistics	Order of integration
LNFPI	-3.9085	I(1)	144.2642	I(0)
IFRSFA	-2.6541	I(0)		
IFRSNFA	-3.9782	I(0)	298.0842	I(0)
INF	-2.9566	I(0)	286.0595	I(0)
INTR	-2.5436	I(0)	379.9689	I(0)
LNEXR	-2.7058	I(1)	221.4113	I(1)
EG	-2.6781	I(0)	247.8240	I(0)
TOP	-2.8794	I(0)	538.2861	I(1)
TAX	-2.5439	I(0)	208.7455	I(1)
LNMCAP	-29876	I(0)	92.6735	I(0)
REG	-3.3088	I(0)	269.9691	I(0)
COR	-3.4828	I(1)	350.8042	I(1)
CORIFRS	-3.4828	I(1)	350.8042	I(1)

Source: Author's computation

The results of the unti root test as presented on table 2 is an indication that all the variables are stationary at levels and after the first difference. For instance all the variables are stationary at levels except TAX, TOP, COR and CORIFRS. Panel data analysis requires that all the variables in the panel model to be estimated must be stationary. Therefore. All variables in this study have been shown to be combinations of I(1) and I(0). Considering the nature of the data included in the study, fixed effect is chosen as the method of analysis and the result is presented in table 3.

Table 3. Fixed effects results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.721547	2.270427	0.317803	0.7508
IFRSFA	0.360657	0.146727	2.458008	0.0145
IFRSNFA	-0.630189	0.958161	2.317919	0.7210
INF	-3.093779	1.638850	-1.887775	0.0499
LNEXR	0.827392	0.465038	1.779193	0.0461
INTR	0.706588	1.647826	0.428800	0.6683
LNMCAP	-0.011836	0.092765	-0.127589	0.8985
EG	2.829716	9.727629	3.603758	0.0004
REG	157.3682	41.14856	3.824392	0.0002
TAX	-1.838559	4.097796	-0.448670	0.6540
TOP	-0.286263	0.196687	-1.455421	0.1465
COR	286.0785	39.25283	7.288099	0.0000
CORIFRS	-59.79768	13.98806	-4.274910	0.0000
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.738628	Mean dependent var		7.393129

Adjusted R-squared	0.703933	S.D. dependent var	3.046870
S.E. of regression	1.657865	Akaike info criterion	3.960656
Sum squared resid	931.7469	Schwarz criterion	4.432992
Log likelihood	-716.4263	Hannan-Quinn criter.	4.147986
F-statistic	21.28895	Durbin-Watson stat	0.819951
Prob(F-statistic)	0.000000		

The fixed effect result shows that full adoption of IFRS (IFRSFA) have significant impact on FPI while non-full adoption of IFRS (IFRSNFA) failed to have significant impact on FPI. The results further show that the coefficient of IFRSFA 0.360657 is positive while that of IFRSNFA is negative -0.630189. This is an indication that adoption of IFRS fully will have significant positive impact on FPI while partial adoption or non-adoption will not have significantly influence on the FPI these countries.

Again, some macroeconomic variables have been shown to be germane to FPI behavior in these countries. For instance, inflation rate coefficient is -3.093779 and it is significant at 5% level. The results imply that a rising inflation rate will have negative and significant impact on FPI inflow into these countries. Inflation rate is therefore an important variable affecting FPIs.

Another macroeconomic variable with significant impact is exchange rate. The coefficient of exchange rate is 0.827392 and it is significant at 5% level. This also shows that FPI is significantly influenced by the exchange rate of these countries. The implication is that foreign investors attached significant importance to the level of exchange rate before bringing in their portfolio investments into these countries.

In addition, the rate of economic growth of these countries has also been identified as another macroeconomic variable with significant effect on the FPI inflow. Economic growth has a positive coefficient of 2.829716 and it is statistically significant at 1% thus, implying that the level og growth achieved by these countries constitute and important determining factor that influence FPI inflow.

Other variables in the fixed effects model with significant impacts on the FPI are the regulatory authorities REG, corruption COR and CORIFRS. These variables are proxies for institutional structure and they exert significant effect on FPI inflow of these countries. These results further underscore the importance of institution in the behavior of the FPIs in these countries.

Finally, the overall strength of the fixed effect model is shown by the value of the R square which indicates that about 70% systemic variations in the FPI is explained by all the variables in the fixed effects estimated panel model. The F statistics is also significant at 1%. This further affirms the importance of these variables in determining FPI inflow in the countries. This is an indication that, adoption of IFRS fully with all these variables will jointly influence FPI significantly. Furthermore,

the validity of this conclusion is examined through the Generalized Methods of Moment GMM which is presented in table 4.

Table 4. Systemic GMM Results for determinants of IFRS adoption

GMM Type= One-Step	
Numbers of instruments	48
Wald chi2(11)	46.12
Prob > chi2	0.000

The results of the systemic GMM, which serves as robustness check on the linear panel model, have shown a high level of consistency in our results. This is an indication that all the variables that were significant under the fixed effect panel model are also significant under the GMM thus, indicating a good outcome for the analysis.

Diagnostic test: Normality test

Despite the robustness check through the GMM, the study further investigated the validity of the parameter estimates of the panel model using the normality test. The result is presented in figure 1.

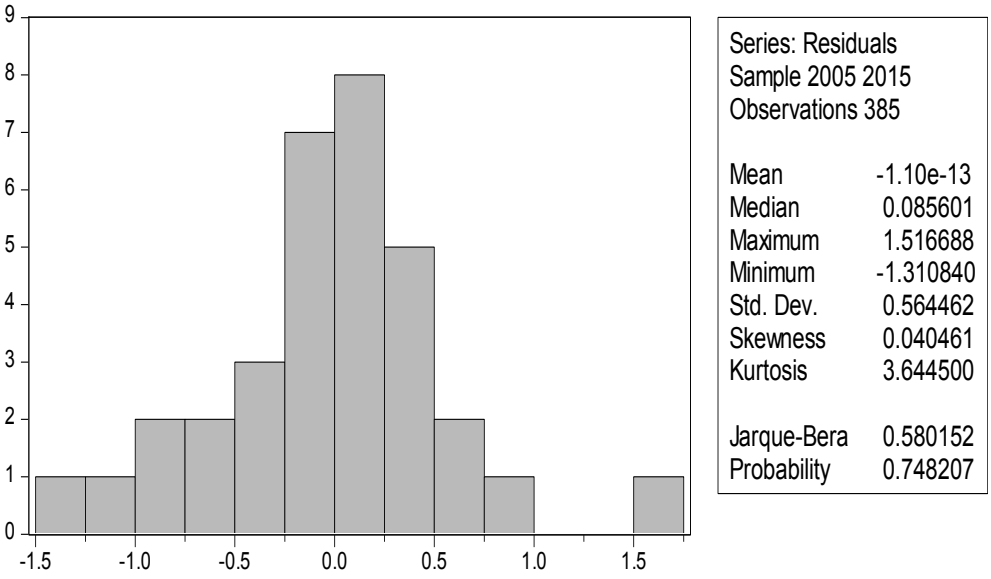

Figure 1. Normality test

Results as shown in figure 1 has a Jarque Bera statistics of 0.580152 and probability of 0.748207. The implication of this result is that the estimated panel model is normally distribute meaning that the results as interpreted via the parameter estimates is reliable.

Institutional structure effect on IFRS adoption and FPI relationship

However, the moderating effect of institution variables in the effectiveness of IFRS on FPI inflow is further investigated. This is done by splitting the results into two that is, fully adopted countries and non-fully adopted countries. The result is presented in table 5.

Table 5. Institutional variables and IFRS adoption/FPI relationship

IFRS Non-Fully Adopted Countries				**IFRS Fully Adopted Countries**		
Variable	Coefficient	Std. Error	Prob.	Coefficient	Std. Error	Prob.
C	-5.697545	4.005951	0.1566	7.064784	2.541699	0.0062
REG	381.9085	102.9174	0.0003	34.95330	8.219626	0.0188
COR	-49.30365	98.82225	0.6184	-94.91088	23.28600	0.0001
COR_IFRS	126.5371	88.67535	0.1552	173.1352	14.19181	0.0011
EG	17.56126	4.467629	0.0001	1.578810	2.456136	0.5214
INF	-6.090681	2.726368	0.0266	0.973316	1.534924	0.5270
INT	0.269558	2.792679	0.9232	1.493530	1.424151	0.2961
LNEXR	1.979190	0.729502	0.0073	-0.829264	0.538541	0.1259
LNMCAP	-0.117578	0.114696	0.3066	0.330241	0.217424	0.1310
TAX	0.303943	5.548864	0.9564	-7.994709	4.178473	0.0577
TOP	-0.394547	0.236528	0.0969	0.220170	0.791779	0.7814
	R-squared	0.740059		R-squared	0.710646	
	F-statistic	18.65296		F-statistic	14.32652	
	Prob(F-statistic)	0.000000		Prob(F-statistic)	0.000000	

Results on table 5 further underscores the importance of institutional structures in determining FPI inflow into African countries. The most dominant out of the three variables used to proxy institutional structures is the REG, which represents how proactive a government is in formulating and implementing policies. Results from the both the fully adopted and non-fully adopted countries indicate that there is a positive and significant relationship between FPI and REG. According to the coding of the REG, it is measured in units that range from -2.5 to 2.5. The higher value reflects the competency of the government to formulate and implement the policies. Therefore, the positive relationship shows that the more proactive a government of a country is in formulation and implementation of policies the higher the values of the FPIs for the country. Findings from this analysis show that for both fully and non-fully adopted countries, their governments' pro-activeness in formulation and implementation of policies is an important determinant of FPIs.

Corruption index is another variable used for institutional structure in the study and the results show that while it is significant in fully adopted countries, it is not significant in the non-fully adopted countries. Notwithstanding, the sign is negative and going by the scale of the corruption perception index as used in the analysis, the

result show that the cleaner a country is the higher the volume FPI. However, this is only significant in the IFRS fully adopted countries.

The third variable used for institutional structure is $COR_{it}*IFRS_{it}$ which indicates the interactive of the corruption as a variable that measure the institution and IFRS to determine how effective the government institution impact on accounting environment in a country. The results from table 4.18 show that the variable is more significant in IFRS fully adopted countries than non-fully adopted countries. The implication of this result is that corruption interaction with IFRS constitute a significant factor influencing FPIs in countries that have fully adopted countries.

It should also be noted that macroeconomic variables such as inflation rate, economic growth and exchange rate are more significant in determining FPIs in non-fully adopted countries than in the fully adopted countries. This simply shows that in the absence of IFRS foreign investors consider macroeconomic indicators as important factors that determines their investment decisions.

However, on comparative grounds, the institutional structure variables are more significant in the fully adopted countries than the non-fully adopted countries as shown table 5. The level of dominance of institutional structure is shown through statistical significance of the variables used to capture it in the estimated panel models. This is a pointer to the fact that institutions are very important in determining the effectiveness of IFRS on inflow of FPIs into African Countries.

Conclusions and Recommendations

Based on the results and findings from the study, some important conclusions are made Firstly, the results have shown that countries that have fully adopted IFRS record its significant impact on their FPIs. Again, this is supporting our findings in objective one, which shows that there is a significant difference in the levels of FPI before and after the adoption of IFRS. This result further underscores the importance of full adoption of IFRS as it constitutes an important driver of FPIs in these countries. According to the results from Efobi, Iyoha and MUkoro (2014) full adoption of IFRS usually gives more confidence to foreign investors and boost the domestic investment climate. Therefore, the results from this analysis is supporting these findings.

Secondly, it has been revealed from the results that non-adoption of IFRS fully will not have significant impact on FPI. The coding of the countries that either have not adopted or that have partially adopted add beauty to the results as it indicates that the extent of the adoption also have its own effect on the FPIs. Although, both non-adoption and partial adoption have been shown not have significant impact on FPI yet the result revealed that the extent of adoption reflects on the FPIs of these countries. The implication of the results is that countries that allow IFRS for some

companies but not all and companies might not witness its impact significantly on their levels of FPIs.

Again, it can be concluded from the study that the effects of institutional structures on FPIs appear to be more significant in the IFRS fully adopted countries than in the IFRS non-fully adopted countries. The reason behind this might not be unconnected to the fact that foreign investors are more concern with the institutional structures that will create enabling environment for IFRS to influence their portfolio investments positively. However, in the IFRS non-fully adopted countries, foreign portfolio investors are more concern with the macroeconomic indicators or environments of these countries as determinants of their investment decisions. The major implication of this finding is that IFRS will have more influence on FPI when institution structure of a country is very vibrant.

Among the variables that failed to have individual significant impacts on FPI is market capitalization. This is an indication that stock markets development in Africa are still very far from having the desired impact on FPI. This might not be a good omen for the capital markets in Africa since FPI measures the inflow of portfolio investment into a country and their destinations should be capital markets. Therefore, in a situation where the major indicator of stock market is not an important driver of FPI then there are still some developmental problems with the stock markets in Africa.

It is recommended that African countries should not just focus on adoption of IFRS alone in order to improve their FPI inflow but to also work on their institutions structure as it has been confirmed from the findings for this study that institutional variables are very germane in influencing the effectiveness of IFRS on FPI.

References

Ahearne, Alan G.; Griever, William L. & Warnock, Francis E. (2001). Information Costs and Home Bias: An Analysis of U.S. Holdings of Foreign Equities. *FRB International Finance Discussion Paper,* no. 691.

Brennan, Michael John & Cao, Huining Henry, Information, Trade, and Derivative Securities. *International Business Review*, 18(4), pp. 387–403

Cieslewicz, Joshua K. (2014). Relationships between national economic culture, institutions, and accounting: Implications for IFRS. *Critical Perspectives on Accounting, Elsevier*, vol. 25(6), pp. 511-528.

Cyrus, F.; Pius, G. & Fray, T. (2006) Culture, Openness, and Finance. *Journal of Financial Economics*, 70(3), pp. 313–349.

Delloite (2017). *Annual Accounts Edition*.

Efobi, Uchenna R. (2015). IFRS Adoption and the Environment: Is Africa Closing her Eyes to Something? In (ed.) Beyond the UN Global Compact: Institutions and Regulations. Advances in

Sustainability and Environmental Justice, Volume 17, *Emerald Group Publishing Limited*, pp. 169 - 195

Rahim, Vijay & Mostafa (2014). Real options valuation. Proceedings of the *39th conference on Winter simulation: 40 years*! The best is yet to come. IEEE Press.

Tweedie, D. & Seidenstein, T.R. (2004). Setting a global standard: the case for accounting convergence. *Northwestern Journal of International Law and Business*, 25(3), p. 589.

Wehrfritz, M. & Haller, A. (2014). The impact of national GAAP and accounting traditions on IFRS policy selection: Evidence from Germany and the UK. *Journal of International Accounting Auditing and Taxation*, 22(1), pp. 39–56.

Wysocki, P. (2011). New Institutional Accounting and IFRS. *Accounting and Business Research,* 41(3), pp. 309-326.

Human Capital and Capital Goods Import in the Sub Sahara Africa (Ssa)

Festus Olumide, Fawehinmi[1], Adeleke Omolade[2], Sunday, Anderu Keji[3]

Abstract: The study investigates the impacts of human capital and capital goods import on the economic growth of the SSA. 30 countries are used in the Panel- ARDL analysis where economic growth is the dependent variable and capital goods import, human capital, primary export, investment exchange rate, among others are used as the independent variables. The result from the panel analysis indicates that capital goods import significantly and positively influence economic growth but human capital fails to have significant positive impact on economic growth of the SSA. Earlier, the trend analysis and the correlation results have shown that there is a weak association between capital goods import and human capital in the SSA. The results offer an expository analysis that reveals that the quality of the human capital is very germane to the effective utilization of capital goods import for purpose of growth in a primary goods export dominated region like the SSA.

Keywords: Capital goods import; Economic growth; Human capital; Sub-Sahara Africa

JEL Classifications: O14, O15, O40

1. Introduction

Technological progress has been identified as the main driver of sustained growth and output per capita. This fact has been established both theoretically (Solow, 1956), and empirically (Mankiw, Romer & Weil, 1992). In most empirical studies, developed countries have been shown to have very high capital labour ratio and labour augmenting technological progress. Also, developed countries are considered frontiers in technological progress and this is embedded in their capital goods. The diffusion of technology from the frontiers states to the developing state can then occur through the importation of capital goods. This has been the experience of different countries over the last eight decades, Japan importing capital goods from

[1] PhD, Department of Economics, Kings University, Nigeria, Address: Gbongan Road, Ode Omu, Nigeria, E-mail: dejanafawe@gmail.com.
[2] PhD, School of Accounting, Economics and Finance, College of Law and Management Studies, University of KwaZulu-Natal, South Africa, Address: University Rd, Westville, Durban, 4000, South Africa, Corresponding author: adeleke.omolade@fuoye.edu.ng.
[3] Department of Economics and Development Studies, Federal University, Oye Ekiti, Nigeria, Address: Aare Afao Road, Oye-Ekiti, Nigeria, E-mail: sunday.keji@fuoye.edu.ng.

the United States and Europe in the 1940s and 1950s, Asian Tigers in the 1970s and 1980s and China in recent times. These economies have thereafter pursued export led economic strategy that is based on the technology adopted from the frontier economies.

However, to be able to use this technology efficiently these economies also invested massively in human capital development, which makes them the economies with the fastest growth rate of investment in human capital in the world in the last five decades (Osei, 2012). The reason for this massive investment is simple; it is only a well-educated labour force that can respond to the disequilibrium caused by the adoption of technology from abroad. This strategy has led to two things. First, it has increased the output per capita of these emerging economies, closing the income gap between them and the developed economies. Two, it has increased both the quantity and the quality of their human capital as they close the gap between them and the technological frontier economies.

However, this has not happened in sub-Saharan Africa. The poorest region in the world is still characterized by both poor human capital development strategy and poor linkage to foreign technology. The growth rate of the SSA region is low compared with those of the developed economies and in particular with the growth rate of the Emerging and Developing Asian countries which less than five decades ago were not more developed than the economies of the SSA. The capital/investment/GDP ratio performances of the Sub-Sahara Africa Countries SSACs had not been as fantastic as the ratios recorded by the economies of the Emerging and Developing Asia. For instance the ratios for SSA and the Emerging and Developing Asia respectively for the five year period, 2010 – 2014 had been: 20.313 percent and 41.491 percent in 2010; 19.941 percent and 42.375 percent in 2011; 20.473 percent and 42.031 percent in 2012; 20.268 percent and 41.749 percent in 2013; and 20.643 percent and 41.286 percent in 2014 (World Bank, 2016).

