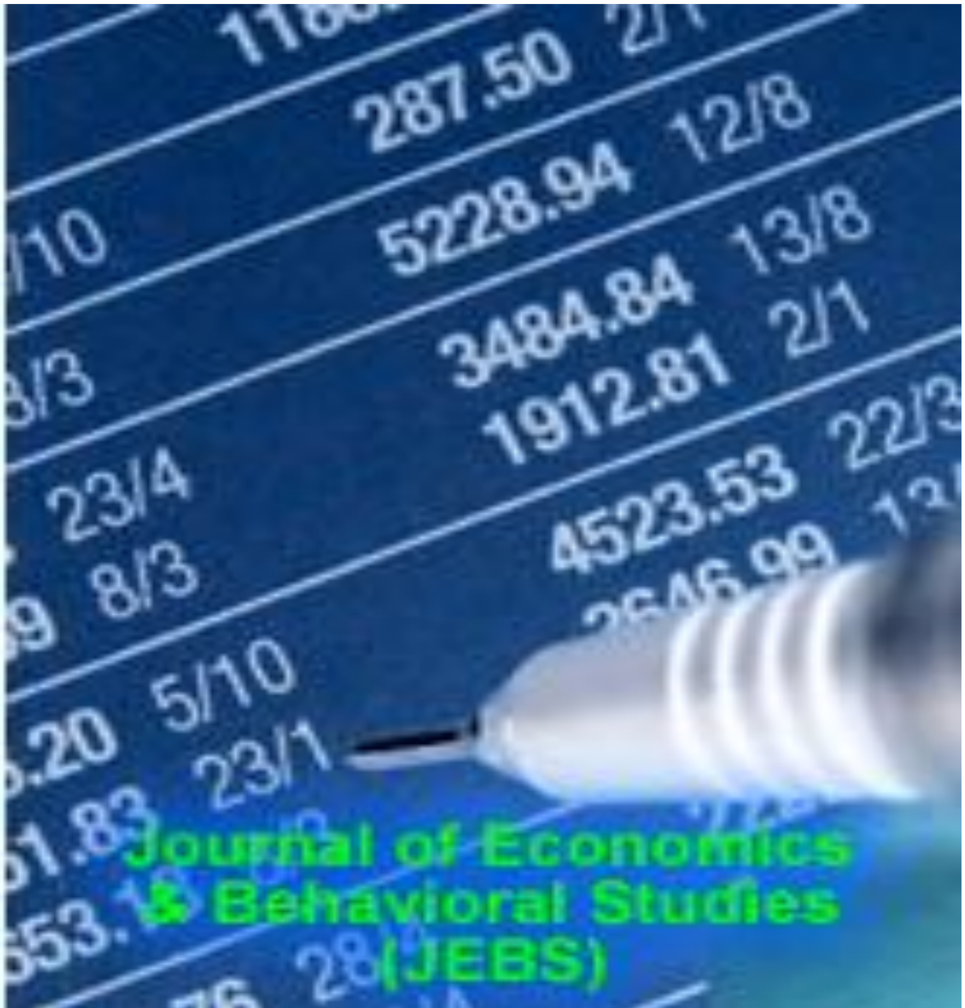

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Editorial

Journal of Economics and Behavioral Studies (JEBS) provides distinct avenue for quality research in the ever-changing fields of economics & behavioral studies and related disciplines. Research work submitted for publication consideration should not merely limited to conceptualization of economics and behavioral developments but comprise interdisciplinary and multi-facet approaches to economics and behavioral theories and practices as well as general transformations in the fields. Scope of the JEBS includes: subjects of managerial economics, financial economics, development economics, finance, economics, financial psychology, strategic management, organizational behavior, human behavior, marketing, human resource management and behavioral finance. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal, and that all listed authors approve its submission to JEBS. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. Journal received research submission related to all aspects of major themes and tracks. All submitted papers were first assessed by the editorial team for relevance and originality of the work and blindly peer-reviewed by the external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance, and clarity of the purpose. The current issue of JEBS comprises of papers of scholars from South Africa, Nigeria, Cameroon, Indonesia, Côte d'Ivoire, Malaysia, Greece and Morocco. Effects of leadership style on employee performance, the link between brand equity and loyalty, effects of information technology (IT) on internal audit, modelling the drivers of impulsive buying behavior, corruption and its implications for development and good governance, influence of perceived human resource risk factors on financial problems, inclusive model of african regional integration, risk tolerance: the influence of gender and life satisfaction, leadership's thinking process with contextual intelligence, urgency of fiscal policy to overcome welfare gap, contribution of fdi to domestic employment levels, income and subjective financial well-being, fiscal policy and external shocks, enhancing the theory of planned behaviour, efficiency in brics currency markets, impact of credit demand on the productivity of rice farmers, analysis of herding behavior in stock market, effect of corporate taxation on the profitability of firms, applying technology acceptance model and public private partnership model were some of the major practices and concepts examined in these studies. Current issue will therefore be a unique offer where scholars will be able to appreciate the latest results in their field of expertise, and to acquire additional knowledge in other relevant fields.

Prof. Sisira R N Colombage, Ph. D.
Editor In Chief

Editorial Board

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PAPERS

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Effects of Leadership Style on Employee Performance of Fast Moving Consumer Goods (FMCGS) in South Africa

Solomon OMONONA, Olabanji ONI, Joseph OBAMEN
University of Fort Hare, Department of Management, Alice, South Africa
omononamise@gmail.com, ooni@ufh.ac.za, obamenjoseph@gmail.com

Abstract: The study seeks to assess the effects of leadership style on Employee performance (EP) of fast moving consumer goods (FMCGs) companies in South Africa. The specific objectives are: to determine the effects of autocratic leadership style on EP; to evaluate the effect of participative/ democratic leadership style on EP; to ascertain the relationship between laissez faire leadership style and EP; to assess the relationship between transactional leadership style and EP in the FMCGs. Quantitative research survey design was adopted for the study; both primary and secondary sources of data were utilized during the investigation. The sample size of 233 was obtained from the estimated population using Rao soft online calculator at 5% error tolerance and 95% level of confidence. Data was collected via questionnaires and analyzed utilizing Simple Linear Regression (SLR) and Pearson product moment correlation (PPMC). It was discovered that there is a significant relationship between the various leadership styles and the performance of organisations. However, transactional leadership style was found to account for more influence on employee performance than other styles of leadership. Therefore, the study recommends the transactional style of leadership for managers of FMCGs in order to increase employee performance, ensure profitability and sustainability of the organisation.

Keywords: *Autocratic leadership (AL); participative/ democratic leadership (PDL); laissez-faire leadership (LFL); Transactional leadership (TL) and Employee Performance (EP)*.

1. Introduction

The need for effective and efficient leadership skills in organizations today is no doubt one of the key areas in human resource-related outcomes, especially in a fast-changing and increasingly competitive global market environment. Leadership style in recent times has become one of the most well-thought-out topics in management. This is undoubtedly so because it is one of the most important areas or aspects that is sometimes very prickly in organizational research (Puni et al., 2014). Inyang (2004); Ukaidi (2016) posits that the term "leadership" involves a process or act that is devoid of the use of force or intimidation to obtain compliance from a subordinate in an organization. Leadership plays an important role during group-group, individual-individual and individual-group interactions or any form of communication within the organization, as such the aptitude of management to achieve "collaborated effort" hinge on leadership competency (Obiwuru et al., 2011). In addition, Fry, (2003) in Obiwuru et al. (2011) x-rayed leadership as a well-planned procedure of giving inspiration/motivation to enrich workers' potential for development and growth by the leader. While Northouse (2004) opines that leadership has to do with individual influencing a group of people to accomplish a pre-determined objective(s). These objectives or tasks can be achieved using the appropriate leadership style in the right situation.

Who is a leader? A leader is like an instructor or guide who goes the extra mile to inspire and encourage his subordinate in order to achieve the desired corporate goals, being a leader encompasses being skilled in inspiring and motivating workers through the use of authority, but by the mere implementation of control (legal authority), that is different from manipulating. In addition, it involves making people or employees perform their duties and still have their dignity and free consent (Acuña, 2017). The act of leadership can be traced centuries back to the Biblical figures, the Greek champions and Egyptian monarchs, who had one thing or the other in common– "leadership". Every leader has its unique way or style of achieving the result through the collaborated effort of the followers. Leadership style is a way of using the influence of a leader as a tool to inspire employee in any organization; it is also known as a leader's method of providing direction, affecting plans, and motivating individuals to achieve a set objective. In the field of management, there are four popular styles of leading followers; Autocratic, democratic, laissez-faire and transformational leadership styles.

The performance of the employee in every organization largely depends on the leadership styles adopted by its management team it is noteworthy to understand that a highly satisfied proportion of employees is directly related to the organizational performance. In addition, a satisfied employee will be loyal, committed and emotionally attached to the organization. In the context of leadership, employee satisfaction can be said to be the velocity of happiness of workers, which determines their efficacy in discharging their tasks in the workplace as set by the employer. Therefore, the satisfaction of employee and proper coordination of other organizational resources is expected to lead to high employee performances. Investigating the leadership styles on employee performance is key to national development because the fast moving consumer goods sector is one of the most important economy driving forces in South Africa. According to PWC, (2012) the FMCG sector is already a juggernaut in South Africa compared to other countries in Africa. As of 2011, retail sales increased to a trillion rands for the first time in history; however by 2016, it had grown to R1.46 trillion. Many big holdings dominated this industry. These companies own most of the biggest brands some of which include: Shoprite, Pick 'n Pay, Spar, Woolworths and Massmart etc. They all make up 80% of the local retail sales with a series of sub-brands aiming at meeting the needs of various consumer market segments.

However, the industry over time has been affected with various challenges ranging from changes in the technological landscape, cultural diversity, globalisation and implementation of black economic empowerment programme which pose challenges to the organisations and their operators in South Africa (Eustace, 2013). These challenges sometimes result to high employee turnover and low productivity, according to Annual South African Human Resource Recruitment Trends Report (2015), most of the FMCGs companies are reporting staff turnover of between 5-10% yearly. In 2014, these companies managed to fill the majority of their vacant positions, although a few did have vacant positions that were carried over to 2015. Many organizations in the industry are faced with dwindling productivity and difficulties in retaining employees since the leadership of such organizations are unable to identify the factors which satisfy their employees and the resultant loyalty. However, employee turnover statistics are being used by organizations as a parameter to measure the effectiveness of the leadership style used, and the impact of turnover on its operations because employee satisfaction is inversely proportional to its turnover.

Top-level employees, particularly those with uncommon expertise, are regularly being offered mouth-watering jobs universally and some of these offers are too striking for them to turn down especially when not satisfied with the present job (Cappelli, 2000). Employees rarely quit their job on the spot. They become discontented and stay unfastened for relatively a while before leaving. In view of leadership challenges faced by the sector, it becomes worrisome to empirically address or investigate the effects of leadership styles on the performance of the employee in the FMCGs. The study seeks to assess the effects of leadership style on the Employee performance (EP) of fast moving consumer goods (FMCGs) companies in South Africa. The specific objectives are: to determine the effects of autocratic leadership style on EP; to evaluate the effect of participative/ democratic leadership style on EP; to ascertain the relationship between laissez-faire leadership style and EP; to assess the relationship between transactional leadership style and EP in the FMCGs. The remaining part of this paper discusses the literature review, methodology, findings and the conclusion and recommendations.

2. Literature Review

The Definition of Leadership Style and Leadership: The lexicon "Leadership style" is practically the same as the leader's conduct. It is the manner by which the leader influences the followers. In Some 2,500 years ago, as posits by Khan, Khan, Qureshi Ismail, Rauf, Latif & Tachir (2015), Socrates contended that leadership is all the time situational: technical and professional abilities of a leader are particular to situations and are not transferable. But he also explained that a good business leader is synonymous to that of an Army Commander because they both share similarities in planning, organizing, coordinating and controlling of subordinates. Leadership style takes care of upward vertical communication and also endeavors to encourage social interactions in the organization. It is the medium in which the line manager comes in contact with the workers etc. Puni, Ofei1 & Okoe, (2014) were of the opinion that humankind has been using organizations to achieve its stated objectives for over two centuries now.

Despite the impact of leadership on the organizational performance, it was not until the 1900s that formal research into leadership began. Because of the cohort of interest in the subject matter, the discipline has been developing fast with more than three hundred and fifty definitions on the concept (Hamidifar, 2009). Different authors and scholars have varying definitions and meanings for leadership, but all are pointing to one thing which is the attitude or behavior of the leader to his subordinates in order to achieve the set objectives. The leadership style crusade came in full swing at the Ohio State University among Scholars in 1945. This research (leadership style) has gained popularity considering the need for leaders who will exhibit the appropriate style toward organizational success (Puni et al., 2014). Subsequently, the works of earlier contributors to this field were expanded in 1947 at the University of Michigan by Likert, Kahn, Maccoby and Katz by mainly examining the correlation between Leadership/supervisor behavior and employee satisfaction and productivity. The research documented two styles of leadership: (1) Production Centered (PC) and (2) Employee Centered (EC) leadership. EC leadership emphasizes employee welfare and satisfaction rather than its productivity while the Production Centered (PC) leadership lays more emphasis on the output of workers and gives less attention to employee welfare and planning. They, however, concluded that there are several patterns or styles of leadership, but every leader has his own peculiar pattern or style of leading, other styles include; Autocratic, Democratic/Participative, Laissez Faire and Team leadership style.

Types of Leadership

A. Autocratic Style: This type of leadership style gives more prominence to productivity/performance rather than employee welfare. The leader is considered to be all-knowing. Input from the subordinates is jettisoned while employee innovative skills are suppressed. This situation is described by Khan et al. (2015) as the autocrat setting the rules for his team or group and expects strict adherence without suggestion from his teammates or subordinates. In the words of McGregor (1960), the autocratic leader is synonymous to a theory X manager because both leaders exhibit the same qualities. An autocratically-led organization will result in the invitation of potential cruelty or manipulation by excessively dominant personalities, suppress worker or subordinate and destroys teamwork and creativity. In addition, contemporary worker or employee may not respond positively to the dictatorial style, which can destruct the communication flow in the organization. However, autocratic leadership is appropriate for circumstances where there is a limited time frame for the team to brainstorm on issues or when the most experienced member of the team happens to be the leader. For example, Gill (2014) opines that automatic style is common in the aviation sector, because it ensures error-free procedures which lead to safety and affordability in aerospace production, bearing in mind the lots of cargo, commercial and NASA flights that lift-off and arrive safely consistently, accolades ought to be given to the aviation sector for steady travellers' safety. The autocratic style adopted by the Aviation team contributed immensely to their success. No doubt an Autocrat achieves result or goal through people.

B. Democratic/Participative Style: This style is grounded on mutual respect and has been in focus in recent decades. It was between the periods of the 1930s to '40s that the notable Scholar Kurt Lewin led the research that helped discover the significance in this leadership style (Gill, 2014). The democratic style most times is linked with participatory style because it involves alliance or teamwork between the leader and follower. In other words, it entails empowering teammate or workers to become active in the decision-making process of the organization, keeping staff in the loop about everything that affects their work and sharing decision making and problem-solving responsibilities. Also, this leadership pattern allows workers or subordinates to be creative, get promoted and celebrate achievement for it employee. There are lots of corporation that have used and still using this style today, notable among them are; Google, Genentech and Amazon.com. Over time, research has shown that democratic/participative leadership has proven to be the most effective and the best form of leadership in some situations. This type of Leadership style will not only increase the productivity of the organization but also increase the employee sense of belonging that leads to organizational citizenship. A democratic leader achieves goals with the people.

C. Laissez-faire Style: This type of leaders considered as uninvolved in the decision making process with their followers and members. In fact, laissez-faire leadership is an absence of leadership style. This style of leadership gives the subordinates the latitude to make or take a decision on their own. This is common among organizations like the advertising companies, start-up social media companies, venture capital investment companies, product design firms, high-end architectural and specialized engineering firms and research and development departments etc. According to Gill (2016), laissez-faire is one of the three basic management styles and is the direct opposite of autocratic rule. In other words, it can be said to be inversely related to the autocratic rule. Robbins et al. (2007) in Chaudhry & Javed (2012) and Luthans, (2005) explained the laissez-faire style as the leadership that "Abdicates responsibilities and avoids making decisions". The laissez-faire style always does not interfere with the decision power of the subordinates. The freedom to take a decision and be accountable for such action is vested on the subordinates (Chaudhry, 2012).

D. Transactional Leadership: This leadership style is based on "reward", that is, followers get rewarded with praise, recognition etc. for an excellent performance but get reprimanded for a negative act. This system of leadership promotes both rewards and punishments as a means of ensuring compliance from its workers. This type of leader, according to Odumeru & Ifeanyi, (2013) does not think outside the box; rather, he works within the existing structure and system. He tends to negotiate his way to achieving organizational objectives. They are "leaders who lead principally by using social exchanges for transactions" (Robbins et al., 2007). Transactional leaders are also concerned with the contingent, the positive and negative reinforcement for reward and punishments respectively. For negative contingent, a transactional leader can be active or passive (management –by- exemption). Transactional leaders stabilize the organization by recognizing followers' needs and desires and working out ways to satisfy them in order to optimize the workers' efficiencies. This satisfaction of needs increases employees' productivity and optimism (Daft, 2015). Transactional leadership concerns itself with granting, rather than wielding of power.

Empirical Review

Autocratic Leadership Style and Organizational Performance: Akor, (2013) studied the performance of library employee and autocratic leadership style in the Benue state of Nigeria. Data for the study was collected and analyzed through a mean and standard deviation analysis, which discovered that the job performance of academic librarians was not significantly influenced by the autocratic style of leadership. Also, Iqbal et al. (2015) investigated leadership and its effects on workers' performance using the descriptive approach and qualitative approach. Based on the research, it was discovered that an autocrat leader is only useful for short term purposes and not appropriate for a long time horizon. The tasks of this type of leader consist of trusting their subordinates to make suitable decisions and fetching vastly skilled, dependable and consistent subordinate into the organization. Therefore, this study hypothesizes that: **H_1:** Autocratic leadership style has a significant effect on EP in the organizations under review.

Participative/Democratic Leadership Style and Organizational Performance: Chris et al. (2016) studied the influence of leadership strategies on the performance of some selected organizations in Nigeria. Under the investigation 84 usable responses obtained. The study reveals that the democratic style has a positive relationship with organizational performance. In addition, Malik et al. (2016) researched the connection between leadership styles and firm citizenship conduct in telecom organizations working in Pakistan. 144 subordinates and 72 leaders constitute the population of study from which data were collected. Data were analyzed using ANOVA to test the hypotheses formulated. However, the finding shows a positive relationship between organizational citizenship behavior and leadership styles. This study hypothesizes that: H2: Participative/democratic leadership style has a great effect on employee performance in the organizations under review

Laissez Faire Leadership Style and Organizational Performance: Chaudhry, (2012) investigated the connection between laissez-faire, transactional style and motivation. The study uses descriptive research with a population of 287. Data collected were analyzed through SPSS. It was discovered that the connection between Laissez-faire and motivation of worker is very low due to the management non-interference. The paper, therefore, concludes that laissez-faire strategy isn't a critical strategy that lifts the inspiration level of workers in comparison with other leadership strategies. Similarly, Malik et al. (2016)'s work centred on the relationship that exists between organizational citizenship behavior and leadership styles. The sample size was drawn from a pool of leaders and subordinates in the telecom companies in Pakistan. PPMC was used to analyze the data obtained. The findings affirmed that the weak relationship between organizational citizenship behavior and laissez-faire leadership style. This study hypothesizes that: H_3: There is a relationship between laissez-faire leadership style and employees' performance in the organizations under review.

Transactional Leadership Style and Organizational Performance: Ojokuku et al. (2012) examined the nexus between the various leadership styles and the performance of firms. Data obtained was analyzed using PPMC to test for the relationship between the variables. The findings revealed that transactional leadership has a negative effect on the performance of the organizations reviewed. The study states further that this style leads to high intention turnover and demoralizes workers. In addition, Shah and Hamid (2015) investigated the connection between transactional leadership and the performance of worker in six different banks of Pakistan. Primary data was obtained from the functional managers of the banks, which was analysed via smart-PLS. Shah and Hamid discovered that there exists a connection between transaction leadership pattern and performance. While Igbaekemen, (2014) investigated how agencies, countries, industries and organizations will achieve their set objective through a vibrant leadership strategy. This investigation is based on secondary data which submits that there is a connection between the various styles and the performance of organizations. This study hypothesizes that: **H_4:** There is a significant relationship between transactional leadership style and employees' performance in the organizations under review.

Theoretical Review: This study is theoretically supported by the Theory X and Theory Y. It was propounded by McGregor Douglas in 1966. This theory categorizes belief or attitude system, which describes leadership performance and behaviour based upon the leader's attitude toward his subordinates. Leaders who believe in theory X attitude assume workers or his subordinate dislike work, therefore must be micro-managed for optimal output while leaders with the belief system of theory Y, assumes that employee or workers naturally like to perform its duties. Therefore there is no need for close supervision. Leaders with Theory Y belief system, which is associated with participative leadership style, tend to have an optimistic view of employees, who are always ready to work based on rewards and internal motivation (Tietjen and Myers, 1998). Most recent managers tend to focus more on leadership styles theory Y rather than the assumption that workers are naturally lazy and unwilling to work except under strict supervision (Theory X). Therefore, management of FMCG in South Africa must be willing to use an appropriate leadership style or theory in order to ensure profitability and sustainability.

3. Methodology

This research follows a survey design. Because of opinions of respondent was gathered through the administration of Questionnaire. Two hundred and thirty-three (233) sample size was utilized for the study from the selected FMCGs; this was determined via Rao soft online calculator at 95% level of confidence and 5% margin error. The data obtained was analysed utilizing Statistical Package for Social Sciences, specifically, SLR and PPMC to determine the significance of variables, degree or strength of the relationship between variables.

4. Analysis and Findings

Hypothesis One: H_0: Autocratic leadership style has no significant effect on EP in the organizations under review. **H_1:** Autocratic leadership style has a significant effect on EP in the organizations under review. To test this hypothesis, a SLR analysis method was used. It was assumed that the autocratic leadership style would have significant impact on EP in the organizations under review.

Table 1: Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.674[a]	.455	.442	.79769	.379

a. Predictors: (Constant) Autocratic style
b. Dependent Variable: EP

Table 2: ANOVA[a]

		Sum of Squares	DF	Square	F	Sig.
	Regression	22.275	1	22.275	35.007	.000[b]
	Residual	26.725	42	.636		
	Total	49.000	43			

a. Dependent Variable: Employees performance
b. Predictors: (Constant), Autocratic style

Table 3: Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-8.650	2.057		-4.205	.000
Autocratic Leadership style	2.475	.418	.674	5.917	.000

R =. 674
R^2 = .455
F = 35.007
T = 5.917
DW = .379
Sum of squares due to regression (SSR) = 22.275
Residual sum of squares (RSS) = 26.725
Std. Error of the Estimate (SEE) =. 79769

Interpretation: The SSR (22.275) is less than the RSS (26.725), which shows that more of the disparity in the dependent variable is elucidated. Variable R shows the degree of relationship between independent variable autocratic leadership style and dependent variable employees' performance. 0.674, which is the coefficient correlation value represents a strong positive connection between autocratic style and the performance of the employee. The EP variation is indicated by the value of R^2 which is 45.5% (coefficient of determination). Also, there is a low error of estimation with a value of 0.798 while Durbin Watson statistic is 379(autocorrelation). Autocratic leadership style of 0.445 indicates a weak on employees' performance, which is significant statistically (with the value of t = 7.920).

Hypothesis Two: H_0: Participative/democratic leadership style has no effect on employee performance in the organizations under review. **H_2:** Participative/democratic leadership style has a great effect on employee performance in the organizations under review**.** To test this hypothesis, a SLR analysis method was used. It was assumed that Participative/democratic style has a great effect on employee performance.

Table 4: Summary[b]

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.665[a]	.442	.429	.95565	.843

a. Predictors: Participative/democratic style
b. Dependent Variable: EP

Table 5: ANOVA[a]

		Sum of Squares	DF	($\bar{X}$) Square	F	Sig.
	Regression	30.438	1	30.438	33.329	.000[b]
1	Residual	38.357	42	.913		
	Total	68.795	43			

a. Dependent Variable: Employees performance
b. Predictors: (Constant), Participative/democratic style

Table 6: Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.429	1.455		-3.043	.004
	Participative/democratic leadership style	1.786	.309	.665	5.773	.000

a. Dependent Variable: employees' performance

R =. 665
R^2 = .442
F = 33.329
T = 5.773
DW = .843
SSR = 30.438
RSS = 38.357
SEE =. 95565

Interpretation: The SSR (30.438) is less than the RSS (38.357), which shows that more of the disparity in the dependent variable is elucidated. Variable R shows the degree of relationship between independent variable Participative/democratic leadership style and dependent variable employees' performance. 0.665, which is the coefficient correlation value represents a strong positive connection between Participative/democratic leadership style and employees' performance. The EP variation is specified by the value of R^2 which is 42% (coefficient of determination). Also, there is a low error of estimation with a value of 0.798 while Durbin Watson statistic is 843(autocorrelation). Participative/democratic style of 0.442 indicates a weak impact between Participative/democratic leadership style and employees' performance, which is significant statistically (t = 5.773). Therefore, the alternative hypothesis should be accepted, which means that the Participative/democratic leadership style has a strong effect on employees' performance.

Hypothesis Three: H_0: There is no relationship between laissez-faire leadership style and employees' performance in the organizations under review. **H_3:** There is a relationship between laissez-faire leadership style and employees' performance in the organizations under review.

Table 7: Descriptive Statistics

	$\bar{X}$	Std. Deviation	N
laissez-faire leadership style	4.0530	1.29776	233
EP	4.1818	1.12628	223

Table: 7 shows the statistics of the connection flanked by laissez-faire style and employees' performance, with feedback $\bar{X}$ of 4.1 and std. deviation of 1.3 for employees' performance, and feedback $\bar{X}$ of 4.2 and std. deviation of 1.2 for laissez-faire leadership style. By careful observation of standard deviation values 1.3 and 1.2, it can be deduced, that independent and dependent variables have nearly the same variability of data points. This indicates that laissez-faire leadership style represents a larger fraction of variables that positively affect employees' performance.

Table 8: Correlations

		laissez-faire leadership style	employee growth
laissez-faire leadership style	Pearson Correlation	1	.036
	Sig. (2-tailed)		.818
	N	233	223
EP	Pearson Correlation	.036	1
	Sig. (2-tailed)	.818	
	N	223	223

Table 8 shows the PPMC of the connection between laissez-faire style and employees' performance; the table presents significant values and correlation coefficients. The correlation value of 0.818 indicates a significant connection between laissez-faire and the performance of employees (r = .818). The table value of r = .195 is smaller than the calculated value of correlations coefficient with 221 degrees of freedom (DF. = n-2) at alpha level for a two-tailed test (r = .818, .036 < 0 .05). Meanwhile, the calculated r = .818, is greater than the table value of .195, the null hypothesis is rejected and it is concluded that there is a significant statistical connection between laissez-faire and employees' performance as described in the probability value of (r =.818, .036 < 0.05).

Hypothesis Four: H_0: There is no significant relationship between transactional leadership style and employees' performance in the organizations under review. **H_4:** There is a significant relationship between transactional leadership style and employees' performance in the organizations under review. To test this hypothesis, PPMC method was used. It was assumed that there is a significant correlation between transactional leadership style and the performance of employees in the organizations under review.

Table 9: Descriptive Statistics

	$\bar{X}$	**Std. Deviation**	**N**
transactional leadership style	3.7879	1.25419	233
EP	3.0000	1.64246	233

Table 9 shows the connection flanked by transactional leadership and employees' performance, with a feedback $\bar{X}$ of 3.8 and std. deviation of 1.3 for employees' performance and feedback mean of 3.0 and std. deviation of 1.6 for the transactional leadership style. Via observation standard deviation values 1.3 and 1.6, it can be deduced, that independent and dependent variables have nearly the same variability of data points. This indicates that leadership style constitutes a less percentage of proxies that positively affect employees' performance

Table 10: Correlations

		Transactional leadership style	**EP**
transactional leadership style	Pearson Correlation	1	.000
	Sig. (2-tailed)		1.000
	N	223	223
EP	Pearson Correlation	.000	1
	Sig. (2-tailed)	1.000	
	N	223	223

Table 10 shows the PPMC of the correlation of employees' performance and transactional style of leadership; the table presents significant values and correlation coefficients. The correlation value of 1 indicates a significant connection between transactional leadership style and the performance of employees (r = 1). However, the calculated correlations coefficient is higher than the table value of r = .195 with 221 degrees of freedom (DF. = n-2) at alpha level for a two-tailed test (r = 1, .000 < 0 .05). Since the computed r = 1 is higher than the table value of .195, the null hypothesis is rejected, and it is concluded that there is a strong connection between transactional leadership and employees' performance as stated in the probability value of (r =1, .000 < 0.05).

Discussion of the Findings: Hypothesis one was tested with SLR to determine how autocratic leadership style significantly affects the performance of employees in the fast moving consumer goods sector for the organizations under review. However, the result shows that autocratic leadership style significantly affects the EP in the FMCG organizations under review (r = .674; F = 35.007; t = 5.917; p < 0.05). This finding aligns with Iqbal et al. (2015) that autocratic leadership style plays a pivot role to short term situation especially with inexperience or new employee who lacks the technical know-how about the task. In addition, such a leadership style is appropriate if the employees are constantly misusing their authority or constantly violating the company rules. Also, hypothesis two was tested using SLR analysis to ascertain how participative/democratic leadership style affects the performance of employees in the FMCGs organizations under review. Therefore, the alternative hypothesis, which states that the autocratic leadership style has a significant effect on employees' performance, should be accepted. The result states that participative/ democratic leadership style has a great effect (r =. 665; F = 33.329; t = 5.773; $p < 0.05$) on the performance of the organizations under review.

This outcome was supported by the work of Chris et al. (2016), which projects that democratic leadership style contributes significantly to the performance of the organisation than the laissez-faire and autocratic leadership style. He further states that the participative or democratic style achieves its objective through the sharing of decision-making process with its group member. The third hypothesis was tested utilising the Product Pearson moment statistical package to define the connection between laissez-faire leadership style and employees' performance in the organizations under review. The result shows that there exists a relationship or correlation (r =.818; P<.05) between the laissez-faire leadership style and the performance of employees. In the selected fast moving consumer goods organizations, the study is in tandem with that of Chaudhry, (2012) which postulates that laissez-faire also has a positive relationship with the performance of employees but due to the pettiness of relation, it shows that other leadership strategies increase employee motivation level except for laissez-faire style.

Finally, the last hypothesis was tested using the Pearson Product moment to determine the relationship that exists between the transactional leadership style and performance of employees in the fast moving consumer good's organizations. The result shows that there exists a relationship (r = 1.00; P<.05) between transactional leadership style and employees' performance in the organizations under review. This is in line with the study of Saasongu (2015), which states that transactional style has a positive and substantial effect on employees' performance because contingent incentive and management by exception skills exhibited by the transactional leader has a significant positive effect on employees' performance.