The SSA's human capital development had not been as robust, since most of the SSACs do not devote enough portions of their GDPs to education and health which are the ultimate proxies for human capital development. Low level of human capital development in turn hinders technological transfer, as the workforces of the SSACs are not capable of tapping and improving upon the latent and embodied technology got via capital imports. The slow pace of economic growth in the SSA has been attributed mainly by some group of authors to lack of effective utilization of capital goods by the domestic producers. While some authors disagreed that the import composition of many SSACs are more of consumables than capital goods thus increasing overreliance on foreign products and reduce the domestic production capacity.[1] Indeed, it appears that it is the twin problems of low human capital development and low level of capital imports, which manifests in poor performance

[1] See (Gyimah & Wilson, 2004).

of the manufacturing sectors and by extension results in SSA's infrastructural deficits. It also manifests as shortage of highly skilled labour force that tend to slow down the economic growth rate of the Sub-Saharan Africa.

Notwithstanding, evidence abound in the literature that most sub-Saharan African countries have large volume of imports which could aid technological transfer that can be utilized by the domestic human capital to produce outputs that will promote the overall growth of the economy.[1] Despite this, the ensuing situation is that the SSA countries are bedeviled with low per capita income, poor standard of living and slow rate of economic growth which WTO (2015) partly attributed to lack of the required synergy between human capital and capital goods import that can engender sustainable economic growth in the sub region. Past studies have concentrated on the relationships between capital goods and growth on one hand or human capital and growth on the other hand. However, with the aforementioned it appears that a study that will include both in a single model and assess their linkage as well as impacts on growth will suffice enough. This is believed will provide policy that will aid synergy between the two in order to engender sustainable growth in the SSACs. More so, most of the past studies are country based analysis which might not offer much useful recommendations for sub regional organizations and agencies like Africa Development Banks, AFDB, IMF among others that rely on outputs of studies that are based on sub regional levels for policy guidance.

Given the peculiar SSACs' economic scenario as described above, this study becomes quite expedient to enable researchers establish the interdependency and complementary nature of the two variables, capital goods import and human capital and determine the extent to which both variables trigger economic growth in SSA.

The period covered by this study, which spans 1980-2014, is contingent upon availability of data from reliable sources. While not all the 48 countries that make up sub-Sahara Africa are considered, this study ensures that the four major economic blocs of the sub-Sahara Africa are recognized. The economic blocs are, *Communaute Economique de l' Afrique Centrale* (CEMAC), Eastern Africa Community (EAC), Economic Community of West African States (ECOWAS) and Southern Africa Development Economic Council (SADC). These economic blocs align with the geographical sub regions of Central Africa, East Africa, West Africa and Southern Africa respectively. However, countries that have been experiencing economic crisis for more than five years running are avoided while those suffering from chronic political problems are considered unfit.

In all, thirty countries which have statistical records in respect of all the variables specified in the research model are selected. From the CEMAC bloc, we have Cameroun, Chad, Equatorial Guinea, Gabon and Republic of Congo. From EAC, we

[1] See (Habiyaremye, 2013).

have Burundi, Kenya, Rwanda, Tanzania and Uganda. From ECOWAS, we have Benin Republic, Burkina Faso, Cote d'Ivoire, Gambia, Ghana, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal Sierra Leone and Togo while we have Republic of Congo, Lesotho, Namibia, South Africa and Swaziland from the SADC.

However, following this introduction aspect, the rest of the article are arranged in the following manner; literature review that discusses empirical studies on the area of focus, materials and method where the methodology adopted to achieve the objective of the study are discussed. The next section is the results and discussion, which present, analyze and discuss the empirical results and lastly the conclusions that summarizes important findings drawn from the study.

2. Literature Review

It has been observed that while study abounds on the linkage between each of the capital goods import or human capital with economic growth, few studies empirically investigated the linkages among the three variables namely; capital goods import, human capital and economic growth. However, some of the study that investigated capital goods (investment)) and economic growth drew conclusions or findings that have implications on human capital. An example is Dulleck and Foster (2008) who studied the effect of equipment investment on the growth of developing countries and the interrelationship between equipment investment and human capital. The study found that generally the relationship between equipment investment and growth is lowest and often negative for countries with low levels of human capital, highest for countries within an intermediate range and somewhat in between for countries with the highest level of human capital.

In the same vein the study by Habiyaremye (2013) establishes the evidence that supports the position that imported machinery leads to higher growth in developing economies. By employing panel data, this researcher finds that when an economy invests in domestic production of equipment, growth rate tends to slow down, whereas investment in imported equipment galvanizes the growth rate provided that there are domestic-technical-know -how that can transform this to output. Other studies in line with this are Agiomirgianakis, Asteriom & Monstiriotis, (2002) among others.

Again, some studies investigated human capital and economic growth but their findings also have implications on the physical capital especially capital goods import. Among these sets of studies is Bakare (2006) who used vector autoregressive error correction mechanism to investigate the growth implication of human capital investment in Nigeria. He established a significant functional and institutional relationship between investment in human capital and economic growth and further concluded that investment in capital goods can promote the impact of human capital

on growth. In a similar manner, Behbudi *et al* (2010) investigated the relationship between human capital (education) and economic growth of countries that are major petroleum exporters. He came up with a negative relationship between economic growth and education. His findings revealed that countries that are rich in mineral and oil exhibited the tendency to neglect the developing of their human resources by devoting inadequate attention and expenditure to education and physical capital with the resultant slow rate of growth compared to those that are not rich in mineral resources. Other studies in this line are Osei (2012), Habiyaremye (2013) and Shaari (2010) among others.

Considering all these empirical studies, it is obvious that more efforts are required to contribute to the existing literature in order to investigate the linkages among the three; human capital, capital goods import and economic growth especially in the SSA. This is because there is dearth of empirical literatures that can provide empirically grounded policy direction for sub regional agencies like the Africa Development Bank, ECOWAS among others.

3. Materials and Methods

The endogenous growth model shows that the sustained and persistence increase in output per capita over time is not determined by exogenous technological progress. This model developed and extended by several authors (Romer, 1986; Lucas, 1988; Rebelo, 1991) has introduced different endogenous factors to the growth process.

The study takes its theoretical framework from the extended endogenous growth model as developed by Lucas (1988). According to Lucas, it is the investment in human capital and not physical capital that has spillover effects that increase the level of technology. For firm i, the output based on Lucas position will take the form:

$$Y_i = A(K_i).(H_i).H^e \quad \text{.....(1)}$$

Where A =technical Coefficient, K_i =physical input, H_i=human capital input, H=the economy's average level of Human capital, e=degree of external effects from human capital to each firm's productivity. Constant return to scale is assumed for this model to thrive. In this Lucas model, technology is endogenously provided as a side effect of investment decision by firms. From the point of view of the user, technology is regarded as a public good thus making it possible to treat the firms as price takers. According to Dulleck and Foster (2008), physical capital has two important sources; local and international and can be achieved via technological transfer. The Lucas model predicts easy arrival at equilibrium as the price-taking firms are on the same page with many other firms under perfect competitive market situation.

Model Specification

Based on the Lucas model presented in equation 1 and with special reference to the studies of Osei (2012) and Habiyaremye (2013), the model for this study is stated as follows to examine the relationship among capital goods import, human capital and economic growth SSA.

$$GDPgr_{i,t} = f\left(ICG_{i,t}INV_{i,t}TOP_{i,t}LBF_{i,t}PER_{i,t}FDI_{i,t}SSE_{i,t}EXR_{i,t}\right)\ldots\ldots[2]$$

Where:

$GDPgr_{i,t}$ = growth rate of GDP of country i at period t. $ICG_{i,t}$ is ICG/GDP = ratio of imported capital goods to GDP of country i at period t. $INV_{i,t}$ is INV/GDP = ratio of investment to GDP of country i at period t. $TOP_{i,t}$ is TOP/GDP = ratio of trade openness to GDP of country i at period t. $LBF_{i,t}$ = Labour Force Participation of country i at period t. $PER_{i,t}$ = Primary goods export of country i at period t. $FDI_{i,t}$ is FDI/GDP = ratio of foreign direct investment to GDP of country i at period t. $SSE_{i,t}$ = Secondary School enrolment of country i at period t. $EXR_{i,t}$ = Exchange rate of country i at period t.

Estimating technique: ARDL MODEL

Since the major objective of this study is impact analsysis consequently, the Panel Auto-Regressive Distributed Lag PARDL is adopted because it makes it possible to split the impact to both long and short run analysis. Because the three variables may have either significant long run or short run association or even significant in both periods. These have policy implications on the relationships. An important preliminary test that is necessary before this technique can be used is the unit root test.

From the unit root test the levels of integration of the variables are ascertained and the results show that the variables are either order one or order zero. The study uses Panel-ARDL since not all the variables are I(1) and there is no I(2) among them. The long run test is referred to as the cointegration test and the guide that is followed to test for the cointegration is bound test (Pedroni, 2004). Under the Bound testing, a set of critical values are based on the assumption that variables are I(0) while the other set is based on the assumption that variables are I(1) in the model. The selection criterion is then that H_0 is rejected if the F-statistic is greater than the upper boundary. Hence, we conclude that there is long run relationship but otherwise there is no long run relationship (Pedroni, 2004). The cointegration test is deemed inconclusive when the F-statistic value falls within the two boundaries.

4. Results and Discussion

This aspect of the research work presents and discusses the results from all the analysis explained in the methodology. According to the methodology, the model to be estimated is mainly on the effect of capital goods import and human capital on the growth of the SSA.

Panel Unit Root Test for the SSA

Ascertaining the order of integration of the variables used in the panel model is very germane to the selection of the estimating technique to be used for our analysis. Therefore, the usual practice is to use more than one method of panel unit root test to be able to confirm the level of consistency in the panel unit root test (Madalla, 1998). In this study, the Im Peresan and Shin (2003), IPS, the Livin-Lin chu (2002), LLC and the Augmented Dickey Fuller, ADF tests are used for the panel unit root test. The results are presented in table I.

The results show that all the variables used in the analysis are integration of both order one and zero I(1) and I(0).

Based on the foregoing, Panel Auto-regressive Distributed Lag, ARDL which is another estimating technique that permits variables that are stationary at levels to be used in the analysis is employed. As explained in the methodology, Panel ARDL emphasizes that none of the variables should have order of integration greater than one, in other words both variables that are I(1) and I(0) are acceptable. Again for better results, it is necessary that the dependent variable be a non-stationary variable. All these conditions have been met by the panel unit root test. Consequently, Panel ARDL is used in this study to investigate the impacts of capital goods import and human capital on the economic growth of the SSA.

Table I. Panel Unit Root Test for the SSA

	IPS unit root test		ADF-Fisher Chi-square unit root test		Levin-Lin-Chu unit-root test	
Variables	t* Statistics	Order of integration	t* Statistics	Order of integration	t* Statistics	Order of integration
GDPGR	-4.6106***	I(1)	610.020***	I(1)	-18.4889***	I(1)
ICGINV	-2.0141***	I(0)	112.325***	I(0)	-26.8044***	I(1)
EXR	-4.4913***	I(1)	528.580***	I(1)	-21.3203***	I(0)
INV	-2.1726***	I(0)	116.088***	I(0)	-10.2203***	I(0)
TOP	-5.5286***	I(1)	573.7799**	I(1)	-2.7701**	I(1)
LBF	-2.3175***	I(1)	186.820***	I(1)	-5.6588**	I(1)
PER	-2.3854***	I(0)	149.415***	I(0)	-8.8345***	I(0)
SSE	-5.2259***	I(1)	735.005***	I(1)	-18.4814***	I(1)
FDI	-7.2414***	I(1)	898.8633**	I(1)	-24.8036***	I(1)

Source: Authors' computation

Statistical significance at 1%(***), 5%(**), 10%(*)

Panel ARDL for the SSA

Estimating Panel ARDL require three steps; first is the assessment of panel cointegration and the second one is the Panel ARDL model estimation.

Panel cointegration test

The panel cointegration test is to confirm or reject the hypothesis that there is long run relationship among capital goods import, human capital and economic growth of the SSA.

Table II. Pedroni Residual Cointegration Test- Deterministic intercept

Pedroni Residual Cointegration Test				
Trend assumption: **Deterministic intercept and trend**				
Alternative hypothesis: common AR coefs. (within-dimension)				
			Weighted	
	Statistic	Prob.	Statistic	Prob.
Panel v-Statistic	0.434302	**0.3320**	-0.033181	**0.5132**
Panel rho-Statistic	-0.186695	**0.4259**	-0.518450	**0.3021**
Panel PP-Statistic	-4.971984	**0.0000**	-5.499263	**0.0000**
Panel ADF-Statistic	-5.232978	**0.0000**	-5.610129	**0.0000**
Alternative hypothesis: individual AR coefs. (between-dimension)				
	Statistic	Prob.		
Group rho-Statistic	0.574993	**0.7174**		
Group PP-Statistic	-6.375847	**0.0000**		
Group ADF-Statistic	-6.761605	**0.0000**		

Source. Author's Computation

Applying the Pedroni residual cointegration under the trend assumption: deterministic intercept and trend. Out of the eleven probability outcomes, six of the probability outcomes result show that they are significant at 5% which implies that there exist a long run relationship among the variables examined.

Panel ARDL estimation

After the confirmation of cointegration and lag length selection the panel auto-regressive distributed lag ARDL estimation follows. The result shows the relative importance of capital goods import and human capital in determining the economic growth of the SSA. The result is presented in table III

Table III explains the impacts of capital goods import and human capital on the economic growth of SSA in both long and short run periods. The results indicate that capital goods import has significant positive impact on economic growth of the SSA in the long run. But this is not the case in the short run.

The long run coefficient of capital import in the table is 0.132601 and the value is significant at 1%. However, in the short run the value is negative and also significant. The implication of this result is that importation of capital goods in SSA will initially have adverse effect on growth of the sub region but as the period progresses to the long run the effect turns positive that is it will later begin to promote economic growth in the long run period. The result here further gives better explanation than what we obtained under the correlation matrix. The results of the correlation matrix on capital goods import only explain the situation in the short run and not in the long run period.

For human capital, the long run coefficient is -0.045093 the value is negative but not statistically significant. The short run equation also follows the same direction. The implication is that human capital proxy by secondary school enrolment does not have significant impact on economic growth both in the short long periods. The result is in line with the correlation matrix results where a positive relationship is obtained between capital goods import and economic growth. Notwithstanding, the relationship is not significant meaning that both transitory and permanent impacts of human capital on economic growth of the SSA are not significant.

Other variables that have significant impacts on economic growth in the SSA are investment and primary good export. Their long run coefficients are 0.199316 and 0.043500 respectively. The result is also in tandem with the correlation matrix result in terms of relationship. But the panel ARDL has shown that the relationship is only significant in the long run and not in the short run. These findings conform to the *apriori* expectation as well as the theoretical postulations that both investment and export are growth promoters. The situation is expected in the SSA where their major export is dominated by primary goods.

However, trade openness, FDI and labour force fail to have significant positive impacts on SSA growth both in the long run and in the short run periods. The coefficient of trade openness is -0.152632. Apart from the fact that the coefficient is negative, it is also significant. The implication is that increase in trade openness of the SSA will significantly reduce the economic growth of the sub region. For labour force participation, the coefficient is positive but it is not significant both in the long run and in the short run. This simply implies that the rate at which labour participates in economic growth process in the SSA is still far from the desired level. This finding appears to be supporting what we obtained on human capital as explained in the previous paragraph since both labour and human capital are related as inputs in growth model. Again, the lagged value of GDP growth rate, the primary export and investment all have significant impact in the short run.

Table III. Long run and Short run Coefficients, dependent variable: GDPGR

Dependent Variable: D(GDPGR)				
Selected Model: ARDL(3, 3, 3, 3, 3, 3, 3, 3)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
	Long Run Equation			
ICG_INV	0.132601	0.029663	4.470205	0.0000
EXR	0.000800	0.000738	1.084215	0.2792
INV	0.199316	0.018204	10.94914	0.0000
LBF	0.000221	0.000136	1.626323	0.1050
POP	-0.154540	0.059960	2.577370	0.0104
PER	0.043500	0.014529	2.993980	0.0030
SSE	0.045093	0.068078	2.494406	0.3132
	Short Run Equation			
COINTEQ01	-1.098959	0.176888	-6.212742	0.0000
D(GDPGR(-1))	0.185715	0.121193	1.532388	0.1265
D(GDPGR(-2))	0.037737	0.057036	0.661642	0.5087
D(ICG_INV)	-0.181685	0.116284	-1.562425	0.1193
D(ICG_INV(-1))	-0.326708	0.102926	-3.174193	0.0017
D(ICG_INV(-2))	-0.017644	0.095461	-0.184832	0.8535
D(EXR)	0.023938	0.359503	0.066588	0.9470
D(EXR(-1))	-0.321165	0.421361	-0.762208	0.4465
D(EXR(-2))	-0.366412	0.268575	-1.364279	0.1735
D(INV)	0.144589	0.131420	1.100199	0.2721
D(INV(-1))	-0.199005	0.169158	-1.176448	0.2404
D(INV(-2))	-0.116008	0.099046	-1.171246	0.2425
D(LBF)	0.026844	0.042939	0.625156	0.5324
D(LBF(-1))	0.044450	0.073852	0.601879	0.5477
D(LBF(-2))	-0.030191	0.077204	-0.391056	0.6960
D(POP)	-11.01257	32.14772	-0.342562	0.7322
D(POP(-1))	-12.08317	42.67741	-0.283128	0.7773
D(POP(-2))	23.28927	21.79035	1.068788	0.2860
D(PER)	0.004670	0.084520	0.055251	0.9560
D(PER(-1))	0.231451	0.369424	0.626519	0.5315
D(PER(-2))	-0.067642	0.119480	-0.566138	0.5717
D(SSE)	-0.052401	0.274149	-0.191140	0.8485
D(SSE(-1))	-0.332649	0.657352	-0.506044	0.6132
D(SSE(-2))	-0.178874	0.189867	-0.942103	0.3469
C	-20.02068	3.575762	-5.598997	0.0000
Mean dependent var	0.064880	S.D. dependent var		9.196984
S.E. of regression	4.782140	Akaike info criterion		4.900821
Sum squared resid	6700.576	Schwarz criterion		8.474254
Log likelihood	-1815.931	Hannan-Quinn criter.		6.255754

Statistical significance at 1%(***), 5%(**), 10%(*)

This further underscores the importance of investment and particularly primary good export as very germane to the growth of the SSA sub region. As further shown in table V the error correction model explains the short run dynamics in the panel ARDL model. The negative coefficient sign of the ECM shows that there was disequilibrium in the past and the adjustment is in the right direction. The ECM value of -1.098959 suggests the relatively high speed of adjustment from the short run deviation to the long run equilibrium of economic growth. More precisely, it indicates that about 109% deviation from the long run GDP growth rate in SSA is corrected in the dynamic model or that the system is being adjusted towards long run equilibrium at the speed of about 109%. In addition, the ECM is statistically significant at 1% level, indicating that long run equilibrium can be attained. Our results are consistent with Dulleck & Foster (2008), who argued that a highly significant error correction term is a further proof of the existence of stable long run relationship. This result further confirms that there will be convergence (steady-state) of the system and the attainment of stable economic growth rate in SSA in the long run.

5. Conclusions

Firstly, the trend of capital goods import in the SSA follows an upward movement between 1980 and 2014 which is the period under review. Both the line trend and the summary of statistics confirmed the result. This is an indication that the AFDB 2013 report that the entire SSA sub region records increasing capital good import within the last two decades is empirically correct. Notwithstanding there has also been a drastic fall in the trend since 2010. This coincides with the period of drastic fall in the commodity prices. The implication of this is that, the fall in commodity price in recent times has reduced the revenue accruing to the SSA and hence limiting their power to import capital goods. This view was also shared by Habiyaremye (2013), Eaton and Kortum (2001) among others. Generally, these authors conclude from their various researches that capital goods is well traded during the period under review among the SSA countries and that the trade volume of capital imports has been rising continuously over the years. However, they also agreed that one of the impediments to the riding trend is the fall in commodity prices which has affected many countries in the SSA because the sub region is dominated by primary goods exporters

Secondly, the trend of human capital fails to show similar pattern with capital goods import. Especially from the summary of statistics, the mean value of secondary school enrolment distribution in the SSA is closer to minimum limit than the maximum limit. The implication is that trend of human capital in the sub region has not been encouraging. This also in line with the findings of Brempong and Wilson (2014) where panel analysis of SSA and OECD shows that human capital

contributions to the growth of the SSA has been reducing due to the rise in population compare to human capital and hence high rate of unskilled labour relative to skilled labour.

Thirdly, findings from the analysis have shown that there is a positive correlation between capital goods import and human capital. Though this correlation is also shown to be very weak, the implication is that ordinarily our findings support the fact that human capital promotes capital import in the SSA but this is contrary to the results of Appleton and Teal 2004 where and inverse relationship was discovered to be existing between human capital and capital imports of the OECDs. The reason for the difference might not be unconnected with the fact that human capital in the SSA have little drive and incentives that make them to be useful in production of capital goods domestically which might reduce their importation of capital goods unlike OECDs where there is advanced technology and incentives that can aid human capital to increase domestic production of capital goods and this will reduce their capital goods import. According to Agiomirgianakis, Asteriom & Monstiriotis (2002), human capital in less developed countries promote economic growth by leveraging on the available capital goods in their economy to improve domestic outputs through improvements in primary goods production.

From all panel results, it can be concluded that capital goods import has significant positive impacts of the economic growth of the SSA. This is in line with the findings of Maksymenko & Rabami (2011), that capital import from China has significant positive impacts on the economic growth of the SSA. Though, his study focused on capital goods import from China alone but yet the findings offered immense supportive evidence for our finding that capital goods import has influenced economic growth of the SSA significantly.

On the contrary, human capital failed to show significant impact on SSA economic growth. This further shows that the contributions of human capital to the economic growth of SSA are far below the level that can bring about sustainable economic growth. Baltagi, (2008) attributed this to the poor quality of human capital in SSA. According to him, SSA is among the least educated region in the world and this singular reason has seriously hampered the quality of their human capital. However, the results of this study have shown that the reason for insignificance of human capital in driving the growth of the SSA might not be unconnected with this.

It can also be concluded from the study that primary export is a dominant factor influencing the growth of the SSA. Statistics from the AFDB shows that 85% of the SSA GDP comes from the primary export (AFDB, 2016). Also, investment is shown to be a good driver of economic growth but the current level of FDI in the sub-region is not enough to promote the economic growth of the region significantly. Labour participation rate, which is an indicator of human capital, follow the same pattern of relationship of human capital with economic growth. The overall implication of the

results in this study is that the limitation to the effectiveness of capital goods import in promoting the growth of the SSA is the low quality of human capital. Since the skill and level of education of human capital is very germane to the utilization of the capital goods for economic growth purposes.

References

Agiomirgianakis, G.; Asteriom, D. & Monstiriotis, V. (2002). Human Capital and economic growth revisited: A dynamic panel data supply. *International Atlantic Economic Conference*, 8(3), pp. 567-600.

AFDB (2016). *Annual Economic Review*. Sub Sahara Africa.

Bakare, A. (2006). The growth implication of human capital investment in Nigeria; An empirical study. *Journal of Economics and Social Studies,* 23(5), pp. 67-92.

Baltagi, B. (2008). *Economic analysis of panel data.* 4th Edition. Chichester: John Wiley & Sons.

Dulleck, U. & Foster, N. (2008). Imported equipment, human capital and economic growth in developing countries. *Economic Analysis & Policy,* 8(2), pp. 34-47.

Eaton, J. & Kortum, S. (2001). Trade in capital goods. *European Economic review,* 45(4), pp. 1195 – 1235.

Gyimah, B. & Wilson, M. (2004). Health human capital and economic growth in Sub- Saharan African and OECD Countries. *The Quarterly Review of Economics and Finance,* 44(6), pp. 296-320.

Habiyaremye, A. (2013). Imported capital goods and manufacturing Productivity: Evidence from Botswana's Manufacturing Sector. *South African Journal of Economics,* 23(6), pp. 45-59.

Im, K.S.; Pesaran, M.H. & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics,* 115, pp. 53-74.

Levein, A.; Lin, C.F. & Chu, C-S.J. (2002) Unit root test in Panel data; Asymptotic and finite sample properties. *Journal of econometrics*, 108, pp. 1-22.

Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics,* 22(4), pp. 13-42.

Maddala, G. & Wu, S. (1999). A comparative study of unit root tests with panel data and a new sample test. *Oxford Bulletin Economics & Statistics,* 61(2), pp. 631 – 652.

Mankiw, G.; Romer, D. & Weil, D. (1992). A contribution to the empirics of economic growth. *Quarterly Journal of Economics,* 107(3), pp. 407 – 431.

Maksymenko, S. & Rabami, A. (2011), Economic reforms, human capital and economic growth in India and South Korea: A co integration analysis. *Journal of Economic Development,* 36(2), pp. 39 - 59.

Osei, V. (2012). Import demand and economic growth analysis in Ghana. *Journal of Economic and Sustainable Development,* 14(3), pp. 45-67.

Pedroni, P. (2004). Panel cointegration: Asymptotic and finite sample properties of pooled time series tests with an application to the purchasing power parity hypothesis. *Econometrics Theory,* 20(6), pp. 597-625.

Persyn, D. & Westerlund, J. (2008). Error-correction- based cointegration tests for panel data. *The Stata Journal,* 8(1), pp. 232-241.

Rebelo, S. (1990). Long run policy analysis and long run growth. *Journal of Political Economy,* 98(6), pp. 500-521.

Solow, M. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics,* 70(2), pp. 65-94.

World Trade Organization (2015). Trade and Development. *Bulletin*, 6(2), pp. 132-156.

Prevalence of and Factors Linked to Occupational Stress in Public and Private Organizations in Kosovo

Sejdë Tolaj[1], Ymer Havolli[2], Gent Beqiri[3]

Abstract: Stress is emerging as an increasing problem in organizations and companies over the recent decades. Despite the awareness on the risks associated with occupational stress, the growing number of literature on stress, so far no empirical research was done to study the prevalence of stress and associated work stressors of employees in Kosovo. Through quantitative research, this study sought to provide scientific contribution by examining the prevalence of stress and by identifying factors that cause stress among public and private sector employees. Findings revealed a relatively high prevalence of occupational stress among employees, where respondents with 1-20 years of work experience reporting being significantly more stressed than those with more than 20 years of work experience. Moreover, results showed that stress adversely affects job performance of employees with 1-20 years of work experience as well as of female employees. Stressors pertaining to demand, control, support, relationships, role and change were identified to be causing occupational stress among employees, all showing positive significant correlation with stress. Furthermore, both public and private sector employees considered similar factors as stressful, even though public sector employees reported experiencing slightly higher levels of stress.

Keywords: Occupational Stress; Stressors; Job performance; Kosovo

JEL Classification: J24

Introduction

Occupational stress has become an inevitable problem in organizations and companies all over. The workplace has become a place of rapidly changing forces such as: increasing competition, quality pressure, innovation and increasing pace of doing business. As a result, employees' demands have increased dramatically and

[1] University of Prishtina, Faculty of Economics, Department of Management and Informatics, Republic of Kosovo, Address: Rr. "George Bush", Nr. 31, 10 000 Prishtinë, Republic of Kosovo, Corrresponding author: sejde.tolaj@rks-gov.net.
[2] University of Prishtina, Faculty of Economics, Department of Management and Informatics, Republic of Kosovo, Address: Rr. "George Bush", Nr. 31, 10 000 Prishtinë, Republic of Kosovo, E-mail: sejde.tolaj@rks-gov.net.
[3] University of Prishtina, Faculty of Economics, Department of Management and Informatics, Republic of Kosovo, Address: Rr. "George Bush", Nr. 31, 10 000 Prishtinë, Republic of Kosovo, E-mail: sejde.tolaj@rks-gov.net.

this has led to the creation of stress at work. However, no study has been conducted so far on occupational stress among employees in Kosovo, examining the prevalence of and factors linked to stress.

Therefore, the aim of this study was to assess the prevalence of stress and to identify the stressors affecting workers of public and private organizations in Kosovo. More specifically, the study aimed to analyze whether there is a relationship between sector of employment, work experience, work performance and stress. To achieve this a survey with 340 public and private sector employees aimed at examining the prevalence of stress has been conducted and the causes of stress have been studied.

Hypothesis

In view the study aim the following 3 hypotheses have been formulated:

H1: Public sector employees experience higher levels of stress than private sector employees.

H2: Employees with less work experience show higher levels of stress than employees with more work experience.

H3: Stress adversely affects employees' job performance.

Even though the awareness of the impact of occupation stress has increased, little research has been done on the topic in developing countries, and especially in Kosovo, where major empirical gaps remain. Therefore, this research tried to provide a scientific contribution to better understand the prevalence of stress in organizations in Kosovo and to identify potential stressors among public and private sector employees. Moreover, the study aimed to analyze the association between sector of employment, work experience, work performance and stress.

Review of Literature

Stress is emerging as an increasing problem in organizations and companies over the years. While work and being employed contributes to the well-being and health of employees, stressful and insecure work can adversely affect their health. The workplace has become a place of rapidly changing forces such as increasing competition, quality pressure, innovation and increasing pace of doing business. As a result, employees' demands have increased dramatically and this has led to the creation of stress at work (Siegrist, 2017). Moreover, it has been identified that these trends pose a threat to the mental health of employees, as higher demands at work are challenging the mental functions of employees and are causing high levels of psychological worries.

Stress has become an important part of the human being development and today it is difficult to imagine an employee who has not experienced stress at work. Selye (1936) defined stress as the pressure or tension to which an individual is exposed but tries to resist. In general, stress is a reaction caused from the pressure and the unknown. Coping with unknown factors, or stressors, can cause a stressful event in humans, as the result is usually perceived as ambiguous but vital (Bashir & Ramay, 2010). Stress is an unwanted or unpleasant reaction people give in response to claims that are basically worried they cannot reach. The state of stress can also pass on health problems when the job demands are high and beyond the individual's capacities. This can also happen when the requirements do not match the skills, resources or needs of the employee at work (Bashir & Ramay, 2010).

There have been numerous research studies on this topic and tests have been developed to assess the stress of employees of different organizations and companies in order to draw conclusions on the phenomenon of stress and its impact. A research carried out by the American Psychological Association (2015) has revealed that 60 percent of respondents considered work as a very stressful factor in their lives, preceded only by finances. According to a survey conducted by the National Institute of Occupational Safety and Health (1999), around 40 percent of workers reported that their work is too stressful and about 26 percent felt overwhelmed by stress at work.

Lewig and Dollard (2001) concluded that employees in the public sector experienced higher levels of stress than employees in the private sector. Moreover, they found that workplace environments in the public and private sectors were characterized by increasing pressure on employees to perform, as such contributing to increased risk of health problems among employees. A survey by Ricardo et.al (2007) showed that public sector employees were significantly more likely (64%) to report stress to be the primary cause of concern at work than private sector employees (with only 46%).

Moreover, a random sample of 305 employees and 325 managers across Canadian companies surveyed found a negative correlation between occupational stress and job performance (Jamal, 1984). The relation between high levels of stress and reduced productivity has also been shown by the Towers Watson study (2014). This study included 22,347 employees across 12 different countries around the world. Their research showed that one out of three employees are anxious about the excessive work pressure and this affects their work performance as well as absenteeism, inevitably leading to lower levels of productivity at work.

Stress at work is not a new phenomenon. In fact, according to Unum’s study (2001), about 25 percent of employees considered their job as the most stressful factor in their lives, and nearly 75 percent thought that today’s employee experiences much more stress at work than the previous generation of ordinary employees.

Another study, in which 425 private and public sector employees were randomly surveyed showed that with higher levels of stress job performance decreases and increased job satisfaction results in increased productivity. Also, when work begins to affect employees' personal lives, it negatively affect productivity as well. Even though, commitment at work is linked more to the worker's conscientiousness and personal satisfaction than with work pressure, when the limits are crossed the worker often fails to withstand and disengages (Halkos, 2010).

A study conducted to measure the impact of organizational culture on occupational stress among executive staff of the Bank of Ceylon has concluded that organizational culture has a major impact on stress and organizational culture has a significant negative correlation with stress at the Bank of Ceylon (Delima, 2017). Researchers have established that occupational stress can be reduced if organizational culture improves. The study has further revealed that the mean value of stress indicates that junior managers experience higher levels of stress than senior managers, while the mean value of organizational culture has shown that senior managers have a higher level of organizational culture than younger ones. Likewise, the mean value of stress was found to be lowest among the experienced executive, with more than 10 years of experience; as opposed to the ones with 3 to 5 years of experience, who showed the highest level of stress (as well as the lowest level of organization culture) (Delima, 2017).

Another study conducted in the US by Integra (2000) has highlighted that about 65 percent of the employees admitted that stress causes very big problems at work. Moreover, 10 percent of the respondents described the workplace as a violent environment because of stress, where maltreatment and verbal abuse are a commonplace. Thus, 29 percent have claimed that they have shouted at a colleague due to of stress; 14 percent claimed to have damaged office equipment because anger; and 2 percent have confessed to even having hit a colleague.

Even if it is not expressed in the form of violence or distress, stress is increasingly affecting the psychological state of the employees. Industrial Psychology Consultants (2014) conducted a survey on stress and depression, which showed that 27 percent of employees have symptoms of depression. Moreover, about 18 percent admitted that they have experienced anxiety, including feelings of fear and panic attacks (Mawanza, 2017).

Everyone may have experienced stress at their workplaces at certain times. Identifying the most common causes of stress at work can help prevent it and reduce the risk for health problems and well-being. According to Dessler (2000), there are two main sources of occupational stress: stress caused by the environment (external factors) and personal stress. This author stated that a variety of external environmental factors could lead to occupational stress. These included work schedules, place of work and job security. Dessler (2000) noted that individuals

reacted differently even if they were at the same job, because personal factors also influenced stress.

There are six areas that can cause a lot of stress if they are not properly managed which are: work load, control, support, relationships with others, role at work, and frequent changes. As a first step to reducing the impact of stress and develop more appropriate work practices, it is first identifying the cause. Taking into account many studies made by different occupational health psychologists, Dessler (2000) listed some of the most common causes of stress at the workplace: high job demands with deadlines which make employees feel pressured and overloaded; inadequate workloads, making workers feel that their skills are being exploited as well as lack of control over work activities. Ben (2007) also reported that higher levels of job demands increased occupational stress, especially at organizations with lower levels of support. Dessler (2000) identified lack of support or poor work relationships as a trigger to stress as well; alongside worries about job security, salary levels, not being engaged when a business is undergoing change, or an inadequate environment (such as excessive heating, cooling or noise, inadequate lighting and malfunctioning devices).

Bhui et al. (2016) conducted in-depth interviews with employees of several organizations in order to identify the causes of occupational stress. According to this study, interviewed participants reported that poor working conditions and inappropriate management practices cause stress at work. Most of the participants referred to working conditions as a major source of stress, which were mainly related to factors such as workload, physical environment (i.e. noisy office, lack of windows, small offices in which the temperature was too low or too high), as well as long working hours. Working conditions were identified as the main cause of stress, regardless of the sector where they worked.

Most of the studies done on this topic showed moreover that stress may be largely responsible for organizational outcomes such as decline in performance, dissatisfaction, lack of motivation and commitment, and an increase in absenteeism and turnover.

Research Methodology

To analyze occupational stress in Kosovo's organizations, this study focused specifically on assessing the prevalence of stress among different staff groups, as well as identifying causes of stress among employees in Kosovo's organizations. Data was collected through a survey including 110 managers and 230 workers of mostly middle and large enterprises as well as directors of various departments in public institutions. The surveys with respondents of public institutions were conducted in Pristina, due to the institutions' concentration in the capital, while

surveys with respondents of private organizations were conducted throughout the entire territory of Kosovo.

In order to produce representative data, the overall sample has included 340 respondents from all over Kosovo, who were selected randomly from the database of declared employees of the Statistical Agency of Kosovo. Out of a population of 370,000 declared workers, a sample of 340 respondents was sufficient to provide statistically significant results at 95 % confidence level and 5.3 % margin of error for this study. The survey sample was stratified by sector and job position, including male and female employees aged 18 to 65.

Respondents have completed a questionnaire that was developed to assess the level of occupational stress they experience as well as the underlying factors causing the stress. The survey instrument was based on the Health and Safety Executives' Management standards indicator tool (Court & Kinman, 2008), considering its validity and reliability in work-related research, and was adapted to account for Kosovo's labor market characteristics. The first part of the questionnaire contained general demographic questions such as age, gender, educational level, sector of employment, job position and work experience. The second part consisted of 12 questions on working conditions. The third section listed 40 potential stressors, divided into six categories, i.e. demand (measured by 6 items), control (measured by 5 items), support (measured by 7 items), relationships (measured by 7 items), role (measured by 7 items) and change (measured by 8 items), and asked about degree to which employees found them stressful. Responses were given on a five-point Likert scale, ranging from 1 (strongly disagree), 2 (disagree), 3 (partially agree), 4 (agree) to 5(strongly agree).

Upon completion of the survey, each questionnaire was verified to ensure the correctness of completion and to see if it contains any non-logical answers. Prior to data analysis, data has been coded and checked for consistency; afterwards it has been quantitatively analyzed through the SPSS software application (version 15.0). The prevalence of stress was identified by using frequency counts and percentages. Within the analysis, an independent samples t-test was first performed to analyze sectoral differences in the prevalence of stress. Secondly, a one-way analysis of variance (ANOVA) was performed to identify the prevalence of stress between managers and staff as well as between highly experienced and less experienced employees, measured by years of experience. Thirdly, bivariate correlation analysis was carried out to examine potential correlation between occupational stress and the 6 categories of stressors. Finally, ordinal logistic regression analysis was carried out to explore possible linkages between demographic or work-related characteristics of the respondents (age, gender, level of education, job experience, job position and sector of employment) and stress.