5. Conclusion and Recommendations

In a nutshell, this research has evaluated the effects of leadership styles on organisational performance in some, selected fast moving consumer goods companies in South Africa. The analysis has shown that no doubt, there exists a significant connection between the various leadership styles and performance of organisations. Especially, transactional leadership style over time has proven to be the most productive leadership style in managing the employees of fast moving consumer's goods companies. Based on the hypotheses tests, positively significant and strongly relationships were discovered between transactional leadership style and business performance. Therefore, in order to maximize and sustain high productivity among employees of the fast moving consumer's good companies, employers or managers are encouraged to adopt the transactional style of leadership in managing the employees.

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The Link between Brand Equity and Loyalty: Evidence from Traditional Medicine Market in Kumasi Metropolis, Ghana

Peter Kwasi Oppong, Maxwell A. Phiri
University of KwaZulu-Natal, Durban, South Africa
peteroppong72@gmail.com, phirim@ukzn.ac.za

Abstract: Building a vibrant brand in a highly competitive market is of strategic importance as it provides greater loyalty which generates large market share and decreases competitive pressure on a firm. However, there is a lack of empirical evidence on the role of brand equity in supporting the formation of loyalty in the traditional medicine market. The aim of this research is to investigate the impact of brand equity on loyalty in the traditional medicine market. Based on the dimensionality of Aaker`s brand equity framework, four research propositions were put forward and evaluated by using structural equation modelling. The study relied on a sample of 348 customers who buy herbal medicines from the traditional medicine market in Kumasi metropolis. The study established that perceived quality, brand association and awareness significantly contribute to enhance the value of the brands which in turn, creates loyalty in the traditional medicine market in the Kumasi Metropolis. Recognizing the strategic importance of loyalty to the success of a firm, traditional health practitioners should direct their efforts towards developing perceived quality, brand association and awareness to enhance the value of their brands to support loyalty in the Kumasi traditional medicine market.

Keywords: *Brand awareness, Brand association, Perceived quality, Brand equity, Brand loyalty*

1. Introduction

In recent years, herbal medicines play a critical role in primary health care worldwide, despite widespread use of conventional drugs in health care delivery. Herbal medicines are plant-derived products with curative or other health benefits comprising refined or crude substances obtained from plants (WHO, 1998). It has been highlighted that traditional or alternative medicine has been continued to be used for primary health care even in developed countries where allopathic medicines dominate the national health care system (WHO, 2000). A study showed that approximately 70 to 80% of the people who reside in advanced countries had used complementary or alternative medicine for different purposes (WHO, 2008). According to WHO (2011), nearly 70 to 95 percent of the population residing in the developed nations use herbal medicines to address their health care needs. In Ghana, approximately 80 percent of the populace depends on herbal medicines to meet their basic health care needs (UNDP, 2007). Herbal medicines produced in Ghana in the form of mixtures, capsules, pills, tablets, creams and ointments are distributed as over-the-counter (OTC) medicines (Essegbey, Awuni, Essegbey, Akuffobea & Mica, 2014; WHO, 2011). Over the past decades, commercialization of herbal medicines in Ghana has been increasing steadily and the number of competing products distributed at the traditional herbal medicine market keeps on increasing every year.

As a result, traditional medicine companies are facing keen competition in the Kumasi traditional herbal medicine market (Essegbey et al., 2014). Building enduring brands with positive equity is recognised as a means of generating greater loyalty to gain predictable sales and higher profits in a highly competitive market (Aaker, 1992). Despite the strategic role of brand equity in supporting loyalty, an empirical study to confirm its importance in the traditional medicine market is lacking. In this regard, this paper seeks to establish the link between brand equity and loyalty in the traditional medicine market in the Kumasi Metropolis, Ghana. Specifically, this research is set out to assess the impact of perceived quality, brand association and awareness on brand equity and in turn, the influence of equity on loyalty in the traditional medicine market. Consequently, this paper will expand the limited literature on the importance of perceived quality, association, awareness and equity to loyalty in the traditional medicine industry. Furthermore, this study will enhance the practical knowledge and understanding of practitioners on the critical role of brand equity and its assets in supporting loyalty in the traditional medicine industry.

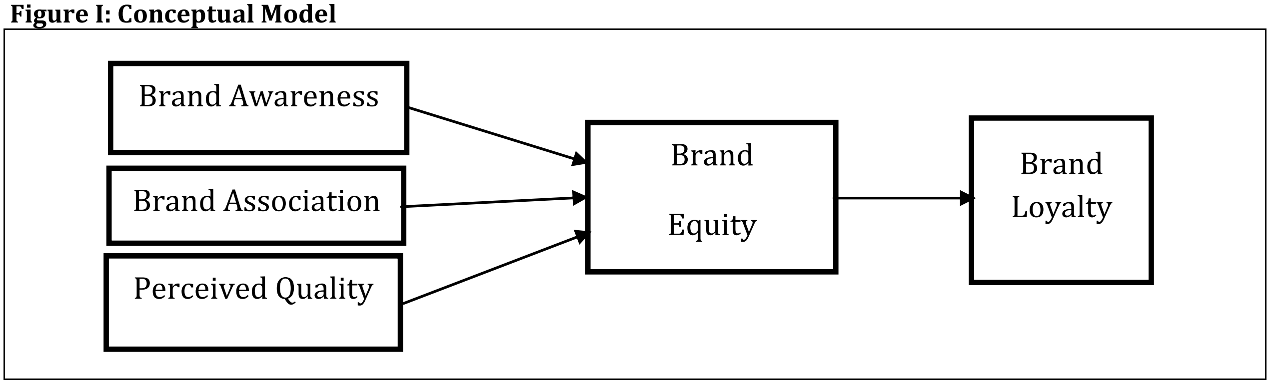
2. Literature Review

Brand Loyalty: Aaker, (1991) defined brand loyalty as the attachment customers have to a brand. According to Oliver (1999, p. 34), brand loyalty is a "deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour". Behavioural and attitudinal loyalty, have been identified as dimensions of brand loyalty in the marketing literature (Tepeci, 1999; Chaudhuri & Holbrook, 2001). Behavioural or purchase brand loyalty relates to repeat patronage and the amount or proportion of category volume attributed to the brand (Keller, 2013), whereas attitudinal brand loyalty refers to the extent of dispositional commitment with respect to some exclusive value linked to the brand (Chaudhuri & Holbrook, 2001). A study revealed that brand equity is positively influenced by both behavioural and attitudinal brand loyalty (*ibid*). Aaker, (1991) is of the view that a large loyal customer base is one of the key components of brand valuation as it provides sustainable cash flow to a firm. It has also been emphasized that brand loyalty leads to word-of-mouth advertising, higher relative brand pricing, greater market shares and time to react to competitive marketing pressures (Aaker, 1992; Chaudhuri & Holbrook, 2001).

Conceptual Framework: The purpose of **the** conceptual framework is to explain graphically or narratively the main factors, concepts and variables in a study, and the presumed relationships among them (Miles & Huberman, 1994). In this study, brand quality, association and awareness are recognised as independent variables, whilst equity is considered as mediating variable and brand loyalty is regarded as the dependent variable. The relationships among the variables are explained graphically in Figure I below. It can be observed in Figure I that brand quality, association and awareness directly influence brand equity and in turn, equity is positively related to loyalty. In this model, loyalty is operationalized as a "deeply held commitment to rebuy or re-patronize a preferred product or service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour" (Oliver, 1999, p. 34).

Perceived quality is related to consumer's subjective evaluation of the overall excellence of a good (Zeithaml, 1988). Awareness relates to the health of the brand trace in the minds of customers and is composed of brand recognition and recall (Keller, 2013). Brand association relates to anything the consumer mentally links to the brand and consists of brand personality, perceived value and organizational association (Aaker, 1991; Buil, Martinez & de Chernatony, 2013). Finally, brand equity is seen as the difference in consumer choice between a focal branded product and its generic version (Yoo, Donthu & Lee, 2000).

Figure I: Conceptual Model



Source: Developed by the Researchers

Research Propositions: This study is set out to identify the link between brand equity and loyalty in the traditional medicine market. Based on the conceptual framework generated from the literature, the proposed relationship between brand equity and loyalty are discussed below.

Brand Awareness: Salience is recognized as a brand element that contributes to enhance the value of a brand (Aaker, 1996). Keller, (2013) described brand awareness as the health of the brand node in the minds of customers. The author further stated that brand salience consists of brand recall and recognition. Brand recognition shows the ability of consumers to confirm their previous exposures to the brand when the brand is used as a cue, whereas band recall indicates the ability of customers to retrieve the brand from their minds when the product class is given as cue (Hoeffler & Keller, 2002). Aaker (1996), on the other hand, proposed brand identification, recall and top-of-mind awareness as the elements of brand salience. It has been noted that brand awareness has the potential to influence consumers` purchase intentions and loyalty (Aaker, 1991). Moreover, Keller (2013) contended that a high level of brand awareness can influence the consumer to include the brand in a set of alternatives to be purchased in the near future. The author further highlighted that strong brand awareness can affect consumer`s buying decision in terms of brands in the consideration set. Past studies revealed that brand awareness significantly contributes to influence the value of a brand (Asif, Abbas, Kashif, Hussain & Hussain, 2015; Panchal, Khan, & Ramesh, 2012). Hence, the following proposition is stated;

H1: There will be a significant and direct relationship between brand awareness and equity

Brand Association: Brand association is another dimension that creates value for a brand (Keller, 2013; Aaker, 1996). Brand association describes anything the customer mentally links to the brand (Aaker, 1991). Keller (1993) suggested that brand association is made up of attributes, benefits and attitudes in an increasing scope. However, perceived brand value, brand personality and organizational characteristics have also been identified in the literature as the elements of brand association (Aaker, 1996; Buil et al., 2013; Pappu, Quester & Cooksey, 2005). Studies have also confirmed that perceived brand value, personality and organizational characteristics contribute to enrich the value of a brand (Buil et al., 2013; Pappu et al., 2005). Brand personality indicates a bundle of human characteristics that are attached to a brand (Aaker, 1997), whilst perceived value is concerned with consumers' subjective evaluation of the utility of an offering, in terms of, what is given out and received (Zeithaml, 1988).

The organizational association also is seen as organizational elements (people, values, and programs) that are linked to the brand (Aaker, 1996). It has been noted that brand associations provide a platform for brand differentiation, positioning, extension and as a basis for buying a particular brand (Aaker, 1991). Coupled with this, customers use brand association to process, organize and retrieve messages from the memory to assist them to make purchasing decisions *(ibid)*. Chen, (2001) also highlighted that distinctive brand association strengthens the value of a brand and ultimately, creates a strong competitive advantage for a firm. Past studies also show that brand association directly influence brand equity (Tong & Hawley, 2009; Sasmita & Suki, 2015). As a result, the following hypothesis is formulated;

H2: There will be a significant and direct relationship between the brand association and equity

Perceived Quality: Aaker (1996) pointed out that brand quality is an important source of the value of a brand. Perceived quality relates to consumer's subjective evaluation of the overall excellence of a good (Zeithaml, 1988). According to Aaker (1992), perceived quality creates value for a firm by providing the basis for channel interest, differentiation, reason to buy the brand, higher brand prices, line extensions, and overall, increasing the profit margin. Perceived quality has also been recognized as an aspect of perceived value (Zeithaml, 1988), and hence, the superiority of a brand can influence a buyer to choose the brand relative to its competitors (Yoo et al., 2000).

Gil, Andres and Martinez (2007) emphasized that perceived brand quality can be improved by enhancing product quality. The authors also recommended that a company should convey the superiority of the brand via its marketing activities. Aaker, (1991) is of the view that consumers define product quality on the basis of its serviceability, performance, durability, reliability, product features, fit and finish and conformance to specification. However, it has also been proposed that safety, efficacy/efficiency, convenience, affordability, availability, side effects and packaging are quality dimensions in the drug industry (Dickov & Igic, 2013; Osemene, Elujoba & Ilori, 2011). Furthermore, earlier studies show that brand equity is positively influenced by a high level of perceived quality (Yoo et al., 2000; Buil et al., 2013). Consequently, the following proposition is stated;
H3: There will be a significant and direct relationship between perceived quality and equity

Brand Equity: In today`s marketplace, the role of brand equity to the growth of businesses has attracted the attention of practitioners and academia. Keller, (2013) asserted that the most invaluable and enduring asset of a company is the brand name attached to its market offering. According to Aaker and Biel (1993), brand equity is the added value transferred to a product by branding. Thus, branding enhances the value of a product beyond its functional performance (Farquhar, 1989). Keller, (1993) also described brand equity with respect to marketing outcomes that are exclusively attributed to branding. The author further proposed customer-based brand equity (CBBE) and defined it as the differential effect that knowing the brand name has on consumer`s reactions to the product and its marketing. Thus, a brand has positive (or negative) value when consumers react more positively (or negatively) to the product and the way it is marketed compared with a generic version of the product. In the author`s view, the health of a brand and its ultimate worth to a company reside in the minds of customers. From the viewpoint of customer-based brand equity, brand knowledge is the key dimension of brand equity and is composed of brand image and awareness. The author also pointed out that customer-based brand equity depends on the extent of customers' awareness and familiarity with a brand and the strength, favorability, and uniqueness of the brand association.

On the other hand, Aaker (1991) proposed that brand equity comprises assets and liabilities that are linked with the brand name that increase or decrease the value of a product endowed to a firm and its clients. According to the author, brand association, loyalty, perceived quality, awareness and other proprietary brand assets like trademarks, channel relationship and patents are the main drivers of brand equity. However, Aaker (1996) concluded that perceived quality, association, loyalty and awareness are dimensions of customer-based brand equity, whilst the other brand elements are derived from market-based information rather than directly from customers. More importantly, CBBE is related to consumer perceptions of the brand and seen as the relationship they have with the brand (Kapferer, 2008; Christodoulides & de Chernatony, 2010). Keller (2013) reported that powerful brands with high equity provide several marketing benefits to a firm which include: greater loyalty, more inelastic to customers' response to price increases, trade leverage, licensing and brand extensions opportunities. Moreover, Aaker (1991) pointed out that brand equity creates value to the customers by assisting in the interpretation, processing and storing product information as well as purchasing decisions. It has also been emphasized that a high level of brand equity significantly influences loyalty (Lassar, Mittal & Sharma, 1995; Taylor, Celuch & Godwin, 2004). Hence, the following proposition is stated;

H4: There will be a significant and direct relationship between brand equity and loyalty

3. Research Methodology

The plan of study used to test the propositions posited in this paper is discussed below. In the current study, herbal medicines manufactured by Ghanaian firms and were distributed in registered herbal stores in the Kumasi Metropolis were targeted. These plant medicines have been licenced by the Food and Drugs Authority which is mandated by law to regulate the production and distribution of medicines in the country. Even though, pharmacies and licensed chemists stores are mandated to distribute both herbal and conventional drugs, recruiting participants in these stores was impracticable. As a result, registered herbal stores were selected because they are authorised by law to sell only plant medicinal products. Furthermore, Kumasi metropolis was selected as a study site because it is the second largest commercial city in Ghana and is endowed with a wide variety of medicinal plants (GSS, 2014). These have led to the localization of traditional medicine firms within the metropolis.

Test Instruments Development: Closed-ended questionnaires with a five-point Likert scale anchored on strongly disagree (1) to strongly agree (5) were employed to capture the perceptions of customers` awareness, association, loyalty and brand equity of herbal medicines. Survey questionnaires were utilized because of data collected permit better mathematical calculations and interpretations (Mackenzie & Knipe, 2006; Creswell, 2014). In addition, the customers were busy shopping and as a result, closed-ended questionnaires provided them with more convenience to respond quickly. The test instruments for measuring the research constructs were guided by previous test instruments. The test instruments for measuring brand awareness were obtained from Yoo et al. (2000), Tong and Hawley (2009) and Gil et al. (2007) and test items of perceived quality were developed by Yoo et al. (2000) and Gil et al. (2007).

Moreover, the test instruments of loyalty were borrowed from Tong and Hawley (2009), Aaker (1996), Yoo et al. (2000) and Gil et al. (2007). Finally, test items for measuring association were designed by Aaker (1996) and Netemeyer, Krishna, Pullig, Wang, Yagci, Dean, Ricks & Wirth (2004), whilst test instruments of brand equity were developed by Yoo et al. (2000).