Research Results

Participants' characteristics

A total of 340 respondents filled out the questionnaire designed for this study. The respondents' age ranged between 25 and 65 years. Nearly 61% of the employees surveyed were males, while 39% of them were females. As far as respondents' education is concerned, the majority of 59% completed bachelor studies, about 13% completed their master's studies, around 3% have completed their specialization, and nearly 2% stated that they completed doctoral studies. On the other hand, about 24% of employees surveyed completed secondary school only. From the total sample, around 49% of employees worked in the private sector, while about 51% of them were employed in public institutions. Close to 33% of respondents hold managerial positions, in 52% of cases they perform professional work and in 15% of cases perform technical / administrative work.

Examining the stress levels revealed a relatively high prevalence of occupational stress among employees in Kosovar organizations, reflected by the mean score 3.15. While comparing stress levels them among different groups of respondents, differences of opinions became apparent. Firstly, comparing stress levels among public and private sector employees showed that the mean score of stress in public sector employees was 3.20, while the mean score of private sector employees was 3.08, as illustrated in Table 1. This indicated that employees working in the public sector were comparably more stressed than employees working in the private sector. However, when testing the difference in the mean scores through the independent sample t-test it was found not significant, since the significance value p is greater than the significance level (0.397> 0.05) at 95% confidence level, which does not support the findings of Lewig and Dollard (2001) that employees working in the public sector experience higher levels of occupational stress than employees working in the private sector.

Table 1. Independent sample t-test for comparisons of stress levels

Dimension	Sector	N	Mean	Std. Deviation	t-value	Sig.
STRESS	**Public**	150	3.20	.772	**.849**	**.397**
	Private	146	3.08	.857		

Source: Authors' calculations

Secondly, stress levels among employees with different levels of job experience were compared using a one-way analysis of variance (ANOVA) to test the difference between the means of the levels of job experience. As showed in Table 2, the significance value p is below the significance level (0.000< 0.05) at 95% confidence level, therefore, the difference in the mean level of stress between the different levels of job experience of the employees is statistically significant. This supports the

findings of Delima (2017) that experienced executives experienced the lowest levels of stress, compared to less experienced employees.

Table 2. Anova for comparisons of stress levels

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13.748	3	4.583	7.372	**.000**
Within Groups	182.137	293	.622		
Total	195.886	296			

Source: Authors' calculations

Factors causing stress in Kosovo's organizations

The UK Health and Safety Executive (HSE, 2006) identified six categories of stress factors related to occupational stress, including demand, control, support, relationships, role and change. The demand area includes issues such as high workload and work patterns. The control aspect looks at how much employees have control over their work and how they organize it. Support deals with shortcomings of support systems in the organization, such as resources provided by the organization and encouragement by managers and colleagues. Relationships pertains to the extent of positive behavior at work to avoid conflict. Role looks into role ambiguity and to what extent employees understand their role within the organization. Change focuses on employees' inclusion in organizational change.

In order to measure the extent to which these stressors impact on occupational stress, employees were asked to answer questions indicating the level of agreement. Around 58% of the employees surveyed strongly agreed or agreed that workload caused them stress. Furthermore, 76% of the employees surveyed either strongly agreed or agreed with the statement that they experience stress because of the inability to plan the work. Regarding support, 75% of employees surveyed strongly agreed or agreed that lack of necessary work equipment caused them stress. Also, 75% of employees surveyed said that lack of support from their supervisor potentially caused stress at work. Pertaining to Relationship, 80% strongly agreed or agreed that cases when they faced inadequate treatments by their employer caused them stress. Moreover, 78% stated that offensive behavior by their colleagues might cause stress at work. Employers giving responsibility without decision-making authority is stressful or very stressful for 65% of employees, while the lack of information about the developments in the organization is stressful or very stressful for 70% of them.

The bivariate correlation method was used to see if there is a correlation between occupational stress and the 6 categories of factors. The results of the correlation analysis illustrated in Table 3, showed that stress has a positive moderate correlation with demand ($r = 0.358^{**}$, p value $0.000<0.01$) and the relationship is statistically significant, i.e. an increase in this factor will cause an increase in stress levels of the employees and the other way around a decrease in this factor will cause a decrease

in stress levels, favoring the findings of Ben (2007) and Dessler (2000). Stress was also positively correlated with control (r = 0.333**, p value 0.000 <0.01), support (r = 0.462**, p value 0.000 <0.01), relationship (r = 0.366**, p value 0.000 <0.01), role (r = 0.335**, p value 0.000 <0.01) and change (r = 0.335**, p value 0.000 <0.01).

Table 3. Correlations matrix among various dimensions

Dimension		STRESS	Demand	Control	Support	Relationship	Role	Change
STRESS	Spearman's Correlation Coefficient	1.000						
	Sig. (2-tailed)							
Demand	Spearman's Correlation Coefficient	.358**	1.000					
	Sig. (2-tailed)	.000						
Control	Spearman's Correlation Coefficient	.333**	.640**	1.000				
	Sig. (2-tailed)	.000	.000					
Support	Spearman's Correlation Coefficient	.462**	.567**	.560**	1.000			
	Sig. (2-tailed)	.000	.000	.000				
Relationship	Spearman's Correlation Coefficient	.366**	.511**	.573**	.769**	1.000		
	Sig. (2-tailed)	.000	.000	.000	.000			
Role	Spearman's Correlation Coefficient	.335**	.416**	.450**	.579**	.621**	1.000	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
Change	Spearman's Correlation Coefficient	.335**	.435**	.458**	.697**	.732**	.560**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' calculations

To further analyze the ordinal dependent variable, stress level at work, and determine which work-related variables (job experience, job position and sector of employment) have an effect on stress, ordinal logistic regression was performed. The parameter estimates in Table 4 revealed that employees' work experience ranging

from 1-10 years (0.000<0.05) and from 10-20 years (0.001<0.05) are statistically significant, i.e. 1-20 years of work experience have significant effect on occupational stress, while work experience above 20 years is not statistically significant (p>0.05), i.e. is not useful in predicting occupational stress. On the other hand, employees' sector of employment (0.151>0.05) and job position (0.073>0.05) showed no statistical significance, i.e. these variables have no significant effect on occupational stress. Therefore, only 1-20 years of work experience was useful to predict stress among employees in Kosovo organizations. This indicates that employees with less than 20 years of work experience are exposed to higher levels of stress than employees with more than 20 years of experience.

Table 4. Ordnial Logit Regression Analysis Parameter Estimates

Predictors	Estimate	Std. Error	Wald	df	Sig.
Public sector	.331	.231	2.061	1	.151
Private sector	0[a]			0	
Manager	.428	.239	3.220	1	.073
Employee	0[a]			0	
1-10 years of experience	1.599	.367	18.947	1	.000
10-20 years of experience	1.091	.338	10.425	1	.001
20-30 years of experience	.650	.365	3.176	1	.075
30-40 years of experience	0[a]			0	

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Source: Authors' calculations

To test the third hypothesis, ordinal logistic regression was performed to examine whether the ordinal dependable variable, stress adversely affects job performance, can be predicted by the independent variables (sector of employment, work experience, gender and level of education). The parameter estimates in Table 5 showed that employees' work experience ranging from 1-10 years (0.000<0.05) and from 10-20 years (0.002<0.05) are statistically significant, i.e. 1-20 years of work experience was useful to predict whether stress adversely affects job performance. Employees' gender is also statistically significant (0.002<0.05), meaning that for a one unit increase in gender (going from 1 to 2), a 0.72 increase in the log odds of being on a higher level of stress is expected, all other variables held constant. Whereas, sector of employment (0.255>0.05) and educational attainment (0.472>0.05) of the employees showed no statistical significance, i.e. these variables are not useful in predicting whether stress adversely affects job performance. Thus, only 1-20 years of work experience and gender have an impact on stress adversely affecting job performance among employees in Kosovo organizations. This indicates that employees with less than 20 years of work experience are exposed to higher

levels of stress than employees with more than 20 years of experience as well as that female employees are exposed to higher levels of stress than male employees.

Table 5. Ordnial logit regression analysis parameter estimates

Predictors	Estimate	Std. Error	Wald	df	Sig.
Public sector	.275	.241	1.296	1	.255
Private sector	0[a]			0	
1-10 years of experience	1.511	.373	16.439	1	.000
10-20 years of experience	1.053	.340	9.596	1	.002
20-30 years of experience	.570	.372	2.352	1	.125
30-40 years of experience	0[a]			0	
Female	.717	.234	9.353	1	.002
Male	0[a]			0	
High school degree	-.202	.280	.517	1	.472
University degree	0[a]			0	

Link function: Logit.
a. This parameter is set to zero because it is redundant.

Hypothesis Testing

Results from the ANOVA as well as the ordinal logistic regression analysis established that among the independent variables only 1-20 years of work experience had a significant impact on occupational stress as its p-value was statistically significant at 95% confidence level, supporting the hypothesis:

H2: Employees with less work experience show higher levels of stress than employees with more work experience.

Moreover, ordinal logistic regression analysis showed that 1-20 years of work experience and gender have a significant impact on stress adversely affecting job performance as their p-values were statistically significant at 95% confidence level, supporting the hypothesis:

H3: Stress adversely affects employees' job performance.

Results from the independent t-test and ordinal logistic regression analysis revealed that sector of employment has no significant impact on occupational stress as its p-value was not statistically significant at 95% confidence level, rejecting the hypothesis:

H1: Public sector employees experience higher levels of stress than private sector employees.

Conclusion

The findings of this quantitative study revealed a relatively high prevalence of occupational stress among employees in Kosovar organizations, reflected by the mean score 3.15. Respondents working in the public sector appeared to be experiencing higher levels of stress than those working in the private sector, with respective mean scores of 3.20 and 3.08; however, the difference proved statistically not significant, rejecting hypothesis H1.

Results showed that years of work experience, however, seemed to predict occupational stress. The ANOVA and the ordinal logistic regression analysis established that 1-20 years of work experience had a statistically significant impact on occupational stress, which confirmed the hypothesis H2 that employees with less work experience show higher levels of stress than employees with more work experience.

Stressors pertaining to demand, control, support, relationships, role and change appeared to be causing occupational stress among employees, all showing positive significant correlation with stress. Demands, such as work load, were reported to cause stress among respondents, alongside issues with control, such as the inability to plan the work. Respondents reported that poor relationships within the organization as well as uncertainty about roles and change in the organization to trigger stress. It was shortcomings in the organization's support system, however, that proved the highest positive correlation with stress, indicating that this aspect made employees most vulnerable to stress.

Moreover, ordinal logistic regression analysis showed that 1-20 years of work experience as well as gender have a statistically significant impact on stress adversely affecting job performance, supporting hypothesis H3 that stress adversely affects job performance of employees with 1-20 years of work experience as well as of female employees.

Although this paper has contributed to the existing body of knowledge, especially pertaining to developing countries such as Kosovo, it still carries limitations that need to be addressed in the future by other scholars. The applied methodology made it difficult to identify specific effects that may be caused by stress. A more thorough study examining the physiological and psychological health effects of occupation stress is necessary, which requires a multidisciplinary analysis. Empirical studies could also analyze the prevalence of stress in various sub-sectors by examining activities to understand which types of work cause higher levels of stress on employees. In this way, more in-depth information will be gathered and awareness on the topic will be increased.

This paper demonstrated that there is prevalence of occupational stress in Kosovo's organizations and that there are several stressors that trigger stress among

employees. This means that companies and public institutions in Kosovo maintain an insecure work environment and do little towards cultivating a stable and positive work environment, leaving employees stressed and insecure about tomorrow. Thus, there is a need to change the approach to managing occupation stress in order to minimize its impact on performance as well as employee wellbeing.

References

American Psychological Association (2015). American Psychological Association Survey Shows Money Stress Weighing on Americans' Health Nationwide. Accessed at:

https://www.apa.org/news/press/releases/2015/02/money-stress.aspx

Barlett, J.E.; Kotrilik, J.W. & Hignins, C.C. (2001). Organisational research: Determining appropriate sample size in survey research. *Information Technology, Learning, and Performance Journal*. Accessed at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.486.8295&rep=rep1&type=pdf.

Bashir, U. & Ramay, M. (2010). *Impact Of Stress on Employees Job Performance A Study On Banking Sector Of Pakistan*. Accessed at: http://www.ccsenet.org/journal/index.php/ijms/article/view/4604.

Ben, C. (2007). *FIT work demand and work supports*. Pp. 1-3.

Bhui, K. et al. (2016). Perceptions of work stress causes and effective interventions in employees working in public, private and non-governmental organisations: a qualitative study. Accessed at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5353523/

Court, S. & Kinman, G. (2008). Tackling stress in higher education. University and College Union. Accesed at: https://www.ucu.org.uk/media/3021/Tackling-stress-in-higher-education-UCU-survey-findings-Dec-08/pdf/ucu_hestress_dec08.pdf.

Desselr, G. (2000). *Human Resource Management*. 8th Ed. New Jersey: Prentice Hall.

Delima, V. (2017). Impact of Organizational Culture on Occupational Stress among the Bank of Ceylon Executive Employees. Accessed at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2909470.

Halkos, G. & Bousinakis, D. (2010). The effect of stress and satisfaction on productivity. Accessed at: https://www.emeraldinsight.com/doi/abs/10.1108/17410401011052869.

Health and Safety Executuive (2018). Work-related stress. Accessed at: http://www.hse.gov.uk/stress/index.htm

Jamal, M. (1984). Job stress and job performance controversy: An empirical assessment. *Organizational Behavior and Human Performance.* Accessed at: https://www.sciencedirect.com/science/article/pii/0030507384900096.

Karasek, R. & Theorell, T. (1990). *Healthy Work: Stress, Productivity, and the Reconstruction of Working Life*. New York: Basic Books.

Lewig, K.A. & Dollard, M.F. (2001). Emotional dissonance, emotional exhaustion and job satisfaction in call centre workers. Accessed at: https://www.researchgate.net/publication/251852257_Emotional_dissonance_emotional_exhaustion_and_job_satisfaction_in_call_centre_workers.

Mawanza, W. (2017). The Effects of Stress on Employee Productivity: A Perspective of Zimbabwe's Socio-Economic Dynamics of 2016. Accessed at:

https://www.researchgate.net/publication/317091863_The_Effects_of_Stress_on_Employee_Productivity_A_Perspective_of_Zimbabwe's_Socio-Economic_Dynamics_of_2016.

Mkumbo, K. (2013). Prevalence of and Factors Associated with Work Stress in Academia in Tanzania. *International Journal of Higher Education*. Accessed at: http://www.sciedu.ca/journal/index.php/ijhe/article/view/3271.

Rafiq, R.; Shah, P.A. & Al-medabesh, A.M. (2015). Job stress among public and private sector workers: an empirical comparison. *International Journal of Research in Commerce, Economics and Management*. Accessed at: https://www.researchgate.net/publication/318745346_JOB_STRESS_AMONG_PUBLIC_AND_PRIVATE_SECTOR_WORKERS_AN_EMPIRICAL_COMPARISON.

Siegrist, J. (2017). *The Handbook of Stress and Health. A Guide to Research and Practice*. Wiley-Blackwell. Accessed at: https://www.wiley.com/enus/The+Handbook+of+Stress+and+Health%3A+A+Guide+to+Research+and+Practice-p-9781118993774.

The National Institute for Occupational Safety and Health (1999). Stress at work. Accessed at: https://www.cdc.gov/niosh/docs/99-101/pdfs/99-101.pdf?id=10.26616/NIOSHPUB99101.

The Effectiveness of Tax Relief Initiatives on SMEs in South Africa

Yergenthren Naicker[1], Rajendra Rajaram[2]

Abstract: Tax relief initiatives have been introduced by the South African government in order to assist small business to grow and become sustainable. The high failure rate of businesses coupled with the alarmingly high rate of unemployment in the country is the main reason the government embarked on these initiatives and strategies. The different tax initiatives available to qualifying small businesses include small business corporation tax and turnover tax. The research has been undertaken to determine if small business tax initiatives introduced by SARS are effective and are being utilised by small businesses. A questionnaire was sent to eighty five small business owners to determine if they are aware of small business tax and turnover tax and also to determine if they are utilising these initiatives. The findings from this study reveal that approximately half of the respondents do not know about these specific tax initiatives. Only a small percentage of small business are eligible for small business tax and none of the respondents in the sample are eligible for turnover tax. The majority of small business owners agree and strongly agree that the initiatives introduced by the government are ineffective and need to be revised.

Keywords: SMEs; SARS; Turnover tax; SBC Rates

JEL Classification: G38

1. Introduction

The cost and complexity of tax compliance for small, medium and micro enterprises in South Africa has been highlighted by the National Treasury and South African Revenue Services (SARS) as an important matter (Govender, 2008).

In South Africa, the failure rate of small businesses is extremely high, with a large proportion of these small businesses not developing into established firms (Olawale & Garwe, 2010). This is contrary to the strategic objectives set out by the national government. One of the main reasons for business failure is the excessive regulatory

[1] Lecturer, University of KwaZulu Natal, School of Accounting, Economics and Finance, South Africa, Address: Golf Road, Pietermaritzburg, South Africa, Tel: 033 260 5397, Corresponding author: naickery2@ukzn.ac.za.

[2] Senior Lecturer and Academic Leader, Managerial Accounting and Financial Management, School of Accounting, Economics and Finance, South Africa, Address: Golf Road, Pietermaritzburg, South Africa, Tel: 033 260 6267, E-mail: rajaramr@ukzn.ac.za.

burdens that are placed on small businesses. In terms of all regulations and laws, tax compliance costs are considered to be the largest component of all compliance costs incurred by businesses. (SBP, 2004) VAT and other tax related issues are considered to be the most problematic regulations for these small businesses. (SBP, 2004)

Although there has been literature on tax compliance and the costs associated with compliance, there has been limited research about the influence of tax relief initiatives on the small business sector in South Africa.

This study aims to determine if tax relief initiatives introduced by SARS have been successful at addressing compliance challenges for small businesses specifically in the province of KwaZulu Natal. The findings from this study reveal that the current tax relief initiatives introduced are not effective fully and the general perception amongst small business owners is that more initiatives should be introduced by the government to assist these owners.