Sample and Data Collection Methods: The study population was made up of 80 licensed herbal shops, of which 20 provide wholesale services, whilst 60 offer only retail services in Kumasi metropolis. These data were obtained from the Traditional Medicine Practice Council (TMPC) in Kumasi. To increase the representativeness of both wholesale and retail shops in the research, a stratified sampling strategy was employed to select a sample of herbal shops operating in the Kumasi metropolis (Saunders, Lewis & Thornhill, 2007). Based on the Krejcie and Morgan, (1970) framework of sample size estimation, a sample of 19 and 52 was selected from the 20 wholesale and 60 retail herbal shops respectively. Moreover, from the 2017 data of the 80 herbal retail outlets, 3 710 customers aged 18 and above usually buy herbal medicines on a daily basis in the Metropolis. Following the recommendation of Krejcie and Morgan model, a total of 348 customers were recruited to participate in this research. Using systematic sampling strategy, the questionnaires were administered to the customers by contacting them face-to-face at the entrance of the stores. Thus, the first customer who entered the store was randomly picked and afterwards, one in every eleven customers was requested to complete the questionnaire until the total sample was obtained. Systematic sampling was used because it provides an opportunity to recruit research participants without knowing their characteristics from the sample frame (Malhotra & Birks, 2007).

4. Data Analysis and Results

Three hundred and sixteen (316) questionnaires were received, but 307 were usable because nine (9) were incomplete. Out of the total number of 304 (three were missing values), 68.4 percent (208) were male whilst 31.6 percent (96) were female, 40.7 percent (124) were between 18 and 25 years, 39.2 percent (120) had secondary education, 36.7percent (110) were traders and finally, 61.2 percent (127) earned a daily income above USD$2. This indicates that a large proportion of the customers was young traders, moderate to high-income earners and had secondary education.

Reliability and Validity of Test Instruments: In line with previous research (Tong & Hawley, 2009; Gil et al*.,* 2007), the test instruments were validated by using exploratory factor analysis, Cronbach`s alpha coefficient, and confirmatory factor analysis.

Internal Consistency Reliability: Cronbach`s alpha statistics was employed to investigate the internal consistency of the indicator items that emerged from the exploratory factor analysis. The results showed that Cronbach`s alpha of test items of brand association, awareness, loyalty, perceived quality and equity were higher than the recommended value of .70, ranging from .773 to .894. This shows good internal consistency reliability (Hair, Black, Babin & Anderson, 2010; Tavakol & Dennick, 2011), as shown in Table I below. Consequently, the reliability estimates of the test items of all the latent constructs were satisfactory and 20 test items were used for measuring the five latent constructs in the structural equation model.

Exploratory Factor Analysis: Exploratory factor analysis (EFA) was carried out to investigate the extent to which the individual test item loads on its respective latent constructs as purported, to produce brand awareness, loyalty, perceived quality, association and equity. Table I below exhibits the findings of the exploratory factor analysis. Twenty-six test items were subjected to EFA in this study. In order to check the adequacy of the sample size for successful EFA, Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was undertaken. The results showed a coefficient of .926 which exceeded the acceptable threshold of .60, demonstrating that the sample size of the study is admissible (Pallant, 2013). Furthermore, the Bartlett`s Test of Sphericity (X^2 = 4479.355, DF = 325, p = .000) was statistically significant at $p < .001$, which demonstrates that the EFA is acceptable (Hair et al., 2010).

The EFA via maximum likelihood factoring with Promax method yielded five distinct latent constructs. In order to obtain significant factor loadings, test items that loaded less than 0.30 were discarded (Floyd & Widaman, 1995) and overall, 20 test items were retained with loadings ranging between .350 and 1.05.

Moreover, all five constructs have eigenvalues greater than one. All the five constructs explained 63.40% of the total variance, suggesting that more than half of the variance in the explored phenomena is explained by these constructs. The first factor is perceived quality, the second is awareness, third is equity, the fourth is an association, and the fifth is loyalty. This outcome confirms that CBBE is a multidimensional construct consistent with Aaker`s (1996) conceptualization. To confirm discriminant validity, the loadings of each test instruments on their own constructs exceeded the cross-loadings on any other constructs (Hair et al., 2010).

Table 1: Results of Exploratory Factor Analysis

Test Items		**Factors**				
		1	**2**	**3**	**4**	**5**
Q1	X is safe for use	.697				
Q2	X functions perfectly	.939				
Q3	X is a very reliable product	.851				
Q4	The quality of X is very high	.761				
Q5	I can always trust this brand if I want a herbal drug of high quality	.909				
AW1	I know what X looks like		.622			
AW2	I can easily recognise X among other competing brands		.683			
AW3	I am familiar with X		.634			
AW7	I am aware of X		.650			
EQ1	It makes sense to buy X instead of any other brand, even if they are of the same price or quality			.558		
EQ2	Even if another brand has the same features as X, I would prefer to buy X			1.05		
EQ3	If there is another brand as good as X, I prefer to buy X			.759		
EQ4	If another brand is not different from X in any way, it seems smarter to purchase X			.574		
AS1	X offers good value for money				.795	
AS2	X gives me a reason to buy over other competing brands				.748	
AS3	When I consider what I would pay for X, I would get much more than my money’s value				.452	
AS10	X is in the upper-class				.513	
LO1	When buying herbal medicines, X would be my first choice					.350
LO2	I would not buy other brands if X is available at store					.573
LO4	I am still willing to buy X even if its price is a little higher than that of competing brands					.443
Cronbach Alpha		.894	.786	.867	.773	.773
Eigenvalues		10.76	1.97	1.33	1.28	1.12
Percentage of Variance Explained		41.40	7.61	5.11	4.94	4.32
Percentage of Total Variance Explained = 63.40						
KMO = 0.926; **Bartlett`s Test of Sphericity**: X^2 = 4479.355; DF= 325; p = 0.000						

Source: Field Survey

Structural Equation Model: To analyse the research propositions stated in this paper, structural equation modelling was conducted. As Byrne (2016) suggested, the measurement model was carried out via confirmatory factor analysis (CFA), followed by the path or structural model.

Measurement Model: A statistical software known as SPSS Amos 22 using the maximum likelihood method was employed to carry out the CFA to further confirm the results generated from the EFA and also to evaluate the construct validity. To attain good construct validity and a plausible model, standardised residual estimates of pairs of indicators exceeding 2.58 were discarded because they indicate a high degree of miscalculation in the model measurement (Byrne, 2016). In addition, to achieve convergent validity, individual test items with standardised loadings less than .50 were also discarded (Hair et al., 2010). Hence, four test items were deleted from this analysis. The findings of the CFA in Table II demonstrate that 16 test items converged on their respective variables. Moreover, all the individual standardized loadings proved to be statistically significant which ranged from .634 to .891, providing a test for construct validity (Hair et al., 2010). Although, the Chi-square statistics (X^2 = 217.229, DF = 94, p < .001) failed to confirm the model, the other indexes produced acceptable estimates in this analysis. The Normed Chi-square statistic (CMIN/DF) was 2.311 which is less than three (Kline, 2005). The Standardised Root Mean Square Residual (SRMR), Root Mean Residual (RMR) and Root Mean Square Error of Approximation (RMSEA) were .044, .036 and .065 which are much lower than the proposed cut-off of .08 respectively (Hu & Bentler, 1999).

Lastly, the Tucker-Lewis Index (TLI), Incremental Fit Index (IFI), Comparative Fit Index (CFI), Normed Fit Index (NFI) and Goodness-of-Fit Index (GFI) were .934, .949, .948, .913 and .923 respectively. These estimates demonstrate that the model fitted well with the data and therefore provided an admissible solution for the measurement model (Hu & Bentler, 1999; Hair et al., 2010). In addition, Table II below exhibits Average Variance Extracted (AVE) and Composite Reliability (CR) of the variables of the measurement model. First, CR was computed to examine the internal consistency of the individual variables in the measurement model. Even though CR is analogous to Cronbach`s alpha, the former is commonly used in conjunction with structural equation modelling and also provides a slightly better assessment of internal consistency reliability (Washburn & Plank, 2002; Hair et al., 2010).

The results of the CR revealed that all the variables had estimates above .70, which ranged from .759 to .861, signifying satisfactory levels of internal consistency (Hair et al., 2010). Furthermore, AVE was used to assess the convergent validity of the constructs in the CFA. The findings of the AVE demonstrate that the variables had estimates above the threshold of .50, confirming convergent validity (Kline, 2005; Hair et al., 2010). Moreover, Table III reveals the findings of discriminant validity statistics of the measurement model. The findings show that the square root of the values of AVE was above the squared correlation estimates between a variable and any other variables, which demonstrate independence between the variables (Hair et al., 2010). These findings indicate that awareness, quality, association, loyalty and equity are valid and reliable variables in the measurement model.

Table 2: Results of Confirmatory Factor Analysis

Constructs and Test Items	CR	AVE	Standardized Loadings	t-value
Brand Awareness	.761	.515		
AWI			.719	— a
AW2			.723	10.078
AW7			.711	9.993
Brand Association	.759	.515		
AS1			.661	— a
AS2			.832	10.657
AS10			.645	9.308
Perceived Quality	.861	.539		
Q1			.739	13.190
Q2			.778	14.000
Q3			.825	14.948
Q4			.776	— a
Brand Loyalty	.777	.608		
LO1			.786	13.581
LO2			.634	10.785
LO4			.774	— a
Brand Equity	.856	.666		
EQ2			.836	— a
EQ3			.891	17.371
EQ4			.710	13.465

Notes: X = Focal brand; **CR =** Composite Reliability; **AVE** = Average Variance Extracted; **a** = path parameter was set to 1, therefore no t-values were estimated; All loadings are significant at 0.001 level.

Table 3: Discriminant Validity Analysis

Constructs	Brand Awareness	Brand Association	Brand Loyalty	Perceived Quality	Brand Equity
Brand Awareness	.718**				
Brand Association	.217	.718**			
Brand Loyalty	.319	.504	.734**		
Perceived Quality	.319	.442	.726	.780**	
Brand Equity	.309	.352	.533	.452	.816**

Notes: ** = Square Root of AVEs; Off-diagonal estimates represent the Squared Inter-Construct Correlations

Structural Model: The path model was conducted to examine the statistical significance of the hypotheses in this research. Brand association, awareness and perceived quality are specified as independent variables, whilst equity is a mediating variable and loyalty is recognized as the endogenous construct. While the Chi-square statistics (X^2 = 265.553, DF = 96, p = .000) failed to confirm the path model, other fit indexes supported the structural model; X^2/DF = 2.766; RMR = .043; GFI = .906; IFI = .930; TLI = .911; CFI = .929; RMSEA = .076; SRMR = .050. The findings of the structural model in Table III show that brand salience (ß = .199, t = 3.060) is statistically significant and directly influences equity at p < .01 level. Furthermore, the findings of the structural model demonstrate that association (ß = .280, t = 3.747) and perceived quality (ß = .550, t = 6.436) are statistically significant and directly influences equity at p < .001. In turn, equity is (ß = .918, t = 11.134) statistically significant and directly related to loyalty at p < .001 level.

Finally, the test results further show that perceived quality (ß = .550) has a greater impact on brand equity than brand awareness and association. These findings confirm H1, H2, H3 and H4 as proposed in the study. In the path analysis, no direct relationship between perceived quality, association, awareness and loyalty was stated, yet as conceptualized in this paper, perceived quality, association and awareness indirectly influence loyalty via the impact of equity. To determine the indirect effect of perceived quality, association and awareness on loyalty, bootstrap was conducted through re-sampling of 1000 at a biased-corrected confidence level of 95%. The findings reveal that the indirect effect of brand awareness (ß = .182, p = .014), perceived quality (ß = .505, p = .002) and association (ß = .257, p = .002) on brand loyalty is statistically significant at p < .001 two-tailed level. These findings further show that perceived quality, association and awareness indirectly influence loyalty through the mediated effect of brand equity.

Table 4: Results of Hypotheses Testing

Hypotheses	Structural relations	Standardized Estimates (ß)	t-value	p-value	Outcome
H1	Brand equity <--- Brand awareness	.199	3.060	.002	Accepted
H2	Brand equity <--- Brand association	.280	3.747	.000	Accepted
H3	Brand equity <----Perceived quality	.550	6.436	.000	Accepted
H4	Brand loyalty <---Brand equity	.918	11.134	0.000	Accepted

Discussion: The purpose of this research was to investigate the link between brand equity and loyalty in the traditional health market in Kumasi metropolis. Specifically, the study was set out to assess the influence of perceived quality, association and awareness on equity and in turn, the impact of equity on loyalty in the traditional medicine industry. The findings of the research reveal that awareness significantly strengthens brand equity in the traditional medicine market. This result concurs with earlier authors (Asif et al., 2015; Panchal et al., 2012), who suggested that high brand awareness contributes to enhance equity. However, this result is contrary to earlier research carried out by Yoo et al. (2000) and Gil et al. (2007), which confirmed that brand salience did not have a direct effect on equity. Moreover, the study found that brand association positively influences brand equity in the traditional herbal medicine market. This is in line with the findings of previous research (Tong & Hawley, 2009), which established that association strengthens brand equity in the sportswear industry. Furthermore, the results reveal that equity is positively affected by perceived quality in the traditional medicine market.

This outcome concurs with the results of earlier authors (Yoo et al., 2000; Buil et al., 2013), who found that high perceived quality significantly enhances the value of a brand. In addition, the findings of the research show that perceived quality is the primary source of value for brands in the Kumasi traditional medicine market. This result is consistent with the previous study (Piaralal & Mei, 2015), which showed that perceived quality had a greater influence on brand equity than any other brand asset in the private healthcare facilities in Klang Valley, Malaysia. The study also revealed that loyalty is positively affected by brand equity in the traditional medicine market in Kumasi metropolis. This outcome concurs with the findings of previous research (Taylor et al., 2004), which suggests that attitudinal and behavioural forms of loyalty are consistently influenced by a high level of equity. This outcome also concurs with existing literature (Aaker, 1991; Keller, 2013) which indicates that loyalty is one of the consequences of equity that provides valuable business results to a firm. Finally, consistent with an earlier study (Alverdi, 2017), this study confirms that brand awareness, association and perceived quality significantly enhance loyalty via the indirect impact of equity in the traditional medicine industry.

5. Conclusion and Recommendations

Recommendations: In accordance with the findings of this research, the following recommendations are made; the research found that brand awareness creates value for brands in the traditional medicine market in the Kumasi metropolis. As a result, traditional medicine practitioners should focus on building consumers` awareness of their brands to enhance their value in the market. Coupled with this, traditional medicine firms should develop awareness messages that can be differentiated and recalled by the target market in the cluttered media communication environment. Additionally, the study revealed that brand association increases the value of the brands in the traditional medicine market in the Kumasi metropolis. Hence, traditional medicine firms should develop valuable associations of their brands to enhance equity in the Kumasi traditional medicine market. Enhancing the perceived value of their brands can also enrich the associations consumers attached to these brands.

The study also points out that brand equity is dominantly influenced by perceived quality in the traditional medicine market in the metropolis. In order to enhance consumers` perceptions of the quality of herbal medicines, traditional medicine firms should allocate more resources to develop superior products consistently, especially in relation to their competitors' products. The research also established that brand quality, awareness and association significantly enhance loyalty via the indirect role of equity in the Kumasi traditional medicine market. As a result, traditional medicine companies should consider consumer`s awareness, associations that are linked to their brands and perceptions of brand quality in their loyalty-building activities which if they are increased, can indirectly contribute to enhancing loyalty in the traditional medicine market. Lastly, traditional medicine companies should constantly track and measure customers` perceptions of the value of their brands in order to increase and maintain loyalty in the traditional medicine market in Kumasi metropolis.