2. Literature Review

2.1. Tax Relief Initiatives for Small and Medium Businesses

Many high income countries, excluding the United States, have significantly lowered corporate tax rates and introduced special tax regimes to assist with alleviating the tax burden. The purpose of these initiatives are intended to support local economies. Initiatives are specifically introduced to encourage business formation and expansion as well as to improve the international competitiveness of these countries. The United States has not reduced its corporate income tax rate since 1986 and has significantly increased the income tax rates of unincorporated businesses. (Hines Jr, 2017) In order to encourage the development of small companies in Pakistan, a lower corporate income tax rate of twenty percent (20%) is levied on smaller businesses. In addition, the Pakistan government also introduced other incentives pertaining to new investment schemes for the purchase of moveable and immoveable assets as well as miscellaneous direct and indirect tax incentives (Alm & Khan, 2017). In India, small businesses were required to keep track of many various indirect taxes, which made compliance very difficult and costly. The Indian government introduced a comprehensive goods and services tax (GST) which put an end to all the indirect taxes that were previously levied. The introduction of this GST was to integrate India into one economy and remove the multiple taxes that were being levied with the aim of facilitating business expansion, lessening the tax burden and improving profits (Jacob, 2017). The Chinese national government also placed great emphasis on the development of small businesses and small business development has been incorporated into the countries overall strategic planning for national economic and social development. A series of tax initiatives were introduced to assist in the promotion and development of the small business sector and some of the major

initiatives included, preferential taxation policies, specific income tax policies for small businesses and taxation policies to promote employment (Chen, 2006).

Government support initiatives for small businesses in South Africa, aim to reduce unemployment and create a more equitable distribution of wealth by creating sustainable employment and increasing turnover for the small business sector (Peters & Naicker, 2013, p. 16). SARS also recognises that new and small businesses are the vital for the economy and are committed to ensuring that these small and medium businesses grow and prosper. (SARS, 2017). In order to assist, SARS has introduced a number of tax relief incentives over the years to help stimulate the growth of small businesses sector in addition to the multiple initiatives and strategies introduced by government.

(Sieberhagen, 2008) Identified the following tax relief incentives that were introduced:

- Reduced tax rates and accelerated depreciation for incorporated small businesses (2001);
- Capital gains tax relief for small businesses (2001 and 2006);
- Skills development relief levies (2005);
- Small business tax amnesty (2006/2007);
- Reduced annual VAT returns (2005);
- Introduction of the small retailers VAT package (2005/2006);
- Increased VAT registration threshold (2008);
- The introduction of a simplified VAT process (2008) and;
- Turnover for small businesses with a turnover of less than R1 million a year (2009)

For the purposes of this study, only two of the more common initiatives will be discussed, which is small business corporation tax and turnover tax.

2.2. Small Business Corporation Tax (SBC)

The definition of a small business as per Section 12E of the South African Income Tax Act is as follows:

- The small business must be a company, close corporation or co-operative as defined in terms of section 1 of the Companies Act, 2008;
- Gross income for the year does not exceed R20 million (2013: R14 million);

- All shareholders or members throughout the year of assessment are natural persons who hold no shares in other private companies or members' interests in any other close corporation or co-operative except in limited cases;

- Not more than 20% of the gross income and all the capital consists collectively of investment income and income from rendering a personal service;

- The company, close corporation or co-operative is not an employment entity. (Davis Tax Committee, 2014)

Section 12E of the Income Tax Act was created for the specific purpose of encouraging new ventures together with employment creation and also presents the opportunity for small businesses to benefit from reduced rates of taxation. (BizCommunity, 2013) The tax relief for small business corporations is essentially in two forms which are favorable and graduated tax rates and secondly accelerated depreciation allowances. (SARS, 2017)

2.3. Favorable and Graduated Tax Rates

Rates applicable to small business corporations for years of assessment ending between 1 April 2017 and 31 March 2018:

Table 1. Rates of taxation applicable to small business corporations

Taxable income	Rates of tax
R0 – R75 750	0% of taxable income
R75 751 – R365 000	7% of the amount over R75 750
R365 001 – R550 000	R20 248 + 21% of the amount over R365 000
R550 000 and above	R59 098 + 28% of the amount over R550 000

Small business corporations with a taxable income of up to R75 750 do not pay any tax. The rates of taxation are much lower for small business corporations with taxable incomes up to R550 000. All taxable income in excess of R550 000 is taxed at the normal South African company tax rate which is currently levied at twenty eight percent (28%) of taxable profits.

2.4. Accelerated Depreciation Allowances

There is an immediate write-off in the year of assessment during which all plant or machinery is brought into use for the first time by a small business corporation in that year for the purposes of its trade (other than mining or farming) and is used directly in a process of manufacture or similar process. (Stinglingh, et al., 2014)

With regard to plant or machinery that is used by an SBC for purposes of its trade, other than miming, farming or those used in a process of manufacturing or similar process, they can be written off over a period of three years as follows:

- fifty percent (50%) of the cost of the asset in the year during which that asset was brought into use for the first time;

- thirty percent (30%) of the cost in the second year; and

- twenty percent (20%) of the cost in the third year. (Stinglingh, et al., 2014)

Currently the Davis Tax Committee has acknowledged that the SBC tax system is fundamentally ineffective, because the tax benefits are being utilized more by service related small business corporations that were never intended to be the main users of the this SBC initiative (Davis Tax Committee, 2016).

2.5. Turnover Tax

In the 2008 Budget Review, it was proposed that an elective turnover tax system be implemented for micro businesses with a turnover up to R1 million per annum. This elective turnover tax is incorporated in the Sixth Schedule to the Income Tax Act and is applicable for all years of assessment beginning on or after 1 March 2009. Despite this tax being incorporated as a Schedule to the Income Tax Act, it is a totally separate from other forms of taxation such as normal tax, donations tax, or dividends tax. Simplistically speaking turnover tax is a tax calculated on the turnover or total receipts of a micro business and not on its profit or net income. This need has seen the need for keeping detailed records of expenses being eliminated. Taxpayers are allowed the choice of selecting this tax and determining whether they should apply to the activities of their micro business. Where the qualifying turnover of any micro business does not exceed R1 million in a given year of assessment, the business is able to elect to be taxed in terms of this regime. To be classified as a micro business, qualifying persons or taxpayers should formally register with SARS. The following persons with a turnover that does not exceed R1 million are allowed to register as micro – businesses:

- incorporated bodies such as companies, close corporations and co-operatives;

- natural persons that are either sole traders or partnerships;

The following persons are specifically excluded as qualifying micro businesses:

- A trust, which is not included in the definition of a micro business and therefore cannot elect to pay turnover tax;

- Persons with interests in other companies which include incorporated entities and natural persons that, at any time during the year of assessment, hold any shares or have any interests in the equity of a private company, close corporation or co-operative or;

- Companies, close corporations and co-operatives, if any holder of its shares or members hold any shares or have any interests in any other private company, close corporation and co-operative. (Stinglingh, et al., 2014)

Table 2. Rates of turnover tax for the period ending 28 February 2018

Taxable turnover (R)	Rate of tax (R)
0 - 335 000	0%
335 001 - 500 000	1% of the amount above 335 000
500 001 - 750 000	1650 + 2% of the amount above 500 000
750 001 and above	6 650 + 3% of the amount above 750 000

Table 2 illustrates the rates of taxation that micro businesses will be subject to if they register for turnover tax. Micro businesses with a qualifying turnover of up to R335 000 do not pay any tax. Business with a qualifying turnover of between R335 000 and R500 000 only pays tax at one percent (1%) of the qualifying turnover. Business with a turnover between R500 000 and R750 000 pay tax of R1 650 plus two percent (2%) of the amount above R500 000. The maximum rate of taxation is three percent (3%) of qualifying turnover for micro business that have a turnover in excess of R750 000.

2.6. Reasons for Tax Relief Initiatives not being Utilized

A large proportion of small businesses in South Africa are not aware of the tax relief initiatives that are available and many believe that the tax systems are considered too complex. These small business owners in South Africa lack the necessary tax skills and the SARS campaigns used to promote these tax initiatives are considered ineffective in attracting small businesses to utilise these initiatives. (Abrie & Doussy, 2006)

According to Smulders, et al., (2003) the total time spent by micro businesses that are registered for turnover tax, on complying with tax is slightly less than two thirds of the time taken by a normal business that is not registered for turnover tax. This indicated that the turnover tax regime is meeting one of its objectives of reducing tax compliance costs by reducing the time spent on tax compliance activities. It was also established that there were additional benefits to tax compliance such as keeping more accurate records, which in turn led to a better knowledge about the financial performance and position of their business. The reduced risk of being selected for a tax audit by SARS is also another benefit that was identified.

Visser (2016), argues that the turnover tax system is simply unhelpful and the requirements to register are too onerous. One of the major problems with the turnover tax system was that a small business would be required to pay tax on its income even if the company was making losses and many start-up companies remain in a loss making position for the first two to three years. Currently not more than eight thousand (8 000) businesses have elected to use the turnover tax regime.

Clerq & Venter, (2007) agreed that many small and medium sized businesses in South Africa do not utilise the support programs made available to them. The main

reasons for not making use of these incentives are firstly, small and medium enterprises are generally unaware of the different incentives and secondly, the requirements and processes to apply for these incentives are possibly a limiting factor (Clerq & Venter, 2007).

According to Smulders, et al., (2012) many small business owners were not eligible for small business tax concessions or they were unsure if they were eligible and the general perception is that small business tax concessions are more complex than useful and are not worth the effort. Atawodi & Ojeka, (2012) recommends that small and medium enterprises should be levied lower amounts of taxes and the government should increase tax incentives and exemptions, as this will assist businesses so that they will have enough funds for other activities which that may lead to business growth and assist in surviving in a competitive market.

Due to the importance that small businesses play in any economy, fixing and developing and effective tax system for small businesses is of paramount importance to any government. Tax systems should be developed and designed in order to minimise the costs of compliance. A good tax system should have contain characteristics of simplicity, certainty, fairness and the tax compliance burdens should be proportionate to the size of the business. (Ponorica & Al-Saedi, 2015, p. 135).

In his study, Govender, (2008) found that thirty percent (30%) of small business corporations believed that there was nothing that SARS could do to improve compliance. However, the remaining businesses cited the following suggestions to improve compliance:

- A need to have SARS office closer to businesses;
- To increase the overall service levels from SARS;
- More SARS officials to be on hand to address their issues;
- A need for reducing current tax rates;
- A need for reducing interest and penalty rates;
- Procedures for registration and filing should be simpler and more easily accomplished;
- Tax forms should be shortened to enable quicker completion.

South Africa is still in need of a tax reform that simplifies and minimizes its tax compliance costs so that more emphasis is placed on addressing the challenge of reducing poverty and unemployment in the country (Smulders, et al., 2012). Most small businesses consider the taxation system to be biased and unfair to them as they pay the same amounts as large businesses. Government needs to simplify and

develop a system that suits small and medium enterprises, which is different when compared to larger entities. (Ponorica & Al-Saedi, 2015).

3. Research Design

No single research method can be considered as the best method in all circumstances. The choice will be dependent on the research question, research objectives, data that is being accessed and precisely what we are expected to do (Smith, 2011, p. 53). Questionnaires have the advantage of obtaining data more efficiently in terms of researcher time, energy and costs. The method of data collection using questionnaires is mostly used for economic and business surveys (Kothari, 2004), and most of the empirical research on tax compliance is based on surveys analysing taxpayers (Gangl et al., 2014). As a result a questionnaire was deemed to be most appropriates for the purposes of this study. The primary participants in this study were the owners of small businesses who are responsible for ensuring the taxes are up to date. The questionnaire was distributed to a sample of 85 SME business owners.

Questions dealt with some of the specific tax relief initiatives that have been introduced by SARS. The two initiatives that are evaluated are small business corporation's tax and turnover tax. This information allowed the researcher to evaluate if business owners are firstly aware of the tax relief initiatives introduces and secondly if these initiatives are actually being utilised. These questions will help to evaluate which specific tax relief initiatives are mainly being used and also determines if these initiatives are effective in meeting the objectives that they were intended for. In addition the perceptions of small business owners over the usefulness and effectiveness of tax initiatives were evaluated.

4. Research Findings

A sample of 85 small and medium business owners were surveyed for the study. The following responses were obtained from the interviews.

Question 1

Table 3. Are business owners aware of tax relief initiatives available for small businesses?

Are business owners aware of tax relief initiatives available for small businesses?			
	Frequency	**Percentage**	**Cumulative Percentage**
Yes	41	48,2	48,2
No	44	51,8	100,0
Cumulative Percentage	85	100,0	

Roughly, half of the business owners are aware of the tax relief initiatives that are available to small businesses. 51.2% of owners are not aware of the various relief initiatives that are available. This indicates that SARS may not be doing enough to promote these initiatives, which may be beneficial in assisting to reduce tax liabilities and improve cash flows.

Question 2

Table 4. Do small business owners utilize tax relief initiatives?

Do small business owners utilize tax relief initiatives?			
	Frequency	**Percentage**	**Cumulative Percentage**
Yes	12	14,1	14,1
No	73	85,9	100,0
Cumulative Percentage	85	100,0	

Only 12 respondents, which represents 14.1% of the sample, have indicated that they utilize the tax relief initiatives that have been introduced by SARS. This indicates that the majority of these small businesses may not be fully befitting from the initiatives that have been introduced and that SARS may have not done enough to promote these initiatives.

Question 3

Table 5. Do small business owners utilize SBC rates?

Do small business owners utilize SBC rates?			
	Frequency	**Percentage**	**Cumulative Percentage**
Yes	12	14,1	14,1
No	73	85,9	100,0
Cumulative Percentage	85	100,0	

All 12 respondents that indicated they are aware of the tax relief initiatives have also indicated that they utilize small business tax. This means that 100% of the business owners who are aware of small business initiatives also apply small business corporation (SBC) rates in calculating their income tax liabilities. 85.9% of small businesses are not aware of the tax relief initiatives and do not utilize SBC rates.

Question 4

Table 6. Do small business owners utilize turnover tax?

Do small business owners utilize turnover tax?			
	Frequency	**Percentage**	**Cumulative Percentage**
No	85	100,0	100,0

All eighty five (85) respondents have indicated that they do not use turnover tax. This indicates that taxpayers do not know about this specific initiative and they may not qualify for turnover tax in terms of the requirements prescribed by SARS. This means that SARS must relook at the specific requirements.

The above findings are consistent with the literature and specifically with the studies done by (Abrie & Doussy, 2006) and (Clerq & Venter, 2007) which found that the relief initiatives introduced are not sufficient and are not being fully utilised efficiently by small and medium businesses.

Question 5

Table 7. Why do you not utilize the initiatives?

Why do you not utilize the initiatives?			
	Frequency	**Percentage**	**Cumulative Percentage**
Not applicable to my business	51	69,9	69,9
Does not add value or save costs	7	9,6	79,5
Do not understand the rules	12	16,4	95,9
SARS does not assist me in implementing these rules	3	4,1	100,0
	73	100,0	

An overwhelming 69.9% of respondents indicated that the main reason for not utilizing tax relief initiatives is because they are not applicable to their businesses. This indicates that the initiatives that SARS have made available are not necessarily addressing the needs of the majority of businesses out there and they may not be effective as intended. Of the remaining 30.1% of the respondents, 9.6% feel that the initiatives do not add value or save costs, 16.4% do not understand the rules and 4.1% feel that SARS does not assist in implementing these initiatives. These findings are consistent with the findings (Smulders et al., 2012), and highlight the fact that the tax initiatives currently available are not adequate to assist small businesses.

Question 6

Table 8. Have initiatives been successful in assisting with compliance?

Have tax initiatives been successful in assisting with compliance?			
	Frequency	**Percentage**	**Cumulative Percentage**
Strongly disagree	24	28,2	28,2
Disagree	35	41,2	69,4
Neutral	23	27,1	96,5
Agree	3	3,5	100,0
	85	100,0	

An overwhelming 69.4% of respondents have indicated that they disagree or strongly disagree that that the tax initiatives introduced by SARS have been successful in assisting with tax compliance. 27.1% of respondents are neutral, which indicates that these respondents are not certain if the tax initiatives introduced have been successful, or not in helping with compliance. Only 3.5% of respondents agree that the initiatives introduced have been successful. Zero respondents strongly agree that the initiatives introduced are successful. These findings are consistent with the findings from (Visser, 2016) the findings from the Davis Tax Committee, (2016).

Question 7

Table 9. Should more tax relief initiatives be introduced?

Should more tax relief initiatives be introduced?			
	Frequency	**Percentage**	**Cumulative Percentage**
Strongly disagree	1	1,2	1,2
Neutral	16	18,8	20,0
Agree	39	45,9	65,9
Strongly agree	29	34,1	100,0
	85	100,0	

Eighty percent (80%) of respondents agree and strongly agree that SARS must introduce more tax relief initiatives to assist small businesses with compliance. 18.8% of the respondents are neutral indicating that they are not sure if SARS should introduce more initiatives or not. This clearly highlights the fact that the current initiatives are not adequate and much more assistance and initiatives are required by small businesses. Only one respondent strongly disagrees with the above statement, that more tax relief initiatives should be introduced. The findings are consistent with studies conducted by Atawodi and Ojeka, (2012) and Govender, (2008) who have also found that small business owners believe that SARS is not doing enough to assist with tax compliance.

5. Conclusion

Approximately 50% of respondents do know about the tax relief initiatives that have been introduced by SARS. However, only 14.1% of respondents have indicated that they actually utilize these initiatives. Small business corporation tax is the only initiative that was utilized. None of the respondents indicated that they adopted turnover tax. This is in line with the other responses, where it was established that tax relief initiatives are not applicable to 69.9% of the respondents. The remaining 30.1% of respondents have indicated that these initiatives do not add value or save costs, business owners do not understand the rules and SARS does not assist in implementing the rules. 69.4% of respondents have also indicated that SARS initiatives have not been successful in assisting with compliance and an overwhelming 80% of respondents have indicated that more initiatives need to be introduced. This is in agreement with the literature review, which has indicated that tax relief initiatives introduced are not achieving the objective they were intended to meet and there is an urgent need for a change in tax policies that regulate the small business sector to support small and medium businesses in accomplishing these objectives. In addition SARS should try and reduce the qualifying criteria for small businesses to benefit from these initiatives as many of them do not qualify and are struggling to pay tax at the normal rates applicable to the larger businesses.

6. References

Abrie, W. & Doussy, E. (2006). Tax compliance obstacles encountered by small and medium enterprises in South Africa. *Meditari Accountancy Research,* 14(1), pp. 1 -13.

Alm, J. & Khan, M.A. (2017). Tax Policy Effects on Business Incentives in Pakistan. *Tulane Economics Working Paper Series,* pp. 1 - 46.

BizCommunity (2013). *www.bizcommunity.com.* [Online] Available at: http://www.bizcommunity.com/Article/196/512/94299.html [Accessed February 2018].

Chen, J. (2006). Development of Chinese small and medium-sized enterprises. *Journal of Small Business and Enterprise Development,* 13(2), pp. 140 - 147.