Conclusion: This paper was set out to empirically assess the link between brand equity and loyalty in the traditional medicine industry in Kumasi metropolis. Essentially, the research aimed to investigate the influence of perceived quality, brand association and awareness on equity and in turn, the impact of equity on loyalty in the Kumasi traditional health market. The study found that brand quality, association and awareness are the core elements of value for brands in the traditional medicine market in Kumasi metropolis. More importantly, perceived quality was found to be the most important brand asset compared to brand awareness and association in the traditional health market. The study also established that brand equity acts as a mediator in the path between perceived quality, association, awareness and loyalty in the traditional medicine market in Kumasi metropolis, Ghana. The study concludes that, although loyalty is regarded as one of the brand assets, it is one of the ways that brand equity and the other dimensions interact to create sustainable value for a firm.

Limitations and Future Research: Although the research was based on sound methodology and literature, the study had some limitations that require future research to further enhance the generalization of the results. While, herbal medicines are bought online and in the in-store retail environment, this study focused on in-store retail outlets in the Kumasi metropolis. Future research should include customers who buy herbal medicines from the online retail environment to enrich the generalization of the findings of this research. In addition, the sample of the study was drawn from only Kumasi Metropolis in Ghana. Future research should consider a larger sample drawn from other parts of the country in order to improve the generalizability of the study.

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Effects of Information Technology (IT) on Internal Audit in Southwest Nigeria Universities

Gideon Tayo AKINLEYE, Comfort Temidayo OLANIPEKUN
Department of Accounting, Ekiti State University, Ado-Ekiti, Nigeria
gtakinleye@eksu.edu.ng, comfort.olanipekun@eksu.edu.ng

Abstract: This study examined the effects of information technology on internal audit in Southwest Nigeria Universities. Primary data were employed and questionnaires were distributed to the selected Universities. Out of 180 questionnaires, 152 questionnaires were filled and returned by the respondents. The study employed factor analysis and binary logit regression analysis as estimation techniques. The findings from factor analysis showed that Kaiser-Meyer-Olkin and Bartlett's tests value was 0.786(78.6%) implying that the variables have a 78.6% variation in the data. The value of components variance revealed 62.750 on component 4 indicating that at component 4 there was 62.8% factor variation in the data. Nonetheless, the logit regression equation revealed that fraud discovery of IT (FD) has a positive and insignificant effect on internal audit. Also, IT effectiveness (ITE) revealed that ITE has a negative and significant effect on internal audit. Equally, asset recovery (AR) exhibited a negative and insignificant effect on internal audit. Furthermore, the external audit (EA) has a positive and insignificant effect on internal audit. This study concluded that a significant relationship exists between information technology and internal audit in Southwest Universities. It was recommended that Universities in Southwest should promote and encourage information technology in the internal audit department and also encourage the external users.

Keywords: *Information Technology, Audit, Internal Audit, Factor Analysis, Logit.*

1. Introduction

Information technology has been globally embraced in all sector of the economy where Universities are not left out and its importance cannot be belittled. Technology and economic reforms that occurred in the last decades have significantly affected basic functions and operations of institutions and other business sectors, (Burnaby & Hass, 2011 as cited by George, Theofanis & Konstantinos, 2015). The way in which institutions, businesses and other areas have utilized this is by using IT to process their financial information (Al-Fehaid, 2003). Information technology is used by the auditors as a tool to assist in their day to day activities. Solomon and Trotman, (2003) are of the view that the impact of information technology has grown exponentially in recent years and it has changed the audit process which has resulted in opportunities and challenges for auditors. As IT changes occur more quickly, auditors must keep pace with emerging technological changes and their impact on their organisation's data processing system, as well as their own audit procedures (Rezaee and Reinstein, 1998). The introduction of e-payment and e-transact through information technology in the university has encouraged, internal auditors to be familiar with IT procedures. Meanwhile, internal auditors are saddled with the responsibility to safeguarding and to monitoring all the activities in the university, and most of all the activities are computerized using information technology such as students' admission letter, course registration, school fees payment, result checking and some other things. So, information technology has become an integral part of university activities. Nonetheless, the fast changes in the growth of IT require auditors, both internal and external to face a greater challenge in carrying out their duties in the computerized environment.

2. Literature Review

In the study of Hermanson, Hill, and Ivancevich, (2000) conducted a study on IT activities of internal auditors in the United States organisations using frequency distribution analysis. Despite the importance of this subject matter, few studies have attempted to examine information technology in relation to internal audit all over the world. The findings showed that IT evaluations, nature of the audit objective, the frequency of computer audit specialists are the factors affecting internal audit performance and presence of new computer information system. Abu-Musa (2008) looked into information technology and its implications for internal auditing among Saudi organizations. Some includes Abu-Rishel and Ivancevich (2003); Musa (2008); Hamdan & Abzakh (2010); Moorthy, Seetharaman, Mohamed, Gopalan & San (2011); and Ebiomobowei &

Yadirichukwu (2011); Kombo (2013); Arena (2013); Abiola (2014); Shilla (2014) and Effiok and Bassey (2015); Al-Duwaila and AL-Mutairi, (2017). Although, some of these studies were carried out in Nigeria but they were not in the University settings. This necessitates this study to examine the effect of information technology on internal audit in Nigeria Universities most especially in the Southwest public and private universities. The study employed a Kruskal-Wallis test and regression analysis as the estimation techniques. The results revealed that internal auditors must develop their knowledge and skills of information technology for the purpose of reviewing the work done. Also, Hamdan and Abzakh (2010) carried out a study on information technology by the Bahrainis auditors in Dubai. One-sample t-test analysis was employed in the study. The study found that e-audit can improve the evidence obtained by the audit department.

Meanwhile, Mahzan and Veerankutty, (2011) used a correlation matrix to examine the relationship between IT auditing activities of public sector auditors in Malaysia. Their results showed that the most frequent evaluations performed by public sector auditors are application processing control and data integrity, privacy and security control. Ebiomobowei & Yadirichukwu, (2011) studied the effects of information technology on internal auditors' activities in Nigeria. Multiple regression analysis was used in this study and the findings revealed that information technology usage exhibits the highest relationship with the internal audit. Salehi and Husini, (2011) investigated the effect of information technology on internal audit. T-test binomial test statistical analysis was used. Their findings revealed that information technology enables its users to perform their obligations with a higher validity. Arena (2013) examined the internal audit in Italian universities using chi-square and t-test techniques. The study showed that auditors are shifting from financial and compliance audit to operational audit. Henderson, Davis and Lapke (2013) looked into the effects of internal auditors' information technology knowledge on integrated internal audits in the United States of America.

The study employed partial least square as the estimation technique. The result revealed that IT risks and application controls exhibited a significant effect on integrated internal audits during the study period. More so, Shilla (2014) studied information technology on internal audit in Tanzanian organisations. Information using chi-square test the outcome of the study revealed that the Tanzanian organisations of internal audit departments have not been using IT and auditing IT-based systems effectively. Equally, Effiok and Bassey (2015) examined information technology, audit evidence and financial performance of an organisation in Nigeria from 2007 to 2013. The data were analyzed using multiple regression analysis. The findings of the study revealed that information technology and audit evidence exhibited a positive significant effect on the financial performance of selected companies. Mustapha and Lai, (2017) focused on the usage of information technology for auditors at different levels and positions in audit firms in Malaysia. Descriptive and regression techniques were carried out to analyze the data. The findings showed that information technology is used in the audit practices and it is mainly used by the top management of the organisations.

3. Methodology

The population of the study made up of all the 46 Universities in Southwest Nigeria. The University comprises eight state Universities, six federal Universities and thirty-two private Universities in Southwest Nigeria. The sample for this study consists of 180 staff that was selected from the nine (9) universities in Nigeria using a multistage sampling technique. The first stage is the selection of nine (9) universities from Southwest purposively from Ekiti State, Osun State and Ondo State. The second stage is the selection of four (4) sub-divisions namely; Payroll and final account, Store and Creditors, Cash and cash advance Management, Revenue and Student Services. The last stage is the random selection of three (3) staff from each of the selected unit a total of respondents. The nine (9) selected Universities in Nigeria, namely Ekiti State, Osun State and Ondo State. The tertiary institutions include: Federal University, Oye (FUOYE), Ekiti State University, Ado-Ekiti (EKSU) and Afe Babalola University, Ado Ekiti (ABUAD), Obafemi Awolowo University (OAU), Osun State University, Joseph Ayo Babalola University (JABU), Adekunle Ajasin University (AAUA), Federal University Technology Akure (FUTA) and Achiever University. The staff made up of the internal audit departments comprises four major divisions in the universities. This study employed Qualitative Response Regression Model of Logit Regression to capture the effect of information technology on internal audit in Nigeria University. Meanwhile, the model is presented as:

$INA = F(FD, ITE, AR, EA)$-- 2

Where
INA = Internal Audit
FD = Fraud discovery
ITE = Information Technology Effectiveness
AR = Asset Recovery
EA = External Auditor
The econometrics forms of the functional models are specified as:
$INA = b_0 + b_1FD + b_2ITE + b_3AR + b_4EA + \mu$ --------------------------------- 3
Where
INA = 1: pr(IT impact on Internal Audit) and 0: if otherwise
b_0 represents the intercepts or constants;
$b_1 - b_4$ indicates the shift parameters or the coefficients

4. Results and Discussion

Results of the Factor Analysis

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.786**
Bartlett's Test of Sphericity	Approx. Chi-Square	453.096
	DF	66
	Sig.	.000

Source: SPSS 20.0

The KMO and bartlett's test shows that measure of sampling adequacy values are 0.786 (78.6%) that is the variables such as fraud discovery, ıt effectiveness, asset recovery and external auditor have 78.6% variation in the data.

Table 2: Total Variance Explained

Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	3.915	32.622	32.622	3.915	32.622	32.622	2.144	17.866	17.866
2	1.453	12.108	44.730	1.453	12.108	44.730	2.042	17.013	34.879
3	1.162	9.683	54.413	1.162	9.683	54.413	1.941	16.172	51.051
4	1.000	8.337	62.750	1.000	8.337	62.750	1.404	11.699	62.750
5	.842	7.019	69.769						
6	.702	5.849	75.617						
7	.641	5.343	80.961						
8	.585	4.876	85.837						
9	.515	4.292	90.129						
10	.476	3.963	94.092						
11	.408	3.400	97.492						
12	.301	2.508	100.000						
Extraction Method: Principal Component Analysis.									

Source: SPSS 20.0

This table above indicates the components variance and the result reveals that the eigenvalues and extraction sums of squared loadings have the cumulative percentage of 62.750 on component 4. This implies that at component 4 there is 62.8% factor variation in the data.

Table 3: Reliability

Cronbach's Alpha	N of Items
.804	12

Source: SPSS 20.0

The reliability test presented above using Cronbach's Alpha showed that the questionnaires with 12 items were reliable with 0.804 indicating 80.4% which was above 70% proposed by Cronbach's Alpha. This implies that the questionnaires were reliable to achieve the broad objective.

Binary Logit Regression Result

Table 4: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	110.169[a]	.497	.573

Source: SPSS 20.0

The above table reveals the model summary of Cox and Snell R square and Nagelkerke R square. The result shows that Cox & Snell R square value is 0.497 (49.7%) implying that the variables have 49.7% variation to explain the dependent variable while Nagelkerke R square is 0.573 (57.3%) indicating that the control variables can explain 57.3% variation in the dependent variable.

Table 5: Variables in the Equation

		B	S.E.	Wald	DF	Sig.	Exp(B)
Step 1[a]	FD	.089	.298	.088	1	.766	1.093
	ITE	-1.400	.441	10.083	1	.001	.247
	AR	-.031	.325	.009	1	.924	.969
	EA	.428	.323	1.755	1	.185	1.534
	Constant	3.456	.925	13.972	1	.000	31.700

a. Variable(s) entered on step 1: FD, ITE, AR, EA.

Source: SPSS 20.0

The variables in the logit equation reveal that fraud discovery of IT (FD) has the coefficient value of 0.089 with a significant value of 0.766. This implies that FD has a positive and insignificant effect on internal audit. That is, a unit increase in FD will lead to 0.089 increases in internal audit performance. This also means that internal audit has not been using IT as a means of fraud discovery in the University. Also, the coefficient value of IT effectiveness (ITE) is -1.400 with a significant value of 0.001. This indicates that ITE has a negative and significant effect on internal audit. This implies that IT has made internal audit functions effective. Equally, the coefficient value of asset recovery (AR) is -0.031 and its significant value is 0.924 which implies that AR shows a negative and insignificant effect on internal audit. This shows that IT has not been recovering asset in the Universities in Southwest. More so, the coefficient value of external audit (EA) is 0.428 with a significant value of 0.185 indicating that EA has a positive and insignificant effect on internal audit. This means that external audit use of IT has not been significant on internal audit. Lastly, the coefficient value of constant is 3.456 with significant value 0.000, implying that, at constant there is a positive and significant effect of IT to internal audit. The findings of this study are similar to the result of Henderson et al. (2013) and Shilla, (2014) that IT applications have a significant impact on internal audits.

5. Conclusion and Recommendations

The study concluded that a significant relationship exists between information technology and internal audit in Southwest Universities. It was further concluded that the fraud discovery of IT has a positive and insignificant effect on internal audit implying that internal audit has not been using IT as a means of fraud discovery in the University. Also, IT effectiveness has a negative and significant effect on internal audit meaning that IT has made internal audit functions effective. Equally, asset recovery (AR) exhibited a negative and insignificant effect on internal audit indicating that IT has not been recovering asset in the Universities in

Southwest. Furthermore, external audit (EA) has a positive and insignificant effect on internal audit meaning that external audit use of IT has not been significant on internal audit. The study recommended that Universities in Southwest should promote and encourage information technology in the internal audit department and also encourage external users. It is also recommended that asset recovery and fraud discovery of IT should be encouraged in the internal audit department of the University.

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Modelling the Drivers of Impulsive Buying Behaviour: A Case of South Africa

Elizabeth Chinomona*, Mosidi Elizabeth Montso
Vaal University of Technology, Vanderbijlpark, South Africa
chakubvaelizabeth@gmail.com

Abstract: Impulsive buying behavior is an emerging phenomenon in marketing literature and it affects consumers across the board. Impulsive buying is seen as the outcome of demonstrative reactions that breed the unexpected craving to purchase. Impulsive buying is becoming an important factor for retailers since they generate a lot of income through this kind of behavior. Due to the expansion of organized retail over the country, shops are trying to comprehend the buying behavior of consumers and try by all means that they trigger consumers to act in an impulsive way. Traditional buying behavior of consumers was seen as when purchasers made a list for purchasing products then depart to a particular store and purchase it. But now the whole buying behavior is changing due to the rise in the income level of consumers. This is giving the consumers more buying power, transformation in the socio-cultural environment way of life and consumption pattern. This, therefore, influences the consumer to act in an irrational manner which is known as unplanned buying without considering the potential consequences which may include non-usage of the product, negative economic consequences and feelings of regret, fury and fault. So the present study aims to analyze how uniqueness, price and past orientation influence impulse buying behavior are focusing on classical clothing brands like Nike, Adidas and Reebok. This study attempts to discern how consumer's traditional planned shopping behavior is shifting to impulse buying behavior. The study used a quantitative research method and analyzed the data by means of SMART PLS to test the relationships and the model. 350 questionnaires were used for data analysis using convenience sampling process. The outcomes of the research showed a progressive and significant association between the predictors (the need for uniqueness, price and past orientation) and the outcome variable (impulsive buying behavior).

Keywords: *Impulsive buying behaviour; need for uniqueness; price; past orientation.*

1. Introduction

A number of factors which influence impulsive buying behavior have been discovered which include gender, race, age, marital status, materialism and psychological factors status but this study focused on the influence of need for uniqueness, price and past orientation on the impulsive buying behavior of the consumer. Items were disseminated to consumers in the Gauteng province of South Africa. According to Wu and Lee, (2016:1091), "consumer decision-making styles for goods differ according to consumers' cultural orientation and that consumer behavior can be predicted from an understanding of the cultural personality of consumers". Accordingly, goods and services can be better designed to meet consumer needs (Bharwada 2010; Rootman & Kruger, 2017). The study seeks to enquire if need for uniqueness, price and past orientation contributed to consumers impulsive buying behavior. Thus, according to Goldsmith, Clark and Goldsmith (2006:411), it is said that individuals with increased requisite for uniqueness view high resemblance with others as unfriendly, and often attempt to make themselves different from others. Whereas with regard to price it can be seen that promotions are a way of framing purchasing decisions in the sense that paybacks received by consumers from the promotion are continual.

However, Yanga, Zhaob, Louc and Weia, (2013) say past orientation has an effect on most individuals because it either gives them desire to think about their past or enjoy stories about how things used to be in the "good old times". According to Janakiraman, Meyer and Morales, (2006:362), ""one effect of unexpected price discounts is that of causing a generalized affective effect on consumers", while Wu and Lee (2016:1093) that "negative affect induced by unexpected price hikes might suppress spending by limiting purchase consideration of other goods, while the positive effect induced by unexpected price drops might increase spending by expanding consideration of other goods". Therefore, unexpected cheaper prices, discounts, sales or specials play a major role on impulse buying of consumers. Past ways of working provided a comfort zone; persons who are past orientated become so comfortable in their memories that they falter to attempt new things, thus act impulsively. According to Hodgins and Amy, (2009), individuals with past orientation have a stout craving for instant gratification and partake lower self-control to postpone their indulgence to a future period. Thus, they do not think about the long-term. Implications of their actions and ardent on current stimulation through consumption while Baumeister, (2014:672) states that "when consumers are not able to resist current temptations and seek immediate pleasure they tend to act impulsively and have little self-control". Park, Kim and Forney (2017:433) classified impulsive buying as four types which include "planned impulsive buying, reminded impulsive buying, fashion-oriented impulsive buying and pure impulsive buying". Zhang, Xu, Zho and Yu, (2018:522) added that there are "four categories of impulsive buying which include pure impulsive buying, reminder impulsive buying, and suggestion impulsive buying and planned impulsive buying" which is more or less the same with what Park, Kim and Forney, (2017) postulated. "Pure impulsive buying is the truly impulsive buying behavior where consumers break their normal buying pattern to make a novelty purchase immediately. Reminder impulsive buying requires the recall of one's prior experience or knowledge about products and cognitive effort will be needed in the process. Suggestion impulsive occurs when a consumer sees a new product and imagines a need for it. Compared with pure impulsive purchasing, suggestion impulsive buying may be an entirely relational process than an emotional reaction (Stern, 1962:33). Planned impulsive ordering is partially "planned" and refers that consumers are open to make purchases beyond shopping goals and search for any promotions.

Problem Statement: Impulsive buying has become a problem for the whole world (Zhang & Kim 2013; Sunil & Kesari, 2018). According to Burgess, (2003), Huang and Kuai, (2006) and Park et al. (2017) consumers are more impulsive than price conscious. This means that consumers do not care much about the price of products when it comes to buy what they want and this has a serious psychological and social consequence. Park and Park, (2015) said that impulsive buying behavior is characterized by two factors which are the stimulus of marketing (such as advertisement and promotion) and the time of the purchase. Impulsive buying behavior is a big problem in South Africa because people just buy classical clothes without planning and thinking leaving out other essential and critical things at home like food, rent and school fees for children (Venter de Villiers, ©a & Chuchu 2018; Dhurup & Tusiime, 2011).

This study singled out the need for uniqueness, price and past orientation as factors that lead to impulsive buying behavior in South Africa. These factors drive consumers to buy products impulsively disregarding the consequences. It seems that there is a lacuna regarding the factors that lead to impulsive buying behavior besides gender, age and marital status (Bakewell & Mitchell 2009; Zhang & Kim, 2013). Therefore, the contemporary research will try to fill this lacuna by bringing more knowledge on the fairly new variables such as need for uniqueness, price and past orientation on impulsive buying. This study will provide a new view on impulsive buying behavior based on these variables.

2. Literature Review

Four major aspects of this paper which include impulsive buying behaviour, need for uniqueness, price and past orientation are outlined and elaborated in this section.

Need for Uniqueness: Consumers of today aspire to be unique and different; that's why they indulge in impulsive buying when they see brands like Nike or Adidas on promotions or being advertised. Belk and Malhotra, (2013) and Lee, Ho and Wu (2018:79) noted that "product personality offers a mechanism for expressing one's actual self, ideal self, or social self and reflects one's own personality". Amaldoos and Jain, (2005) states that make with robust character tends to contain exclusive styles in product design which may differ itself from other contestant makes. However, Burns and Homer (2014:10) say "need for uniqueness individuals seek non-traditional and self-differentiating products such as scarce or limited versions of products, or even niche products, which are deemed as superior tools for demonstrating self-image". Tian, Bearden and Hunter, (2011:51) define purchaser's need for distinctiveness as "the trait of pursuing differences relative to others through the acquisition, utilization and disposition of consumer goods for the purpose of developing and enhancing one's self-image and social image". According to Aaker, (2013), need for uniqueness is human characteristics associated with a specific brand. Gwinner and Eaton, (2012) say the need for uniqueness naturally is regarded as one of the marketing tools to build an overall carbon copy appealing to targeted viewers.

According to Knight and Kim, (2007:270), "new products or brands can be acquired more rapidly by purchasers who have greater demand of distinction than those having that demand at a lower level". Since consumer's need for uniqueness is anticipated to have a direct impact on the hedonic purchase, this acts as a mediator role in the relationship between consumer's need for exceptionality and impulse buying behavior. Netemeyer, Krishnan, Pulling, Wang, Yagci, Dean and Wirth, (2015:210), alleged that product rareness is defined "as the degree to which customers feel the brands are different from competing brands and how distinctive it is relative to competitors". Another antecedent of compulsive buying behavior according to Steenkamp, Batra and Alden, (2015) is made stature which refers to the relatively high status of product positioning associated with a brand.

Lastly, Zeithaml, Berry and Parasuraman, (2015) states that another antecedent of compulsive buying behavior can be professed significance which is the customer's overall assessment of the utility of a product or service based on perceptions of what is received and what is given. Avoidance of similarity according to Fisher and Price, (2014:477) refers to the "loss of interest in, or discontinued use of, possessions that become commonplace in order to move away from the norm and reestablish one's differentness". However, creative choice counter conformity according to Kron, (2014:9) "reflects one's personal style in material displays as accomplished through the purchase of original, novel, or unique consumer goods or via the decorative collection, arrangement and display of goods". South African market is budding into a pool of customers hungry for international brands superfluity fashion goods which they see as a symbol of success, wealth and status (Zhang & Kim 2013; Lang & Armstrong, 2018; Raisanen, Bjork, Lonnstrom & Jauffret, 2018).

Price: Research by Kim and Kramer, (2006:311) found that "price discount based on percentage played a positive impact on consumer novelty perceived savings and purchase intention, that is, the more innovative in the form of price discounts, the more savings and purchase intention consumer would feel". However, Syam, Ruan and Hess, (2005) and Jaehyeon and Jaehyeon, (2016) found that customisation shows a vital role in changing the competitive situation like putting downward pressure on a competitor's prices. According to Schindler, (2012) fee is the quantity of payment or compensation given by one party to another in return for goods or services. The price is set so as to equate the quantity being supplied and that being demanded. According to Huang and Chen, (2013) and Lindblom, Lindblom and Wechtler, (2018), for planned purchasers, external reference price has no significant impact on impulsive buying decision, but as for unplanned purchasers, external reference price will have a significant impact on the purchase decision. Retailers also frequently use price discount offer strategy for promoting sales (Babbie, 2010; Hoch & Loewenstein, 2016; Ayub & Zafar 2018). Therefore, the price is multi-dimension (dependability) as well as one-dimensional (not dependable) as compared to impulsive buying behavior. Lower prices mean a better deal for consumers and force them to indulge in impulsive buying behavior without planning (Graciola, Toni, Lima & Milan, 2018; Loureiro & Breazeale, 2018).

Past Orientation: Zimbardo and John, (2008) argued that the previous habits of operational provide a comfort zone, hence, these individuals hesitate to try new things by acting impulsively. Baumeister, (2014) and Liang, (2012) proposed when people are in the habit of doing something, they are more likely to stick to their existing routines and are less likely to be impulsive. However, Raju (2012:272) says "shoppers with a strong past orientation are rigid; they are likely to be less risk-taking and less likely to act spontaneously/impulsively". Therefore, he argued that past-oriented people are less likely to be impulsive and more likely to be prudent. According to Zimbardo and John (2008), individuals who are historical oriented are those that are comfortable in their memories and set ways of the past. Holbrook, (2012) proved people who are highly nostalgic have a preference for products and services that remind them of the past, as that gives them comfort.

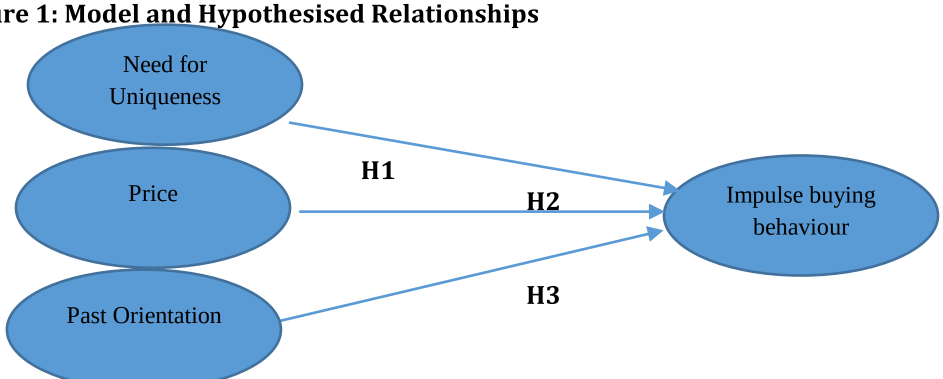
Similarly, Cotte, Ratneshwar and Mick, (2012) define people who are past orientated as those that are nostalgic, dodge new or unfamiliar leisure activities and prefer doing familiar activities that they grew up with. Since Zimbardo and John, (2008) stated that persons are past-oriented are comfortable in their memories and set of ways in doing things, hence, it is less likely for them to be impulsive and more likely to be prudent. People who are past-oriented are comfortable in their memories, factors such as nostalgia, rituals, traditions and memories of exactly how things used to be done in the good old days, play a major role for them not to behave impulsively. The study shows that persons who are past-oriented have little self-control and can surrender to immediate temptation. Furthermore, Baumeister, (2014) states that practicality or self-discipline is character's long-term preference for monitoring.

Impulsive Buying Behavior: Mcinnes and Price, (2012) say spending might be more important than actual product attainment since it can provide a highly pleasurable buying experience. According to Sherry, (2012) and Sunil and Kesari, (2017), accidental perusing or spending may sometimes be more important than actual product acquisition since it can provide a highly pleasurable buying experience for consumers. Furthermore, according to Watson, Clark and Tellegen, (2012) positive affect makes the individual sense enthusiastic, energetic, and vigilant, meaning that, high constructive affect involves a state of high energy, full concentration and pleasant engagement. Hoch and Lowenstein (2016) and Zhang et al. (2018) clarified thoughtless purchasing behavior as a struggle between the psychological forces of desires and willpower. While Kacen and Lee (2016) defined impulsive buying as unplanned buying with rapids decision making and a subjective bias in the form of immediate possession. However, Rook and Fisher (2016:189) defined impulsive buying "as consumer tendency to buy spontaneously, unreflectively, immediately and kinetically". Liang, (2012) and Bakewell and Mitchell (2009) concluded that spontaneous buying behavior is considered irrational, immature and highly risky since the buyer buys without consciousness and it's unplanned. Dittmar (2005), Wu and Lee (2016) and Sunil and Kesari, (2018) postulated that cost is one other factor that influences impulsive buying behavior.

Tendai and Crispen (2009:102) advocated that "the in-store shopping environment is a very important determinant of impulsive buying with factors such as in-store background music, store display, scent, in stock promotions, prices, shop cleanliness, shop density and store personnel all make up the in-store shopping environment". Rook and Hoch (2012) recommended a psychological model of buyer instinct buying behavior and proved out that impulse buying is characterized by the following five elements which are a sudden and spontaneous desire to act, a state of psychological disequilibrium, the onset of psychological conflict and struggle, a reduction in cognitive evaluation and lack of regard for the consequences of impulse buying behavior. Weinberg and Gottwald (2012) and Thoumrungroje (2018) indicated that impetuous buyers typically show greater feelings of amusement, delight, enthusiasm and joy. Hence, realistically to take an emotional variable as the predictor of an impulse purchase. According to Donthu and Gilliland (2010) and Chebad, Michon, Haj-Salem and Oliveira (2014), it is shown that customers with optimistic mood state exhibit higher risk-seeking propensity, and thus tend to engage in impulse behavior. Impulsiveness, whereas Puri (2012) says cautious people evaluate the implications of their actions and behave less impulsively.

The Conceptual Model: Portraying from the literature review, research model is conceptualised. Theorised associations between research constructs are then developed. In the conceptualised research model, need for uniqueness, price and past orientation are proposed as predictors (independent variables) of impulsive buying. Impulsive buying equals ending variable (dependent variable). Figure 1 illustrates this research model.

Figure 1: Model and Hypothesised Relationships



Source: Own Source

Hypothesis One: Positive relationship exists concerning need for uniqueness and impulse buying behavior.

Hypothesis Two: Constructive connection is between price and impulse buying behavior.

Hypothesis Three: There is an affirmative association between past orientation and impulse buying behavior.

3. Research Methodology

Quantitative research tool is engaged for this research for reasons of reliability validity of the results unlike in qualitative where there is a lot of bias in terms of the results. Quantitative research allows researchers to provide statistical facts and estimates about relationships between constructs of research interest and to make a sweeping statement of extrapolations on the defined target population. Quantitative research is fast and can be conducted on large numbers of respondents with little cost and effort. Consumers around Gauteng province were the target population for easy accessibility and distribution of questionnaires. This would also cut transport cost. 350 respondents were targeted because the bigger the data set the more reliable and valid the results using a convenience sampling method.

Presentation of the Results: Table 1, more females plays a part in the study than males. This may be that female, buy more compulsively than men because in general women love fashion (Retief, Erasmus and Petzer 2018). Ages ranging from 23 to 35 are more active because that's the working class group in which they just buy to please their partners and to look good and unique at work. Single people buy more impulsively than others because they do not have dependents like married people and they are still looking for the right partners. Table 1 also shows that blacks buy more impulsively without thinking twice unlike whites people who in most cases think before they purchase anything. According to the study results, white people have the tendency to invest and save, unlike black people who are not as much interested to invest and save. White people believe so much in investing and saving unlike the black people who do not think about tomorrow when purchasing. Those who speak Zulu act in an impulsive way when purchasing compared to others because Zulu people love fashion to attract the opposite sex.