Clerq, B.d. & Venter, J. (2007). A three-sector comparative study of the impact of taxation on small and medium enterprises. *Meditari Accountancy Research,* 15(2), pp. 131 - 151.

Davis Tax Committee (2014). *Small and Medium Enterprises: Taxation Considerations,* s.l.: s.n.

Davis Tax Committee (2016). *Small and Medium Enterprises: Taxation considerations, Second and final report,* s.l.: s.n.

Gangl, K.; Torgler, B.; Kirchler, E. & Hofmann, E. (2014). Effects of supervision on tax compliance: Evidence from a field experiment in Austria. *Economics Letters,* pp. 378 - 382.

Govender, R. (2008). *Formal SMME tax compliance survey report,* s.l.: United States Agency for International Development (USAID).

Hines Jr, J.R. (2017). *Business Tax Burdens and Tax Reform.* s.l., Brookings Papers on Economic Activity.

Jacob, R. (2017). The Impact of Goods and Service Tax on the Micro, Small and Medium Enterprises. *Imperial Journal of Interdisciplinary Research (IJIR),* 3(10), pp. 86 - 88.

Kothari, C.R. (2004). *Research Methodology: Methods and Techniques.* New Delhi: New Age International Publishers.

Olawale, F. & Garwe, D. (2010). Obstacles to the growth of new SMEs in South Africa: A principal compnent analysis approach. *African Journal of Business Management,* May, 4(5), pp. 729 - 738.

Peters, R. & Naicker, V. (2013). Small medium micro enterprise business goals and government support: A South African case study. *South African Journal of Business Management,* 44(4), pp. 13 - 24.

Ponorica, A.G. & Al-Saedi, A.H.J. (2015). *The importance of taxation systems for SME tax compliance.* Bucharest, s.n., pp. 129 - 136.

SARS, 2017. *www.sars.gov.za.* [Online] Available at: http://www.sars.gov.za/TaxTypes/Pages/default.aspx

SBP (2004). *Counting the cost of red tape for businesses in South Africa.* Johannesburg: SBP.

Sieberhagen, H. S., 2008. *A qualitative literature review of the differentiated tax policies for small and medium enterprises in South Africa.* s.l.:s.n.

Smith, M. (2011). *Research methods in accounting.* 2nd ed. s.l.:Sage Publications.

Smulders, S.; Stiglingh, M.; Franzsen, R. & Fletcher, L. (2012). Tax compliance costs for the small business sector in South Africa - establishing a baseline. *eJournal of Tax Research,* 10(2), pp. 184 - 226.

Stinglingh, M. et al. (2014). *SILKE: South Arican Income Tax.* s.l.:LexisNexis.

Visser, A. (2016). *Turnover tax harms SMEs,* s.l.: Business Report.

The Risks of Outsourcing Services at Selected Facility Management Companies in Cape Town

Rethaa van der Berg[1], Onojaefe Darlington[2]

Abstract: The outsourcing of facility management services has become increasingly competitive and success now depends on companies' ability to assess and manage risks of low employee morale, intellectual property right, legal, increased costs, unrealistic savings projections and reputational damage successfully. This paper examined outsourcing risks at selected facility management companies in Cape Town. Previous study identifies loss of control, cost and life cycle impact and time inefficiency as anecdotal evidence of outsourcing risks. In the facility management sector, the identification and management of risks have begun to shift progressively from external to internal – like resource and capability management and the strengthening of internal control mechanism. This quantitative study utilised self-administered questionnaire to collect data from 142 randomly selected respondents; employees of participating facility management companies in Cape Town. The paper found that top 6 risks ranked from the highest are information security, legal, ethics/compliance, contractual, financial and economic. The higher end of the mean scoring indicates a greater emphasis on controllable (internal) risks, with 4 out of the top 6 ranked items identified within the internal risks category. This research provides insight to understand outsourcing, risks of outsourcing and risk assessment techniques with emphasis on internal risk management. The examination of outsourcing risks enables companies to understand risk assessment, evaluation and mitigation requirements and categorisation for successful management of risks associated with the outsourcing of facility management services.

Keywords: Risk Management; Controllable and Uncontrollable Risk; Strategic Facilities Planning

JEL Classification: M11

1. Introduction

In a competitive real estate market, companies need to assess and manage facilities management related services to ensure that the company operates optimally whilst

[1] Master of Business Administration graduate, Cape Peninsula University of Technology, Cape Town Campus, South Africa, 8000, Tel: +27216738433, Corresponding author: rethaavanderberg@yahoo.com.

[2] Senior Lecturer, PhD, Coordinator: Research and Academic Programme, Graduate Centre for Management, Cape Peninsula University of Technology, Room 4.27 4 th Floor, Engineering Building, Cape Town Campus, South Africa, 8000, Fax: +27 21 460 3717, Tel: +27 21 460 9019, Corresponding author: onojaefed@cput.ac.za.

ensuring minimal risk. The outsourcing of services comes with risks, such as reduced employee morale, IP, legal, increased costs, unrealistic savings projections and reputational damage. The examination of identified risks enable a company to manage outsourcing of facility management services. Outsourcing, according to Ikediashi, Ogunla and Boateng (2012) is the "contracting out" of business process to a third party. While most facility management services are outsourced, some remain insourced to maintain organisational cohesion and control (Ikediashi, Ogunla & Boateng, 2014, p. 473). In a similar study, Kavcic (2014, p. 9) states that the decision to outsource is one which could be of long term and strategically important for a company overall cohesion and control. For the facilities management company to be successful, improved organisational cohesion and control should be regarded as essential part of organisational activities and functions.

2. Literature Review

Increasing complexity in the real estate sector along with shifting paradigm progressively from external to internal – enhances resource and management capability (Krumm, 1998, p. 95). This paradigm shift provides impetus for robust acquisitions, mergers and strategic alliances decision to improve organisational resources and capabilities for success and growth. This is done with the objective of risks identification, mitigation and management. In addition to risk mitigation and management, the growth and success of outsourcing would benefit from the application of four principal components; (1) strategic facilities planning, (2) strategic asset management, (3) asset maintenance service and (4) facilities service management.

Strategic facility planning: The formation of strategic facilities planning commences in the boardroom and requires the input and support from major divisions within the company. Whilst strategic facilities planning is a key component in long-term planning of assets, success would depend greatly on the identification, management and mitigation outsourcing risks. In this instance, error in risk identification, mitigation and management could lead to financial loss, reputational damage with consequence of adversarial relationship with third parties. It is imperative that strategic facilities planning is conducted in a manner where it has complete stakeholder buy-in compatible with companies' objectives.

Strategic asset management: provides the guiding principle for procurement, strategic planning use and disposal of assets (Barton, Jones & Gilbert, 2001, p. 70). Jolicoeur and Barrett (2005, p. 52) indicates the success of strategic asset management is determined by the degree of alignment with other resources to support a company's strategic direction. Also, the alignment allows a facilities manager the time to contemplate on how best to respond to change in requirements.

As competition increases, strategic asset management becomes an important management principle that should be applied for success, growth and competitiveness (Fraser, 2014).

Asset maintenance service: Although maintenance management models exist, risk management in the context of outsourcing is focused on four dominant models. These models according to Fraser, (2014) are: (a) total productive maintenance (TPM), (b) condition-based maintenance (CBM), (c) reliability centred maintenance (RCM) and (d) condition monitoring (CM). The four maintenance models should be used in conjunction with building provision of basic services for human habitation like, clean water and air, waste removal, optimal humidity and thermal control, privacy, security and acoustic comfort (Osbourn & Greeno, 2007).

Facility management services: The outsourcing risks here relate in part to user satisfaction of the facility which should be optimised (Mohd et al, 2016, p. 29). Tan, (2016, p. 86) explains that users' satisfaction may be assessed via two perspectives, namely the purposive approach, where the aim is to understand if the property is fit for purpose for a specific user and the aspiration-gap approach. In this instance, users have a set of aspirations for their space and require that the condition of the space meet their aspirations. With the four management principles above, there are other elements of risks exposure that requires mitigation and management. These are:

Exposure to and Elements of Facility Management Risks

Abbasi et al, (2005) define risks as the likelihood of an occurrence of uncertainty, unpredictable and undesirable nature which may alter the probability of investment the success. In outsourcing, other risks include a possible change in companies' ability to achieve both investment success and the failure of a relationship between the principal (client or client's representative) and the outsourcing vendor. In study by JLL (Jones Lang LaSalle Incorporated, 2015) an American professional services and investment management firm which specialises in real estate, have highlighted seven compliance and facilities related risks when considering outsourcing. These risks are: ethics, safety, vendor and financial management, labour management, information security, data governance and contractual risks.

Drivers of Outsourcing and the Effects on Stakeholders

Through vertical integration strategy in facility management, outsourcing plays a role in the transfer ownership and management of processes to a third party (Farncombe & Waller, 2005, p. 259). This transfer allows companies to focus on core contends that the capability benefit can maximised when you focus on those activities that matches companies' capabilities. Woodward-Pu, (2014) extend this notion when he argued that core competencies should never be outsourced so that it can be maximised when directed toward a single activity. In determining a company's key strengths, internal factors should be used to strengthen control and

ownership in the form of strategic asset management. Outsourcing should be complementary providing much needed support services which pertain to a core competency that are external to the company.

Risk Assessment Planning and Implementation

Risk assessments involve the identification of potential losses by means of establishing the extent of these, understanding the likelihood of the potential losses, placing significance to the potential losses whilst appraising overall risk attributed to it (Zsidisin et al, 2004, p. 398). Lee, Yeung and Hong, (2012, p. 544) proposed the failure mode and effect analysis (FMEA) framework to construct a risk map for qualitative risk assessment purposes. A FMEA according to asq.org (2018) can be defined as a step-by-step approach in the identification of possible failures in a design, assembly/manufacturing process, a product or service. A FMEA can be used during the design phase of a product, process or service, when an existing product, process of service is redesigned, prior to the modification of control plans for new or modified processes whilst analysing failures of existing products, processes and services.

Various factors which contribute to risk analysis using FMEA are taken into consideration, which aids in the exploration and diagnoses of problems at progressive stages of a process (Carbone & Tippett, 2009, p. 29). Stage one focuses on the identification, exploration and examination of the outsourced service. Stage two focuses on the quantification of risks, hence accounts for components such as probability, impact and detection factors. Stage three focuses on the understanding of what each risk entails. Consequences understanding is key to strategy formulation in the risk mitigation domain. Stage four focuses on the statistical techniques of outsourcing, with the cost and benefit associated with this being explored. Stage five focuses on the design of an action plan and, finally, stage six the stage where action is taken, leading to mitigation of risks.

3. Research Methodology

Research methodology is derived from the theory of data collection to acquire knowledge on the process, methods or procedures to assembled data. The data provides evidence to construct knowledge about the unit of analysis and serves as the base for the research strategy (Creswell & Clark, 2017).

In this paper a quantitative study using survey method was applied. The quantitative survey combines normative techniques with descriptive research to examine respondents' perception of outsourcing risks. The quantitative survey method was adopted to ensure participation by sufficient numbers of respondents. To this end,

self-administered questionnaires were distributed via email to 142 randomly selected respondents employee of participating facility management companies.

Respondents were requested to return questionnaires within 10 days of delivery. Participants were informed in the email that the questionnaire formed part of an academic study with participation being voluntary and that the information obtained will be used exclusively as part of the study and treated with utmost confidence. Persons inside of companies who have little or no exposure to either facilities management or outsourcing functions were excluded due to concerns that their limited understanding of both key disciplines may lead to these participants completing the questionnaire without fully understanding the contents of the said survey.

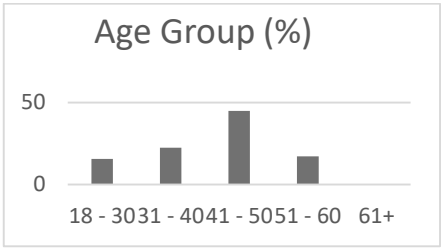

Table 3.1. Age Group (n=58)

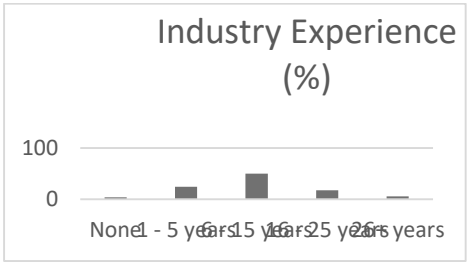

Table 3.2. Industry Experience (n=58)

Of the selected population of 142 persons, 58 participants returned their questionnaires in a completed state with a single participant responding with an indication of their desire not to participate in the survey. This meant that a total of 83 participants did not return any surveys, which equates to a 41% response rate. Although below 50%, several studies concluded that an increase in response rate does not increase survey accuracy.

Visser et al (1996) states that surveys with lower response rates (near 20%) yielded more accurate results than those with higher response rates (70%). Table 3.1 shows that the largest group of respondents (45%) falls within the 41-50 years old age group, followed by those in the 31-40 years age group (23%). A smaller group of respondents (17%) falls within the 51-60-year age group, with the remaining 15% falling within the 18-30-year age group. No participants over the age of 61 years participated. Industry experience specifically pertains to the amount of years participants were employed in or exposed to the facilities and/or outsourcing sectors. Half of the respondents fall within the 6-15-year bracket, with 24% falling into the 1-5-year bracket, 18% the 16-25-year bracket, 5% of respondents falling into the 26+ year bracket and 3% indicting that they have had no exposure.

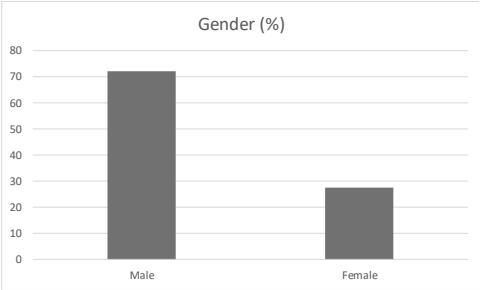

Table 3.3. Gender (n=58)

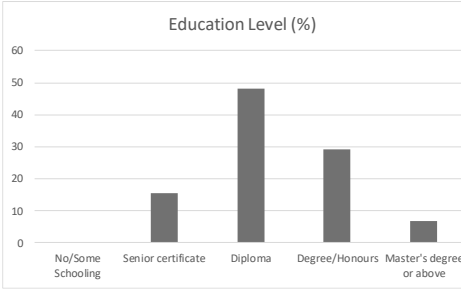

Table 3.4. Education Level (n=58)

As shown in Table 3.3, most of the respondents in this study were male (72%), with female respondents making up the balance thereof (28%). This represents a nearly 3-to-1 male to female ratio. Table 3.4 indicates a large section of respondents having obtained some level of tertiary education, with 84.5% having obtained a diploma or above and the remaining 15.5% of respondents having obtained a senior certificate. None of the respondents who participated have indicated none or only some level of schooling.

Instrumentation

Methods of instrumentation include gathering data on whether outsourcing of FM related services is prevalent in the participant's company, the level of outsourcing, the desired level of outsourcing in the opinion of the participant and the impact which outsourcing of FM related services have had on the company. Next, the reasons for outsourcing was measured. As adapted from the model presented by Burdon and Bhalla, (2005), noted that a Likert scale indicates key reasons as to why companies may choose to outsource FM related services was included.

Following this, questions pertaining to risk factors associated with the outsourcing of FM related functions, both inside (controllable risk) and outside (uncontrollable risk) of a company were considered. To identify the risk associated with the outsourcing of services on the facilities management environment, a survey consisting of variables which has been adopted from previous outsourcing studies (Keegan & Haden, 2000 and adapted by Ikediashi et al, 2012 p. 304) was used as the design approach which pertains to the perceived risks to companies from an outsourcing perspective. A 5-point Likert scale method of 1-strongly disagree to 5-strongly agree was employed.

Data Analysis

The software package used to conduct data analysis is called SPSS. The analysis of data was completed using basic interferential and descriptive statistical tools (Ikediashi & Okwuashi, 2015, p. 67).

4. Results

Nearly 64% of respondents indicated that facilities related services were outsourced within their organisation, with 33% indicating no levels of outsourcing and 3% being unsure. The variance between companies practicing full outsourcing (12.2%) and the desired level (15.5%) as well as companies where no outsourcing is prevalent (20.7%) and the desired level (22.4) is low. This indicates a general satisfaction between existing and desired levels of outsourcing.

Table 4.1. The impact outsourcing of FM services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Positive	35	60.3	60.3	60.3
	Neutral/no change	10	17.2	17.2	77.6
	Negative	2	3.4	3.4	81.0
	Not applicable	11	19.0	19.0	100.0

When considering reasons why companies choose to outsource FM related services and as illustrated in table 4.2, the desire to focus on core activities, followed by the need to reduce costs are considered as the greatest reasons to do so.

Table 4.2. Descriptive Stats on Reasons Companies Outsource FM Services

Determinant	N	Minimum	Maximum	Mean	Std. Deviation
Q5.5 To focus on core activities	58	1	5	4.45	.921
Q5.1 Reduction of costs	58	1	5	4.43	.840
Q5.3 Access to greater knowledge/skills pool	58	1	5	4.29	.918
Q5.2 Shared risk/accountability	58	1	5	4.21	1.039
Q5.6 Competitive pressure	58	1	5	3.98	1.000
Q5.4 Less staff to manage	58	1	5	3.81	1.115

Table 4.3 takes both controllable as well as uncontrollable risks into consideration, with the risk which is assigned the highest risk being the one(s) with the mean closest to that of the maximum. A benchmark of 3 (1+2+3+4+5)/5 was set to determine the significant as well as non-significant factors, which is a model adopted by Ikediashi & Okwuashi (2015, p. 69), who used this method in a study to determine a number of critical success factors (CSFs) for the implementation of risk assessment and management practices within Tanzania's construction industry. Thus, any mean value greater or equal to 3 can be considered as significant.

Table 4.3. Descriptive Statistics for All Risks

Determinant	N	Minimum	Maximum	Mean	Std. Deviation	Rank	Remark
Q6.5 Information Security	58	2	5	4.07	0.876	1	S
Q7.2 Legal	58	2	5	4.07	0.856	1	S
Q6.3 Ethics/Compliance	58	1	5	4.03	0.955	3	S
Q6.2 Contractual	58	2	5	3.97	0.917	4	S
Q6.1 Financial	58	1	5	3.95	1.067	5	S
Q7.3 Economic	58	2	5	3.95	0.804	5	S
Q6.4 Staffing	58	1	5	3.84	0.951	7	S
Q7.5 Technology	58	2	5	3.79	0.913	8	S
Q7.4 Political	58	1	5	3.6	0.917	9	S
Q6.6 Vendor Management	58	2	5	3.59	0.817	10	S
Q7.1 Social	58	2	5	3.33	0.866	11	S

The top 6 risks ranked from the highest are information security, legal, ethics/compliance, contractual, financial and economic. The higher end of the mean scoring indicates a greater emphasis on controllable risks, with 4 out of the top 6 ranked items identified falling within this category. According to Ernst & Young, (2017), preventable or controllable risks present only negative impact, which should be avoided or eliminated. Information security risk was highlighted as the leading risk (mean of 4.07) companies are faced with when choosing to outsource facilities related services.