Table 1: Sample Demographic Characteristics

Gender	**Frequency**	**Percentage**
Male	96	27.4%
Female	254	72.6%
Total	**350**	**100%**
Age	**Frequency**	**Percentage**
18-22	61	17.4%
23-35	170	48.6%
35-60	119	34.0%
Total	**350**	**100%**
Marital Status	**Frequency**	**Percentage**
Married	80	22.9%
Single	155	44.3%
Divorced	101	28.9%
Widowed	14	4.0%
Total	**350**	**100%**
Race	**Frequency**	**Percentage**
Blacks	239	68.3%
Whites	106	30.3%
Coloureds	5	1.4%
Total	**350**	**100%**
Language	**Frequency**	**Percentage**

English	48	17.4%
Afrikaans	61	13.7
Zulu	143	40.9%
Xhosa	23	6.6
South Sotho	68	19.4%
Northern Sotho	7	2.0%
Total	**350**	100%

Source: Own source

Measurement Items: Slight variations made in order to fit the current research context and purpose. Five-questionnaire scales which were adapted from the previous works of Donthu and Gilliland (2010) were used to measure uniqueness. Question asked of the participants was: "I like to take chances". Five items were taken from Clemes, Gan and Zhang, (2014) to measure how price impact on impulse buying. Sample question asked of the participants were: "Low prices allow me to save money as I buy branded goods". Another five-item scale taken from Karande and Merchant (2012) was utilized to determine the extent to which past-oriented consumers react towards acting impulsively. Sample questions asked of the participants were: "It gives me pleasure to think about my past". Moreover, the five-item scale taken from Xiao (2012) was used to determine compulsive buying behavior. Item query asked of the participants was: "I always buy something I had not planned to purchase".

Table 2: Analysis Statistics

Research Construct	**Cronbach's Test**		**C.R Value**	**AVE Value**	**Factor loading**
	Item-total	**α value**			
UQ 2	0.769				0.894
UQ 3	0.658	0.792	0.792	0.590	0.723
UQ 5	0.523				0.592
PC 3	0.786				0.855
PC 4	0.793	0.900	0.900	0.855	0.883
PC 5	0.777				0.869
PO 1	0.681				0.723
PO 2	0.600				0.662
PO 3	0.619	0.800	0.800	0.598	0.764
PO 4	0.595				0.624
PO 5	0.587				0.604
IB 2	0.655				0.703
IB 3	0.711				0.723
IB 4	0.600	0.798	0.798	0.599	0.681
IB 5	0.592				0.634

Note: C.R.: UQ: Uniqueness, PO: Past Orientation, PC: Price, IB: Impulsive Buying Behaviour, CR: Composite Reliability; AVE: Average Variance Extracted; S.V.: Shared Variance;* Scores: 1 – Strongly Disagree; 3 – Neutral; 5 – Strongly Agree
Source: Own source

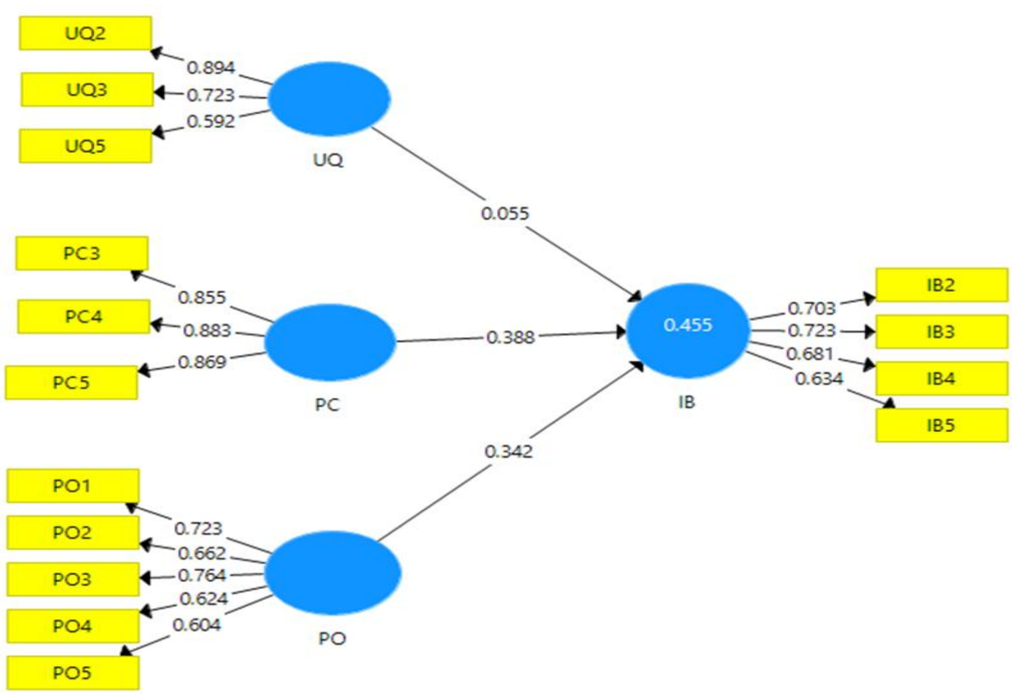
Convergent validity is a technique to assess construct validity (Goddard & Melville 2010; Graziano & Raulin 2010). In the current study, convergent validity was determined through the item to total correlation and factor loading. Item to total correlation and factor loading were assessed using SPSS. For consistency to assess the items, factor loading should be greater than 0.5 (Fornell & Larcker 1981). As seen in Table 2, the factor loading of all the measurement instruments is within the range of 0.592 to 0.894. All the items are greater than 0.5. These results mean that all the items are acceptable and that there is a relationship between each construct and each item. UQ 1, UQ 4, PC 1, PC 2 and IB 1 were deleted because the factor loadings were lower than 0.5 which is the threshold recommended by Anderson and Gerbing (1988). To evaluate the internal consistency of the research constructs, composite reliability was conducted in this study.
The following formula was used to calculate composite reliability.

(CR): CRη= (∑λyi) 2 / [(∑λyi) 2 + (∑Ɛi)]
CR= (square of the summation of the factor loadings)/ [(square of the summation of the factor loadings) + (summation of error variances)]. Hair, Babin, Anderson and Tatham (2010) postulated that a CR greater than 0.7 reflects a good consistency of the variable. As shown in Table 1, all the four constructs in this study were having composite reliability between 0.792 and 0.900 (more than 0.700). Therefore, these results prove the existence of good internal reliability of the constructs in this study. Chin (1998) argued that the AVE of the research constructs should be greater than 0.5. The AVE was calculated by using the following formula of Fornell and Lacker (1981):
Vη= ∑λyi2 / (∑λyi2 + ∑Ɛi)
AVE= summation of the square of factor loadings / [(summation of the square of factor loadings) + (summation of error variances)]. The values of AVE of the research constructs are between 0.590 and 0.855 (as presented in Table 2); these values exceed the recommended threshold of 0.50 (Fornell & Larcker 1981). Therefore, these results are acceptable. After endorsing the reliability and validity of the measurement instruments (reported in Table 2), the study progressed to test the proposed hypotheses. In total, there are three hypotheses that are tested.

Figure 2 provides the proposed hypotheses and the respective path coefficients. The same results of the path coefficients are tabulated in Table 3 depicting the item to total correlations, AVE, CR and factor loadings. The convenience sampling technique was chosen because it was quick and cheap, also because respondents were conveniently available (Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuis, Pietersen, Plano Clark & Van Der Westhuizen, 2012).

Path Model Results and Factor Loadings: Path modelling results and as well as the item loadings for the research constructs are shown in figure 2. In the figure, UQ stands for Uniqueness; PO is the acronym for Past Orientation; PC stands for Price and IB represents Impulsive Buying Behaviour.

Figure 2: SMART PLS Figure



Source: Own Source

In the current study, Table 3 and 4 show a positive significant correlation between the different constructs. The correlation between PC and IB has a value of ($r=0.595$; $p<0.01$). Moreover, the correlation matrix describes a positive relationship between PO and IB with a value of ($r=0.580$; <0.01) as well PO and PC with a value of ($r=0.523$; $p<0.01$). Furthermore, the same type of correlation exists between UQ and IB ($r=0.472$; $p<0.01$); UQ and PC ($r=0.511$; $p< 0.01$) as well as UQ and PO ($r=0.598$; $p<0.01$).

Table 3: Correlations between Constructs

Research Construct	**Construct correlation**			
	IB	**PC**	**PO**	**UQ**
Impulsive Buying Behavior (IB)	1.000			
Price (PC)	0.595**	1.000		
Past Orientation (PO)	0.580**	0.523**	1.000	
Uniqueness (UQ)	0.472***	0.511**	0.598**	1.000

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

Source: Own source

Table 4: Hypothesized Relationships and Path Co-efficiency

Proposed Hypothesis Relationship	**Hypothesis**	**Path Coefficient Estimates**	**Decision**
Need for Uniqueness → Impulsive Buying Behavior	H1	0.055***	Accepted
Price → Impulsive Buying Behavior	H2	0.388***	Accepted
Past Orientation → Impulsive Buying Behavior	H3	0.342***	Accepted

***p-value<0.001, **p-value<0.05, *p-value<0.1; using a significance level of 0.05, critical ratios (t-value) that exceed 1.96 would be significant.

Source: Own source

4. Interpretation of the Results

The following section discusses the result of hypotheses that are indicated in Table 4.

(H1): The first hypothesis (H1) in this study stated that requisite for uniqueness significantly impact on impulsive buying behaviour. The path coefficient of 0.055 indicates a very strong relationship between uniqueness and compulsive buying behaviour. Thus, the p-value is significant at 99% ($r=0.001$), which means that this hypothesis is supportive and significant. This is supported by the study done by Islam, Wei, Sheikh, Hameed and Azam (2017) which shows that people need to look different and unique by increasing the level of materialism thereby leading to self-actualisation and compulsive buying behaviour.

(H2): With reference to the second hypothesis (H2), the study hypothesized that price significantly influenced impulsive buying behavior. Table 4 indicates a path coefficient value of ($r=0.388$) with ($p<0.001$) for H2; the results are significant and confident at 99%. The path coefficient endorses the presence of a reasonable relationship between price and impulsive buying behavior. This concurred with the results found by Surulivel, Selvabaskar, Nigama, Rafic and Pradeepa (2018) and Ayub and Zafar (2018) that the issue of price attracts people to act in an impulsive way. Sales promotions which include free vouchers, refunds, free sampling, competition and gift packs effect impulsive buying. Price discount offers which include price and bulk discounts have a major effect on consumer towards a brand. Price discounts increase sales and also stimulate impulsive buying (Ayub & Zafar 2018)

(H3): A positive correlation was hypothesized between past orientation and impulsive buying behaviour. After tested H3, a path coefficient of ($r=0.342$) was obtained. The result confirms a positive relationship between past orientation and spontaneous buying behaviour. The relationship between these two constructs is highly significant at 99% indicated by a ($p<0.001$). The results confirm or validate the existence of the relationship. Also, the study by Liang (2012) and Raisanen et al. (2018) proves that past orientation has an effect on impulsive buying.

5. Recommendations of the Study

The first major practical input of this research is that it provides much needed empirical data on impulsive buying, what consumers do most of the time and with what in mind. This research will help consumers to know more about impulsive buying and to help them be vigilant when purchasing so as not to indulge in buying impulsively as it can lead to disastrous effects like being penniless and divorce in marriages (Islam et al., 2017; Ave, Venter & Mhlophe 2015). Hypothesis two which is the relationship between price and impulsive buying behaviour has the highest path-coefficient on 0.388 which shows that buyers should focus more on the issue of price as it is the major culprit that allure them to just buy without proper planning. Nevertheless, the price also is a contributing factor. A number of people go for impulsive purchasing just due to the reason it was on discount. Temptations like stock clearances or offers for a premium to customers also promote impulsive buying. It is the responsibility of consumers not to be tempted by catchy advertisements. The consumers should know when and how to purchase, for example, the consumer should make a shopping list before going on shopping.

However, since impulse purchase occurs subconsciously, on the spur of movement, a significant portion of those shoppers carrying shopping list also fail to abstain from impulse purchase though they show lower impulse purchase behaviour. On the theoretical contributions, the study contributes immense knowledge to the consumers to practice the consumer buying process instead of just following the impulsive buying process. This will help consumers not acting impulsively when purchasing products proper planning is needed. The consumer buying procedure begins with problem recognition, followed by information search, pre-purchase alternative evaluation, then the purchase and lastly, the post-purchase evaluation (Dhurup & Tisiime 2011: 519). This will help the consumers that buying impulsively it's an issue and a risk to take. The model also is very robust and contributes to the extant literature on the subject matter.

Impulsive buying can be correlated to unhappiness and anxiety and is required to be controlled from a psychological perspective. "Impulsive buying tendency can be linked to personality trait which triggers a person making the impulsive purchase a habit. Impulsive buyers are mainly social beings who are very much concerned about their social image and status. In order to impress others and to look good so that others feel positive about them, they opt to impulsive buying" (Dhurup & Tisiime 2011: 522). To lighten their mood buyers, buy in an impulsive manner. Impulsive buyers are not much concerned about the results of their spending pattern. "As proved, only individuals with low self-control easily enter into impulse buying behavior (Chen & Yao 2018:1249). Consumers need to control themselves physiologically by avoiding buying impulsively. In addition, customers will feel the urge to buy "limited edition" products to fulfil their esteems (Graciola et al., 2018:202). There is no need to buy things which you have not planned for since it will lead to bankruptcy and other problems like health risks (Ayub & Zafar 2018).

Limitations and Conclusion of the Study: The study did not focus on time orientation and preparation as antecedents of impulsive buying behavior. This network can be expanded to include other variables such as regulatory focus, need for stimulation, and store/brand loyalty. This study focus on consumers in South Africa only but a comparison study could yield more robust results and it could be very beneficial to see what other countries experience on impulsive buying behavior. This will be beneficial to the world in general because most authors agree that impulsive buying it's a world problem (Baumeister 2014: Chen & Yao 2018; Zhang et al., 2018).

Therefore, it can be concluded that a substantial portion of all consumer retail purchases are impulsive and retailers cannot afford to overlook the contribution of revenue generated through impulse purchases. This behaviour may well curtail from several different causes that include broad personality characteristics, as well as specific short-term states and environmental stimuli. The correlation of the basic personality factors and the specific stimuli that trigger specific incidents of impulse buying seemed both reasonable and valuable and is worthy of further study.

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Corruption and Its Implications for Development and Good Governance: A Perspective from Post-Colonial Africa

Daniel N. Mlambo, Mandla A. Mubecua, Siphesihle Edmund Mpanza, Victor H. Mlambo
University of Zululand, KwaDlangezwa, South Africa
mlambo1@ymail.com, mubecua@gmail.com, smpanza1@gmail.com, halavico@yahoo.com

Abstract: One of the many impediments to a specific region, country and/or continents political, social and economic growth prospects is corruption, the aim of this paper is to unearth the drivers and consequences of corruption in post-colonial Africa. Corruption is a global phenomenon; however when observing global corruption statistics and/or trends, it seems to be more prominent in underdeveloped continents such as Africa. Corruption in Africa is purely driven by low levels of economic growth, bad governance structures weak constitutions political instability, high levels of poverty coupled with high and ever-increasing levels of unemployment. We argue that post the colonial era, there has been a rise of corruption activities within the continent where individuals including some African heads of states have looted the continent of its resources meant for the general populace. In this sense, corruption takes resources meant for the poor, limits foreign direct investments (FDI) and has severe effects on a continent that is already the least developed in the world.

Keywords: *Corruption, Africa, Heads of States, Development, Good Governance.*

1. Introduction

The purpose of this paper is to ponder the drivers and consequences of corruption in post-colonial Africa. Uwak and Udofia (2016) posit that corruption and in whichever way you look at it has enormous negative implications for the growth of any region, country and/or continent. From an economic point of view, corruption pertains to investments on projects that rather than benefiting society, will rather enrich certain individuals and their allies. On the other hand, from a political perspective, it involves corrupt political elites who use their political positions for their own personal satisfaction. Also, from a social standpoint, corruption has massive consequences on the social system which ultimately leads to the general populace losing or not having faith and/or trust in the political system. Despite a plethora of institutional, legal and other relevant measures that have been formulated and implemented, corruption persists in both developed and developing countries (Mungiu-Pippidi, 2015). As a result of this, over the last two to three decades, many studies have been taken pertaining to corruption both from an Afrocentric and Eurocentric perspective. According to Awojobi (2014), the post-colonial era ushered in a period where African countries could now realign themselves in global politics. Basically, the re-emergence of African states from their colonial masters steered in a period where they would introduce their own economic growth and developmental models moving forward. Bojang (2017) contends that several economic and political reforms have been undergone by African states post the colonial era. However, they have been lacking in stimulating the continents economic growth prospects thus far.