Many high-profile data breaches were found to occur due to physical security weaknesses, which emphasises the importance of adequate data protection, both at client (principal) and supplier level. Although risks to information systems can be mitigated by implementing items such as proper contract structuring, partnering with the correct service provider and understanding the company's information security objectives (Gonzalez, Gasco & Llopis, 2005) argued that an increase in information security risk will always remain when choosing to outsource facilities related functions. Legal risk was identified as the joint biggest risk (mean of 4.07) faced by companies who choose to outsource facilities related services. Pai and Basu, (2007, p. 29) states that any outsourcing agreement would require proper due diligence and legal planning as to prevent the common legal pitfalls. Thirdly, ethics/compliance risk was listed as a risk to companies when choosing to outsource facilities related services.

Ethical behaviour between the principal and service provider is of utmost importance, as failure to do so may see negative consequences both from a reputational and financial perspective. Following this, contractual risk was identified as the next biggest risk. According to JLL (2015), a breach in contract has both legal

and financial implications, with even minor infractions having serious ramifications. Financial and economic risks make up items number 5 and 6 considered as the biggest risks to companies conducting outsourcing functions. Whilst both items pertain to items of a monetary nature, financial risk specifically refers to controllable risk, with economic as uncontrollable.

5. Conclusion and Recommendations

5.1. What are the Risks of Outsourcing Facilities Management Services?

By considering the descriptive statistics, both controllable and uncontrollable risks appeared at the upper end of the combined table when ranked from the highest to lowest and using the mean as a benchmark. There is however an inclination towards controllable risks as the ones considered as greater risk to an organisation. Items such as information security, ethics/compliance, contractual and financial risk features prominently when considering controllable risks, with legal and economic factors featuring as such when considering uncontrollable risks. Information security and legal risk were deemed as the greatest risks facing companies who choose to outsource facilities management services. Gasco and Llopis, (2005, p. 299) study support this finding from an information security perspective while similar study by Platz and Temponi, (2007) found the legal risk to be greater.

5.2. Why do Companies Outsource Facility Management Services?

By considering descriptive statistics and using the mean as the benchmark, it was found that outsourcing allows a company to focus on its core activities (mean of 4.45 out of 5) was highlighted as a key determinant when considering outsourcing services. Another key determinant when considering reasons to outsource is a reduction in costs, with a mean score of 4.43 out of 5 reflected in this regard. Outsourcing, according to Embleton and Wright (1998, p. 96) stemmed from economic climate which places an emphasis on cost cutting and profit maximisation.

On the basis of the above discussion, this paper recommends as follow:

(1) Conducting capability management exercises to prioritise in-sourcing of facility management services;

(2) Consider drivers of outsourcing determine those which may resonate with the said company;

(3) Apply the Failure Mode and Effect Analysis (FMEA) Where outsource is found to be prefer option for qualitative risk assessment, mitigation and management as part of the outsourced contract;

(4) Develop partnerships with specialised third party and utilise analytical tool to identify, evaluate and mitigate outsource risks between partners and contractors.

6. References

Abbasi, G.T.; Abdel-Jabar, M.S. & Abu-Khdejeh, A. (2005). Risk analysis for the major factors affecting the construction industry in Jordan. *Emirate Journal of Engineering Research*, Vol. 10, pp. 41-7.

Barton, R.; Jones, D. & Gilbert, D. (2002). Strategic asset management incorporating ecologically sustainable development. *Journal of FM,* Vol. 1, Issue 1, pp. 70-84.

Burdon, S. & Bhalla, A. (2005). Lessons from the untold success story: Outsourcing engineering and facilities management. *European Management Journal*, Vol. 23, no 5. pp. 576-582.

Carbone, T. & Tippett, D. (2004). Project Risk Management Using the Project Risk FMEA. *Engineering Management Journal*, Vol. 16, Issue 4, pp. 28-35.

Creswell, J.W. & Plano Clark, V.L. (2017). *Designing and conducting mixed methods research*. 3rd ed. Thousand Oaks, CA: Sage.

Embleton, P.R. & Wright, P.C. (1998). A practical guide to successful outsourcing. *Empowerment in Organizations,* Vol. 6, Issue 3, pp. 94-106.

Farncombe, M. & Waller, A. (2005). Outsourcing for corporate real estate managers: How can real estate learn lessons from other industries? *Journal of Corporate Real Estate*, Vol. 7, Issue: 3, pp. 258-270.

Fraser, K. (2014). The Future of Learning and Teaching in Next Generation Learning Spaces*, Emerald Group Publishing Limited*, pp. 15-24.

Gonzalez, R.; Gasco, J. & Llopis, J. (2005). Information systems outsourcing risks: a study of large firms*. Industrial Management & Data Systems*, Vol. 105, Issue 1, pp. 45-62.

Ikediashi, D.I. & Okwuashi, O. (2015). Significant factors influencing outsourcing decision for facilities management (FM) services: A study on Nigeria's public hospitals. *Property Management*, Vol. 33, Issue 1, pp. 59-82.

Ikediashi, D.I.; Ogunlana, S.O.; Boateng, P. & Okwuashi, O. (2012). Analysis of risks associated with facilities management outsourcing: A multivariate approach. *Journal of Facilities Management*, Vol. 10, Issue 4, pp. 301-316.

Ikediashi, D.I.; Ogunlana, S.O. & Boateng, P. (2014). Determinants of outsourcing decision for facilities management (FM) services provision. *School of the Built Environment,* Heriot-Watt University, Edinburgh, UK. pp. 472-489.

Jolicoeur, P.W. & Barrett, J.T. (2005). Coming of age: Strategic asset management in the municipal sector. *Journal of Facilities Management*, Vol. 3, Issue 1, pp. 41-52.

Kavcic K. (2014). Strategic management of outsourcing. *University of Primorska*, Faculty of Management. pp. 9.

Keegan, J. & Haden, F.M. (2000). Facilities management outsourcing and contractual risks. Paper presented at *Ideaction 2000, FMA*, Melbourne.

Krumm, P.J.M.M. (1998). Consequences of modern banking on facilities and corporate real estate management. *Facilities*, Vol. 16, Issue 3/4, pp. 93-98.

Lee, C.K.M.; Yeung, Y.C. & Hong, Z. (2012). An integrated framework for outsourcing risk management. *Industrial Management & Data Systems*, Vol. 112, Issue 4, pp. 541-558.

Mohd, K.; Radzi, M.; Nor, M.N. & Mohezar Ali, S. (2017). The impact of internal factors on small business success: A case of small enterprises under the FELDA scheme. *Asian Academy of Management Journal*, 22(1), pp. 27–55.

Osbourn, D. & Greeno, R. (2007). Introduction to Building. Mitchell's Building Series. *Trans-Atlantic Publications*, I, 2007 ISBN 10: 0132325713.

Pai, A.K. & Basu, S. (2007). Offshore technology outsourcing: overview of management and legal issues. *Business Process Management Journal*, Vol. 13, Issue 1, pp. 21-46.

Platz, L.A. & Temponi, C. (2007). Defining the most desirable outsourcing contract between customer and vendor. *Management Decision*, Vol. 45, Issue 10, pp. 1656-1666.

Swicegood, S. (1987). Strategic facilities planning. *Property Management*, Vol. 5, Issue 3, pp. 245-247.

Tan, T.H. (2016). Residential satisfaction in gated communities: Case study of Desa Park City, Kuala Lumpur, Malaysia. *Property Management,* Vol. 34, Issue 2, pp. 84-99.

Visser, W. (1996). Two functions of analogical reasoning in design: A cognitive-psychology approach. *Design Studies.* 17. pp. 417-434.

Zsidisin, G.; Ellram, L.; Carter, R.; Joseph, L. & Cavinato, J. (2004). An Analysis of Supply Risk Assessment Techniques. *International Journal of Physical Distribution & Logistics Management*, 34, pp. 397-413.

http://asq.org/learn-about-quality/process-analysis-tools/overview/fmea.html.

https://www.ey.com/Publication/vwLUAssets/ey-top-10-business-risks-facing-mining-and-metals-2017-2018/$FILE/ey-top-10-business-risks-facing-mining-and-metals-2017-2018.pdf.

https://fmlink.com/articles/jll-lists-top-7-fm-compliance-risks/.

Methods of Performance Assessment of Managers in Kosovo Businesses

Hidajet Azem Karaxha[1]

Abstract: The main purpose of this study is to evaluate employees' performance as a key component of employee performance management. The objectives of the study are: application of management techniques to identify the needs of employees, application of useful methods of employee performance evaluation of human resources, selection of case studies that apply the methods of employee performances. Methodology of study. To accomplish the purpose of the study, the objectives of the study were met using the linear regression methodology and the Pearson Chi - Square Test. The total number of cases in the study was 391 cases, with the study excluded 27 cases of study that did not apply any method of evaluation of employee performance. The results of the study show that businesses in Kosovo applying new management performance assessment methods are a determining factor of trustworthiness by providing high-performance organizational. The value of the study. This study contributes to the encouragement of businesses in Kosovo to apply new performance evaluation methods with other words successful implementation of the most effective methods.

Keywords: managerial staff; strategies; success; organizations

JEL Classification: M12; L25

1. Introduction

Performance evaluation can increase employee motivation through the feedback process and can give an estimate of working conditions and can improve employee productivity by encouraging strong areas and modifying the weaknesses. Applying useful methods of employee performance appraisal from human resources is considered as a very important asset of the company.

The success of any business depends largely on the use of methods and its ability to accurately measure the performance of its members. In this study, work performance assessment methods were addressed including general performance analysis, narrative estimates, compulsory distribution, ranking tasks, quota systems, and visual evaluation methods. Also in this study are the traditional methods and modern methods applied by Kosovar businesses. The paper incorporates the use of

[1] PhD Candidate, Republic of Kosovo, Address: n.n. 10000 Pristina, Republic of Kosovo, Corresponding author: hidajetkaraxha@gmail.com.

contemporary literature related to employee performance evaluation methods. The linear regression method was used to determine the application of the methods of evaluation of the performance of the managers. Data processing and analysis is implemented through software package for statistical analysis SPSS 20.

Performance assessment is a key factor for developing an organization effectively and efficiently. Individual performance assessment is very useful for the growth dynamics of the organization as a whole. Evolutionary change represents an attempt to improve aspects of the organization that lead to better performance and does not affect the basic nature of business (Burke, 2008). Performance and satisfaction increase the level of acceptance of the proposed change (Holt et al, 2007). Usually rewards are used as a tool to effect change in staff behavior and performance (Balog & Hope Hailey, 2008). Performance Measurement has a significant role before and after change and enables control during change Oakland & Tanner (2007). Zahra et al. (2006) states that one of the reasons for increasing interest in dynamic skills is their ability to influence the organization's performance. Liuhto (2001), points out that the age of new organizations is linked to positive change in performance. Change is not just an exercise to persuade employees to change; it is an exercise with negotiation and compromise (Cunningham & Kempling, 2009). Public Management Literature contains evidence of the importance of determining the need for change by communicating through a continuous exchange process between as many actors and participants as possible (Abramson & Laerence, 2001; Rossotti, 2005) (quoted in Fernandez & Rainey, 2006).

2. Literature Review

Moreover, in respect of the definition of performance evaluation Grote (2002) stated that "Performance evaluation is a formal management system that provides the assessment of individual performance quality in an organization." Performance assessment is the "process of assessing how well employees perform their jobs when compared to a set of standards and then communicating those information to these employees" (Prasetya & Kato, 2011, p. 20). According to Armstrong (2006), there are seven ways to evaluate performance:

1 Overall performance analysis;

2 Performance writing narrative;

3 Mandatory distribution;

4 Mandatory referral;

5 Quota system;

6 Method of visual evaluation.

When public organization operations are to a large extent based on rules and procedures, there is little need for transformative behavior where leadership is intended to create trust in others, values and attitudes of employees (the big eel, 1999; Paar & Eastman, 1997) (Quoted to Quoted, Voet, Kuipers & Groeneveld, 2013). In the process of appraisal based on a Critical Incident Technique (Wagnerová, 2008; Bogardus, 2007; Durai, 2010), or the critical incident or using the Critical Incident Method (Duda, 2008; Hroník, 2006) the appraiser is obliged to keep written records on positive and negative actions related to the work of the employee in question (Durai, 2010).

In practice, a general analysis is a form of assessment as it will reveal the strengths and weaknesses that show where development can be achieved in order for managers to reach an understanding with their staff who wants to evaluate the best work they are doing. Businesses with a performance scheme or wage-related contributions may disagree with this general approach on the grounds that estimates are needed to inform paid decisions (Armstrong, 2006, p. 103). Management should always try to keep the learning environment in the organization. an understanding of the organizational culture that leads to the improvement of the employee's performance (Shahzad, Luqman, Khan & Shabbir, 2012, pp. 975-976).

A story rating is simply a written summary of views about the level of performance achieved. This at least ensures that managers need to collect their thoughts together and put them on paper. It is better to provide action plans to emerge from systematic performance analysis in terms of results and behavior that should occur during the course of a review meeting (Armstrong, 2006, pp. 104-105). Documentation and descriptive texts are the basic components of the narrative approach, which includes: critical incident and essay methods. In the critical incident method, the manager keeps written notes of both highly favorable and unfavorable actions performed by an employee throughout the evaluation period. Critical incident method can be used with other methods to document the reasons why an employee has provided a certain estimate. The Essay Method requires a manager to write a short essay describing the work of each employee during the evaluation period. The evaluator usually categorizes comments under some general headlines. (Mathis & Jackson, 2010, p. 345) The narrative approach offers evaluators the ability to provide written evaluation information, so this method can be applied to evaluate individually either a project or a team (Tabassum, 2012, p. 7).

Forced distribution means that managers need to comply with a disaggregated distribution across the different levels. A typical normal distribution of evaluation is: A = 5%, B = 15%, C = 60%, D = 15% and E = 5%. Forced distribution achieves consistency of one type, but managers and staff rightly hesitate to apply this method (M. Armstrong, 2006, pp. 104-114). Forced distribution is a distribution method that requires the appraiser to assign the employee to the category based on their

performance, but to limit the percentage of employees that can be placed in each category as seen in the table below.

Table 1. Forced distribution

Evaluation	%
A	5-10
B	10-15
C	60
D	15
E	5

Source: (Dechev, 2010, p. 17).

Top compulsory distribution is 5% -10% and at the end 5% of employees are in the highest and lowest category and the others are distributed in medium groups (Dechev, 2010, p. 17). A compulsory distribution system is good for organizations, it is good for individuals, because it takes people who are failing from situations that are bad for them and the company. Because of this he can lead to decisions that cannot be protected when it has a negative impact. On the other hand, its proponents say it puts a rigor and discipline in the performance management system that overcomes all too common tendency with tenderness managers (Lawler, 2003, pp. 2-3).

Forced ranking is a development of forced distribution. Managers are required to set their staff so that order can be generated directly by assigning categories of employees (eg A, B and C), or indirectly through the transformation of performance evaluation in groups of employees. The problem with compulsory typing as well as forced delivery and other general evaluation systems is that the notion of performance is unclear. (Armstrong, 2006, p. 114). Performance assessment systems are one of the most commonly used systems by human resource management in today's organizations. However, despite their widespread use, previous research has identified some problems with implementing performance appraisals, they are evaluative superstition. Consequently, these prejudices result in the lack of high, middle and low interpreting differentials. According to Schleicher, Bull and Jeshil (2009), forced ranking is a type of performance evaluation, where evaluations are necessary to fit along the lines of a certain distribution (Aune & Roed, 2011, pp. 2 - 3). In a forced distribution system, employees are ranked from positive to negative in comparison to the same place to be judged based on independent standards. Human resource professionals have expressed concern that this practice leads to reduced productivity and distrust of management, reduces collaboration and teamwork resulting in high costs during evaluation periods (Marlinga, 2006, p. 21).

Quota systems determine what distribution of estimates should be and adjust the ratings of some managers after the event to ensure that quotas at each level are completed. They are usually applied retrospectively to ensure that, if salaries are

related to performance, the cost of rising is within the budget. (Armstrong, 2011, p. 115)

Performance evaluation can be categorized in two groups:

1) traditional methods (oriented in the past) and

2) Modern methods (future-oriented). Other researchers have classified existing methods in three groups; absolute standards, standards and relative objectives. The performance evaluation methods are:

Traditional methods are relatively old performance evaluation methods. These methods were approaches oriented to the past, which focused only on past performance. Below are the traditional methods that were used in the past:

a. Method of Order;

b. Graphic Evaluation Scales;

c. Critical Incident Method;

d. Especially narrative.

Ordering Method - The superior made the rankings of his employees based on the merits of the best to the worst.

Graphical grading scales are a scale that shows a number of features and a performance range for each. The employee then is evaluated by finding the best score that determines his performance level for each feature.

Critical Incident Method This method is focused on certain critical employee behaviors that make significant performance differences.

The narrative essay method in this method administrator writes an explanation of the strength and weaknesses of the employee for improvement at the end of the evaluation time. This approach mainly tries to focus on behavior (Shaout & Yousif, 2014, pp. 966-967).

Performance evaluation is important because it plays a vital role in any human resource organization. There are clear benefits from managing individual and team performance to achieve organizational objectives. Modern methods would treat the following. Management by Objectives is a method of performance evaluation in which managers or employers determine a list of objectives and make evaluations on their performance on a regular basis and finally make awards based on the results obtained (Khanna & Kumar, 2014, pp. 51-56). Performance is assessed in achieving the objectives set by management. MBO includes three main processes; facility formulation, execution process and performance feedback (Shaout & Yousif, 2014, p. 967). Objective Management is a useful tool for developing and preparing staff for future roles within an organization and assessing skill levels in their current

organizational roles (Huang, Chen & Yien, 2011, p. 274). Objective Management (MBO) is a systematic and organized approach that allows management to focus on achievable goals and achieve the best possible outcomes from available resources. MBO includes continuous tracking and responses in process to achieve targets as it goes down in the figure below (Ghicajanu, 2008, p. 2239).

Figure 1. MBO process steps

Source: (Ghicajanu, 2008)

Comments on how to describe the 360 degree feedback interpretation and the development of important steps are seen below:

a. Feedback is essential to learning. Your report contains information that can help you achieve success if you are open to feedback;

b. Persuasion is a reality.

Do not create feedback if we disagree because there are many people responding based on their perception. And this is a perception that needs to be addressed. D. Observations often contain surprises and individuals can improve their relationships and their work. e. You are responsible for your development. This report raises awareness that feedback becomes effective (Kane, 2013, p. 1). Typically, performance assessment, are limited to a feedback process between employees and superiors. With increased focus and teamwork, employee development, and

customer service, emphasis has shifted employees' feedback from the full range of resources. This highly input for performance feedback is called "360 degree assessment" as shown in the figure below.

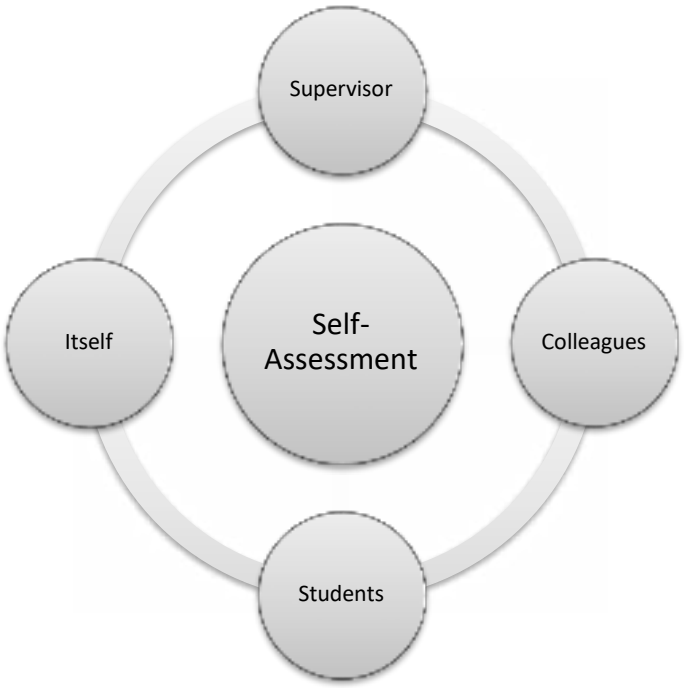

Figure 2. 360 degree fideleku

Source: (Reddy & Pradesh, 2012)

This system is a holistic approach incorporating many-angles views, with many sources of assessment levels (Reddy & Pradesh, 2012, pp. 92-93).

An assessment center is a central place where managers can come together to participate in performance-related exercises evaluated by trained observers. Assessors are required to participate in group exercises, work groups, computer simulations, fact-finding exercises, analysis/decision-making problems, role play, and oral presentation exercises (Shaout & Yousif, 2014, p. 967). The main purpose of conducting the assessment center is to find out how the candidate works in typical management situations. With the help of this method, employees get a broader perspective and performance review that makes it able to understand its stability and lack (Tripathi, 2016, p. 31). Advantages of Evaluation Centers:

1) useful for forecasting future performance;

2) high availability, content availability, and predictive capability compared to other methods;

3) helpful in determining criteria for selection and promotion.

Disadvantages of Evaluation Centers:

1) Costly Process (Singh, 2015, p. 39).

This method is used to assess the employee's potential for future performance rather than the past. It's done using interviews, psychological tests, and discussions with managers. This method focuses on the emotional, intellectual and motivational characteristics of the employee and other personal characteristics that affect his or her work. Advantages of psychological evaluations:

1. Useful for identifying employees who may have considerable potential.

Disadvantages of Psychological Assessments:

1. Consumable and Costly Time
2. Various of the Psychoanalytic Skills (Singh, 2015, p. 39).

Performance capability may be one of the factors influencing stress assessment, and vice versa, an assessment of such a situation can affect performance (Rith-Najarian, 2011, p. 32).

3. Methods

The questionnaire was developed to determine the methods for assessing the performance of managerial staff. This questionnaire is addressed to owners/co-owners, directors, general directors, and all other level managers in Kosovo businesses. The compilation of the questionnaire is standard for all businesses surveyed in Kosovo. In compiling the questionnaire, factors that affect the enhancement of validity and credibility such as the size of businesses and their managerial organization have been taken into account.

Out of the total number of 391 study cases, 27 cases were excluded from the study because they did not apply any evaluation method of managerial staff. The data were analyzed through the SPSS 20 program.

The use of formulas to estimate the size of samples is as follows:

$n = \frac{N}{1+N*e^2}$(Yamane,1967),

N- Number of population elements

n-the number of elements of choice

e- the error limit

The confidence level is 95%

5% error limit. –

The econometric linear regression model testing in this study was used to justify the relationship between dependent variables - enterprise success and independent variables - performance evaluation of management staff applying modern methods for assessment and performance of managerial staff.

The econometric regression model is presented as follows:

$$Y_1 = \beta_1 + \beta_2 X_2 + \beta_3 X_3 + u_i$$

Y = dependent variables - enterprise success

β 1 = constant

β 2 = coefficient close to independent variables

X2 = independent variables

β 3 = coefficient close to independent variables

X3 = independent variables

4. Results and Discussion

The linear regression model is used to test the impact of the application of management performance assessment methods.

Table 2. Applying methods for assessing the performance of managerial staff

Coefficients						
Model		Non-standardized Coefficients		Standardized Coefficients of	t	Sig./p-value
		B	Error Std.	Beta		
1	(Constants)	8.403	.178		47.112	.001
	Do you use new management performance assessment methods?	-.535	.162	-.165	-3.294	.001
Summary of Model						

Model	R	'R Square'	Adjusted square'	Evaluation Error Std.
1	.165[a]	.027	.025	.814

From the data in the table above we can conclude that the Model has the form

$$Y = 8.403 - 0.535X_2 + u_i$$

By testing independent variables for its significance through the importance of hypotheses, H0 and Ha.

H0: β2 = 0 meaning that variable X2 is not statistically significant

If: β2 ≠ 0 which means that variable X2 is statistically significant

The table above shows the probability of the coefficient β2 is Prob./Sig./p-value=0.001 which means that it is smaller than '<' p = 0.05 which consequently shows that hypothesis H0 falls and stays hypothesis Ha that variable X2 is statistically significant.

The Model Interpretation shows that: New Management Performance Management Assessment Methods, Increased by 1 Units and Other Factors Keeping "CentrixParapus" Effect on Organizational Performance Management Challenges as Affecting Factors of Valuation Reliability with -53.5%. Thus, there is a statistically significant positive link between the challenges of organization performance management systems as influencing factors of assessment reliability and new managerial staff performance assessment methods. Explanation of this Model is 2.5%.

Moreover, we can say that the econometric model of ANOVA linear regression gives us the same conclusion.

Table 3. ANOVA applying methods for assessing the performance of managerial staff

ANOVA[a]						
Model		Square amount	df	'Mean' on square	F	Sig./p-value
1	Regression	7.189	1	7.189	10.853	.001[b]
	The remaining	257.670	389	.662		
	Total	264.859	390			

Based on the results provided by the analysis presented in the table where the regression significance is p-0.001 <that is smaller than (p-0.05), which represents the relationship between dependent variables (a. Dependent variables: A Do your organization's performance management systems experience any of the following challenges which are influencing factors of assessment reliability?) and independent variables (b) Predictors: (Constant), Do New Management Performance Methods Approve Management Performance ?) Are significant among themselves.

The application of modern (communicative) performance evaluation methods is an influencing factor of the credibility of the assessment.

Table 4. Challenges in performance management systems and use of new managerial staff assessment methods

*Do your organization's performance management systems experience any of the following challenges, which are influencing factors of appreciation? * Do you use new management performance assessment methods?*					
			Do you use new management performance assessment methods?		Total
			Yes	No	
Do your organization's performance management systems experience any of the following challenges, which are influencing factors of appreciation?	Documentation consistent with performance by supervisors	No.	2	0	2
		% of Total	0.5%	0.0%	0.5%
	Poor performance management system connection with other Human Resource practices	No.	0	1	1
		% of Total	0.0%	0.3%	0.3%
	Poor forms with design rating	No.	1	2	3
		% of Total	0.3%	0.5%	0.8%
	Lack of accountability of employees to meet performance goals or performance criteria	No.	4	0	4
		% of Total	1.0%	0.0%	1.0%
	Non-compliance with ratings	No.	6	0	6
		% of Total	1.5%	0.0%	1.5%
	Failure of supervisors to provide ongoing feedback	No.	5	2	7
		% of Total	1.3%	0.5%	1.8%
	None of these	No.	346	22	368
		% of Total	88.5%	5.6%	94.1%
Total		No.	364	27	391
		% of Total	93.1%	6.9%	100.0%

Challenges in performance management systems should be included in the study of human resource management. Businesses in Kosovo At an organizational level of analysis, businesses surveyed in Kosovo assume that an organization that has a good performance is one that achieves its objectives successfully and uses new management performance management assessment methods with In other words; it

is effectively implementing an appropriate strategy. Referring to the data presented in table form, surveyed businesses estimate that the use of new performance evaluation methods is a significant factor in assessing credibility. While addressing challenges in performance management systems, related documentation consistent with supervisor performance, poor performance management relationship with other Human Resource practices, poor design patterns, lack of employee accountability for meeting performance goals or criteria, failure to comply with ratings, failure of supervisors to consistently provide feedback, where 364 or 93% of them stated that they did not experience any of the above-mentioned challenges.

Chi-Square Test Results - Reliability between challenges in performance management systems and the use of new managerial staff assessment methods.

Table 5. Test "Chi-Square"

	Vlera	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.642[a]	6	.001
Proportion of chance	17.624	6	.007
Nr. valid case	391		

10 cells (71.4%) is assumed no. less than 5. The acceptable minimum of no. is .07.

The Chi-Square test analysis confirms that there is strong evidence of the relationship between the challenges of performance management systems and the use of new managerial staff assessment methods, which is also evidenced through the Pearson-Chi- square "is = .001 with the degree of freedom" df '= 6, p <0.001, and since the p value is less than 0.05 this analysis verifies the relationship of significant importance to the variables between them.

Table 6. Types of use of methods in assessing the performance of managerial staff and the ability to experience the challenges that can experience performance management systems as influencing factors of credibility of assessment

		Which of these methods does your business use to evaluate the performance of management staff?								
		Survey	Interview	Questionnaire analysis	Checklists	Overall performance analysis	Performance (Narrative) Assessment	Forced distribution	Forced Ranking	Metode of visual evaluation
		No.	No.	No.	No.	No.	No.	No.	No.	No.
Do your organization's performance management systems experience any of the following challenges, which are influencing factors of appreciation?	Documentation consistent with performance by supervisors	2	2	2	2	2	2	2	2	2
	Poor performance management system connection with other Human Resource practices	0	1	1	1	1	0	0	0	0
	Poor forms with design rating	2	3	3	3	2	1	1	1	1

	Application contrary to systems by supervisors	0	0	0	0	0	0	0	0	0
	Lack of accountability of employees to meet performance goals or performance criteria	3	3	3	4	4	3	3	3	3
	Non-compliance with ratings	3	4	5	6	5	4	4	4	4
	Failure of supervisors to provide ongoing feedback	6	6	7	7	7	6	6	6	6
	None of these	251	299	331	320	294	273	246	233	224

The cross-tabled 2 chart outlines the types of methods used in assessing the performance of management staff and the ability to experience challenges that can experience performance management systems as influencing factors of appreciation. So from the findings that are presented by the total number of surveyed businesses, 251 businesses use observation as a method of assessing the performance of managerial staff, 299 businesses use the interview, 331 businesses use questionnaire analysis, 320 businesses use checklists, 294 businesspeople use general performance analysis, 273 businesses use narrative written performance estimate, 246 deployed distribution, 233 of them use bulletins, and 224 use the visual evaluation method. All these methods used by businesses in Kosovo to assess performance are influencing factors of reliability, the evaluation.

The Chi-Square test results - the correlation between the types of use of managerial staff performance assessment methods and the ability to experience the challenges that can experience performance management systems as influencing factors of assessment assurance.

Table 7. Test "Chi-Square"

		Which of these methods does your business use to evaluate the performance of management staff?
Do your organization's performance management systems experience any of the following challenges, which are influencing factors of appreciation?	Chi-square	41.962
	df	54
	Sig.	.024[a,b]

The Chi-Square test analysis proves that there is strong evidence of the relationship between the types of use of management staff performance assessment methods and the ability to experience the challenges that can experience performance management systems as influential factors of confidence and the Pearson-Chi-square

statistical value is = 41.962 with the degree of freedom 'df' = 54, p <0.001, significance = .024 and since the p value is less than 0.05 this the analysis confirms the relationship of significance to the variables between them.

5. Conclusions

Of the cases studied, the most widely used method for assessing the performance of managerial staff is the questionnaire analysis followed by the checklist method, then interview and at least as a method of using the visual evaluation method. All of these performance evaluation methods are influencing factors of appreciation. Interpretation of the linear regression model shows that the variables have a statistically significant positive correlation between the challenges of the organization's performance management systems as influencing factors of assessment reliability and new managerial staff performance assessment methods. Performance evaluation is a process that involves taking intentional success actions that an individual or organization has accomplished in performing certain tasks or meeting certain goals over a period of time. Therefore, it shows that performance assessment practices should be intentional rather than casual. Performance evaluation processes in Kosovo businesses are seen to be systematic and regular and are often characterized by personal impacts caused by business concerns to use an assessment system that obstructs objectivity and fairness. Another feature that we have encountered in the field businesses often ignore management by objectives, critical incidents to personal prejudices. This is retrogressive as it affects the overall performance of the individual. Meanwhile, traditional employee valuation methods are being compensated by modern methods of assessment. For Kosovo businesses Objective Management is seen as a performance appraisal method in which managers or employers set a list of objectives and makes assessments of their performance on a regular basis and ultimately determines remuneration based on the achieved results set by management. The 360 degree assessment method, where superiors and appraisals of their subordinates, subordinates evaluate their supervisor and the appraiser evaluates himself and the average of all estimates obtained to reach the final assessment score should now be considered by the organizations. Also after-evaluation counseling through which the results of the assessment are analyzed to explain the strengths and weaknesses and set the agenda for a better performance in the future. Organizations should stop paying less attention to the assessment of their employees and accept that organizational training needs can only be identified by performance evaluation results

6. References

Armstrong. M. (2006). *Performance management*. 3rd edn. Kogan page London.

Aune, M. & Roed, J. (2011). Forced Ranking: Friend or Foe - On forced ranking and its effect on intrinsic motivation, justice perceptions and performance. *Master of Science in Leadership and Organizational Psychology*, pp. 2-3.

Balogun, J. & Hailey. V.H. (2008). *Exploring Strategic Change*. 3rd Edition. FT Prentice Hall.

Bogardus, M.A. (2007). *PHR/SPHR: Professional in Human Resources Certification*. Indianapolis: Wiley Publishing.

Burke, W.W. (2008). *Organization Change: theory and practice*. 2nd Edition. Sage Publications, Inc.

Cunningham. B. & Kempling. J. (2009). Implementing change in public sector organizations. Management Decision. *Emerald Group Publishing Limited*, Vol. 47, no. 2, pp. 330-344.

Dechev, Z. (2010). Effective Performance Appraisal – a study into the relation between employer satisfaction and optimizing business results. *Erasmus University Rotterdam Faculty of Economics of Business Department of Economics,* pp. 1-71.

Duda, J. (2008). *Řízení lidských zdrojů. Ostrava*: Key Publishing.

Durai, P. (2010). *Human Resources Management*. India: Dorling Kindersley.

Fernandez. S. & Rainey, H. (2006). Managing Successful Organizational Change in the Public Sector. *Public Adminisration Review*, pp. 168-176.

Ghicajanu, M. (2008). Strategic Planning and Control in Management by Objectives. *Annals of the Oradea University*, p. 2239.

Holt, D.T.; Armenakis, A.A.; Field, H.S. & Harris, S.G. (2007). Readiness for organizational change: the systemic development of a scale. *The Journal of Applied Behavioral Science*, Vol. 43, no. 2, pp. 232-255.

Hroník, F. (2006). *Hodnocení pracovníků. Praha*: Grada Publishing.

Huang, K.; Chen, K. & Yien, J. (2011). Performance Appraisal-Management by Objective and Assessment Centre. *American Journal of Applied Sciences*, p. 274.

Kane, S. (2013). Confidential 360-Degree Feedback Report. *Teambuildersplus*, pp. 1-7.

Khanna, M. & Sharma, R.K. (2014). Employees Performance Appraisal and its techniques. *A Review, Asian J. of Adv. Basic Sci*, pp. 51-56.

Kuipers, B. & Groeneveld, S. (2013) Implementing change in public organizations. *Paper presented at the 11th Public Management Research Conference, Madison, Wisconsin*, pp. 1-40.

Lawler, E. (2003). Reward Practices and Performance Management System Effectiveness, *Organizational Dynamics*, Vol. 32, no. 4, pp. 396-404.

Liuhto, K. (2001). How much does size, age, or industry membership matter in transition. *Problems of Economic Transition*, Vol. 43, no 12, pp. 6-49.

Marlinga, J. (2006). Continuous Feedback: An analysis of performance evaluation and employee feedback systems in a trial court environment, *Institute for Court Management Court Executive Development Program,* pp. 1-55.

Mathis, R. & Jackson, J. (2010). *Human Resource Management*. 13th Edition, South-Western Cengage Learning

Meenakshi, G. (2012). Multi source feedback based performance appraisal system using Fuzzy logic decision support system. *International Journal on Soft Computing (IJSC),* Vol. 3, no. 1, pp. 91-106.

Oakland, J.S. & Tanner. S. (2007). Successful change management. *Total Quality Management*, Vol. 18, no. 1-2, pp. 1-19.

Prasetya, A. & Kato, M. (2011). Employees' Perception towards the Performance Assessment System And Salary System. *International Conference on Economics, Trade and Development*, pp. 20-26.

Rith-Najarian, L. (2011). The role of Performance in the Stress Re-Appraisal Process. *Indiana University Undergraduate Journal of Cognitive Science,* 6 (2011), p. 32.

Singh, P. (2015). Performance Appraisal and it's Effectiveness in Modern Business Scenarios. *The SIJ Transactions on Industrial, Financial & Business Management* (IFBM), Vol. 3, no. 4, p. 39.

Shahzad, F.; Luqman. R. Khan & Shabbir, L. (2012). Impact of Organizational Culture on Organizational Performance: *An Overview*, pp. 975-976.

Shaout, A. & Yousif, M. (2014). Performance Evaluation – Methods and Techniques Survey. *International Journal of Computer and Information Technology,* pp. 966-967.

Tabassum, A. (2012). Performance Appraisal Practices in a Developing Country: Case Study of a Ngo in Bangladesh. *Journal of good governance and sustainable development* (jggsd), Vol. 1, no. 1, pp. 1-15.

Tripathi, R. (2016). Assessment Centers: Benefits and Shortcomings. *International Journal of Emerging Research in Management & Technology*, pp. 31-39.

Wagnerová, I. (2008*). Hodnocení a řízení výkonnosti*. Praha: Grada Publishing.

Zahra, Sh. A.; Sapienza, H.J. & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43, pp. 917-955.