Africa as a result of its rich mineral and natural resources is one of the richest continents in the world, yet the least developed. It is in this vein that corruption has been witnessed as one of the major role players when viewing Africa's current lack of development and economic growth post-independence. This trajectory stems from the fact that some African states are still propelled with low levels of economic growth, bad governance structures, weak constitutions, political misrule, dictatorship rule, high levels of poverty together with unemployment which makes them more vulnerable to partake in corruption activities (Myint, 2000; Azeez, 2018). As a result of these elements, some African states are left demobilized and economically decapitated, living the general populace under severe poverty. Corruption in Africa takes place from high-level political graft which accounts for millions of dollars to low-level bribes like bribing for a speeding ticket (Henson, 2009). Jain (2001) opines that the increased attention paid to corruption is mainly because development requires good governance which in most cases has been hindered by corrupt activities in Africa. According to Lawal (2007), this makes corruption in Africa an epidemic development issue, in his view, most African states cannot endure the cost(s) of corruption activities which further has significant effects on the current and future development of the continent. For African states to be more integrated into the global economy and allow for more FDI for their economic growth, diluting the number of continental corruption tendencies is of utmost importance.

It is within this context that this paper explores the effects of corruption on Africa's development and economic growth endeavours post the colonial era. The following section aims to conceptualize the term corruption from a broader perspective. The subsequent section unpacks the rise of corruption in Africa post-independence by reviewing current literature pertaining to corruption. The paper further explains the effects and drivers of corruption in Africa hereby also observing Cressey's Fraud Triangle Model as a means to offer a more nuanced explanation into what drives individuals to partake in corruption activities. The latter parts of the paper look at the implications corruption has on Africa's current and future development, while the last section draws on the informed general conclusion from the arguments in the paper while offering some recommendations.

Conceptual Clarifications: On the clarification of corruption, various definitions exist; therefore, setting a precise definition of corruption has been a difficult task in academic literature as it tends to mean different things to different people (Eyo, 2017). To Jain (2001) corruption refers to the act whereby the power of public office is applied for personal gain. In essence, it entails the unauthorized utilization of power or influence by someone in the public or private sector by means to enrich himself and/or herself at the expense of the general populace. Myint (2000) defines corruption as the usage of status or rank by an individual in office for his or her personal gain. Some examples of these corrupt behaviours may include the appropriation of public assets and property for personal use, cronyism, nepotism, embezzlement, bribery and extortion. Basically, corruption means the mistreatment or exploitation of one's position or authority (Clark, 2017). Nevertheless, as noted by Tanzi (1998) this abuse of public power can involve other third parties, in this case, close friends, family members or even colleagues. However, Azeez (2018) contends that corruption can further be broken down into other broad forms such as petty corruption, grand corruption and looting. Corruption activities that take place usually fall under these three broad forms.

Petty Corruption: Pertains to small amounts of gifts or capital been exchanged by two or more parties who themselves are relatively minor individuals in a particular organization where this type of corruption in undertaken. It is more common in areas where the monthly income for civil servants does not meet their basic monthly needs.

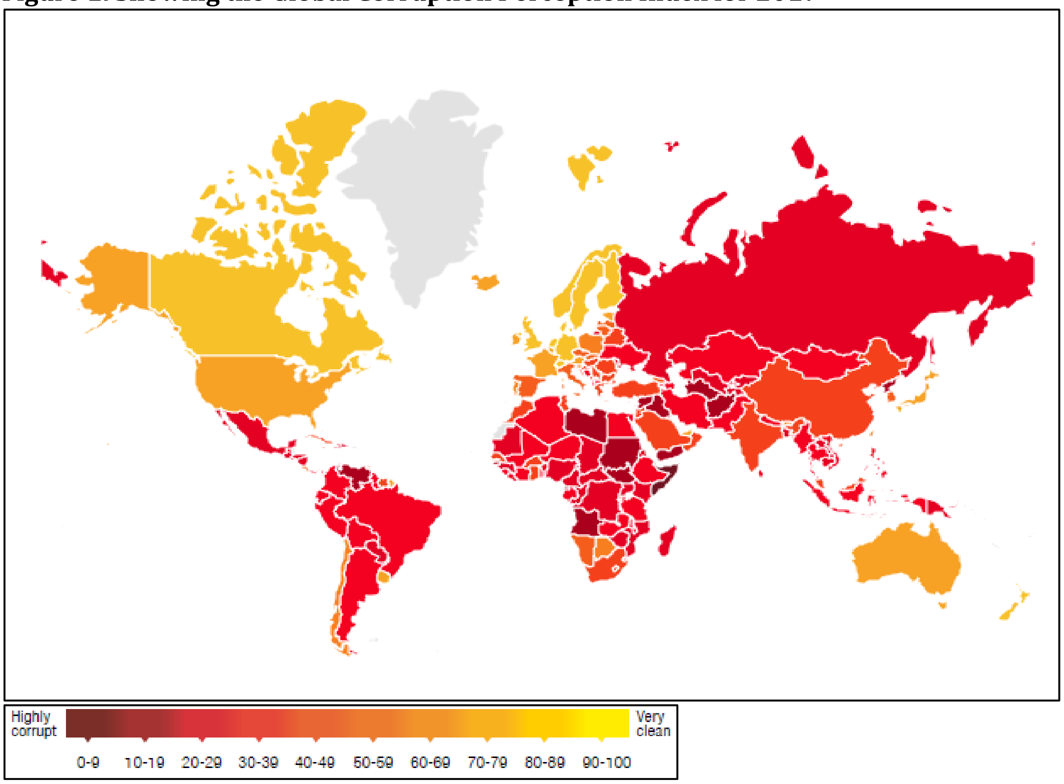
Grand Corruption: In most cases is undertaken by high ranking government officials or businessman. These corrupt activities could include kick-backs which are rewarded to government officials to award tender contracts, embezzlement of public funds and political patronage. In this form of corruption, the corrupt individual(s) is more focused on his/her personal wealth and may use some of this wealth to assist his/her close allies who assist him/her to stay in power (Uneca, 2016).

Looting: This involves huge figures of money and could bring with it macroeconomic repercussions. This type of corruption is normally undertaken by influential political representatives and other actors in the public and private sector.

2. A Review of Literature

Corruption Trends in Africa Post-Independence: In 1957, during his opening address to the newly independent state of Ghana, Kwame Nkrumah mentioned corruption as a pivotal disease that was to contribute to Africa's downfall (Nkrumah, 1961). About three years later, a period where Tanganyika (now Tanzania) was about to gain its independence, Julias Nyerere argued that Tanganyika, which was hampered by both diseases and poverty risked adding another enemy, that of corruption (Nyerere, 1966). To him, corruption was an enemy to the welfare of the general populace, several decades later it seems as if the worst fears of both Nyerere and Nkrumah are being witnessed. According to Sugden and Tomlinson (2017), post the colonial era, corruption has been a widespread enigma in Africa, no region or state in the continent has not had its fair share of corrupt practices and as a result, the continent is widely considered amongst the most corrupt in the world. Corruption in Africa has been propelled by greed, the decline in morals and ethics, self-enrichment, poverty, ethnic loyalties, unemployment and socio-economic conditions. In this vein, the weak governance in Africa may be traced back to colonialism; here, many institutions were established to strengthen political influences instead of creating an environment of accountability. From a global perspective, over the last few decades, attention paid to corruption has grown tremendously (refer to figure 1) as often measured by various governance indicators and other organizations such as the Mo Ibrahim Foundation, the World Bank and Transparency International (Hope, 2017). From an economic and development perspective, corruption hinders much needed continental economic development and further grants, Africa, a poor image globally.

Figure 1: Showing the Global Corruption Perception Index for 2017



Source: Transparency International (2017).

By drawing insights from the above figure, one would rightfully observe that Africa is one of the worst corrupt continents globally with South Sudan and Somalia ranked as the most corrupt countries in the world with a score[1] of 12 and 9 respectively in the latest 2017 Transparency International Corruption index. Also, Sub-Saharan Africa was one of three worst performing regions with a score of 32, others being Eastern Europe and Central Asia with a score of 34. Mungiu-Pippidi (2015) argues that in developed states that possess robust governance structures, corruption watchdogs and the rule of law, when there are signs of corruption activities, these (in most cases) are thoroughly investigated and the perpetrators are brought to book. However, in developing and third world (Africa) states where weak institutions and corruption watchdogs are not as robust[2], corruption tends to be a widespread spectacle. As a result, this is predominantly witnessed in Africa, Asia, Latin America and the Pacific. It is in this vein that states with high corruption trends also possess or are confronted with low levels of economic growth, fewer investment opportunities, poverty, low FDI and poor infrastructure (Otusanya, 2011; Hope, 2017).

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[1] Here a scale of 0 to 100 is used to measure how corrupt a specific region or country is, where 0 represents a highly corrupt country and 100 a least corrupt country.

[2] Some of these states in Africa include but are not limited to Somalia, South Sudan, Sudan, Libya, Guinea Bissau, Equatorial Guinea and Angola.

Implications of Corruption on Africa's Current and Future Development: The consequences of corruption are normally drawn from triad spheres which encompass of political, economic and social driven motives (Lawal, 2007). From a political perspective, corruption may trigger political instability and brain drain. In this case, unrests may occur driven by individuals who have had enough of corruption activities as this may limit the speed of service delivery and divert resources intended for economic development to corrupt individuals. When viewing it from a social perspective, corruption grants individuals the platform to loot the State for personal gain and/or self-enrichment. Nevertheless, and without controversy, some African heads of states have also utilized their political positions to amass much wealth for themselves from their state coffers.

Former and current state presidents of various African countries including Jose Eduardo dos Santos, El Hadj Omar Bongo (the late), Mobutu Sese Seko (the late) and Sani Abacha (the late) just to name a few have looted the resources of their respective states in recent years (Rotberg, 2017). In Zaire (now the Democratic Republic of Congo (DRC), the late Mobutu Sese Soko's fortune was projected to be US$ 4 billion in 1984, most of it stashed in offshore bank accounts. In 1997, a year where he was forced out of power, it was estimated that his wealth was about US$ 8 billion (Hope, 2000). Another former African head of state Yahya Abdul-Aziz Jemus Junkung Jammeh, who was in power from 1994 until 2017, has also been accused of looting millions of dollars from Gambia's treasury department for his personal gain. The associated capital estimated to be at least US$ 50 million (McAllister and Farge, 2017). Engebretsen (2017) posit that after almost forty decades in power, former Angolan president and the Peoples Movement for the Liberation of Angola (MPLA) leader Jose Eduardo dos Santos and his family where leading players in the country's economy. He used the oil wealth of Angola to enrich himself and his family, some government and military officials, while poverty was rife in his country. His son was linked to corruption allegations which found that he transferred US$500 million from Angola's central bank to the United Kingdom (UK). All of these were purchased with the money that was looted from his country.

In Gabon, the late El Hadj Omar Bongo Ondimba was accused of channelling money to a French political party in support for Nicolas Sarkozy who was president of France from 2007 to 2012. He (Bongo) is known to have owned more about 33 properties valued at £125 million in France including a luxury collection of vehicles, all of these were purchased with the money that was looted from his country. He used Gabon's 2.5 billion barrel of oil to enrich himself, family and his Bateke tribe thus becoming one of Africa's richest heads of state[3] (The Telegraph, 2009). Yet again, Former Nigerian Minister of Aviation Miss Stella Oduah-Ogiemwonyi utilized the Ministry's finances to purchase cars that were bulletproof for her own private use. Whereas former Minister of Petroleum resources Mrs Diezani Alison-Madueke has had charges brought against her for corruption under Goodluck Jonathan's Presidency (Uwak and Udofia, 2016). According to Bojang (2017), in a period from 2010 to 2015, millions of US$ in oil revenue went missing via money laundering and bribery when Madueke was Minister. Basically, in a period spanning five decades (1960 to 2010) almost US$ 500 million plus has been lost due to corruption in Nigeria. For instance, in Nigeria, bodies such as the Economic and Financial Crimes Commission (EFCC), the Independent Corrupt Practices Commission (ICPC) were established to arrest and prosecute corrupt individuals; however, these have produced little results.

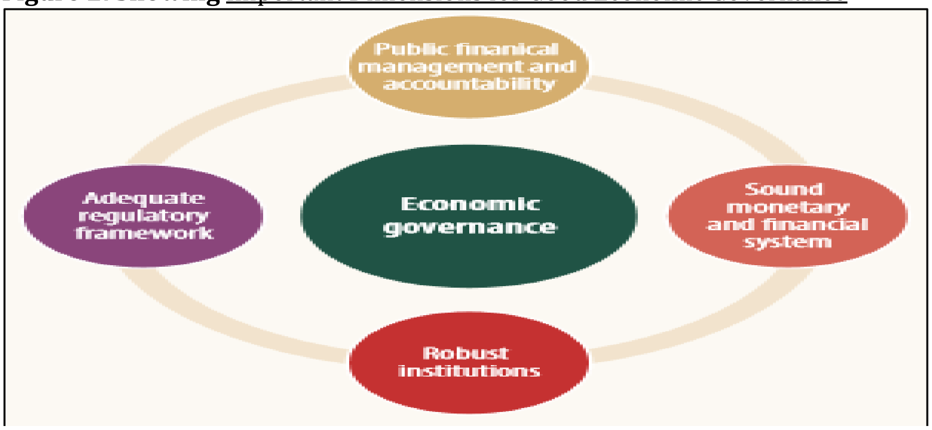
This at times can be drawn from the fact that, depending on the rank/position and/or political leadership you occupy, if found guilty of any wrongdoing, these offences are swept under the carpet or end up getting a lesser sentence in comparison to the crime committed (Uwak and Udofia, 2016). In this sense, a study conducted by PricewaterhouseCoopers in (2016) alluded that in 2030, corruption might cost Nigeria up to 30 percent of its Gross Domestic Product (GDP). This (looting of state coffers) shows that some African leaders and ministers have been exploiting states institutions to not only enrich themselves but also their close allies. As a result, this has often hindered stability as it often leads to military interventions which at times results in the government (both democratically elected and authoritarian regimes) being overthrown as was the case

[3] Bojang (2017) asserts that former and current dictatorship(s) or long-term in office of some African heads of states has also immensely contributed to the high rose of corruption in Africa. Some of these long tenures in power include but are not limited to Egypt's Hosni Mubarak (31 years), Libya's Muammar Gaddafi (42 years), Gabon's Omar Bongo Odimba (42 years), Togo's Gnassingbe Eyadema (38 years), Zimbabwe's Robert Mugabe (30 years), the DRC's Joseph Kabila (2001 – to date) and Cameroon's Paul Biya (1982 – to date).

with Mobuto Sese Soko, Yahya Abdul-Aziz Jemus Junkung Jammeh and Robert Mugabe (Hope, 2000; Uneke, 2010; McAllister and Farge, 2017). As Henson (2009) avers, continentally, there is a notion that high ranking public official (heads of states) seek to continue staying in office through re-election because this further grants them power and access to state resources and further grants them immunity from prosecution.

Corruption Weakens Public Administration and Sabotages Good Governance: Lack of good governance in Africa entails weak institutions, poor implementation mechanisms, inadequate regulatory and legal frameworks, these further stimulate corruption activities (Uneca, 2016), and this sentiment is further echoed by Khan (2006), who entails that corruption is closely linked to poor governance. Drawing from the above, there is a need for good governance mechanisms (see figure 2) in Africa which embraces political representativeness, strong economic management and institutional effectiveness. For African states to improve their economic development, they will require robust performance in all these areas.

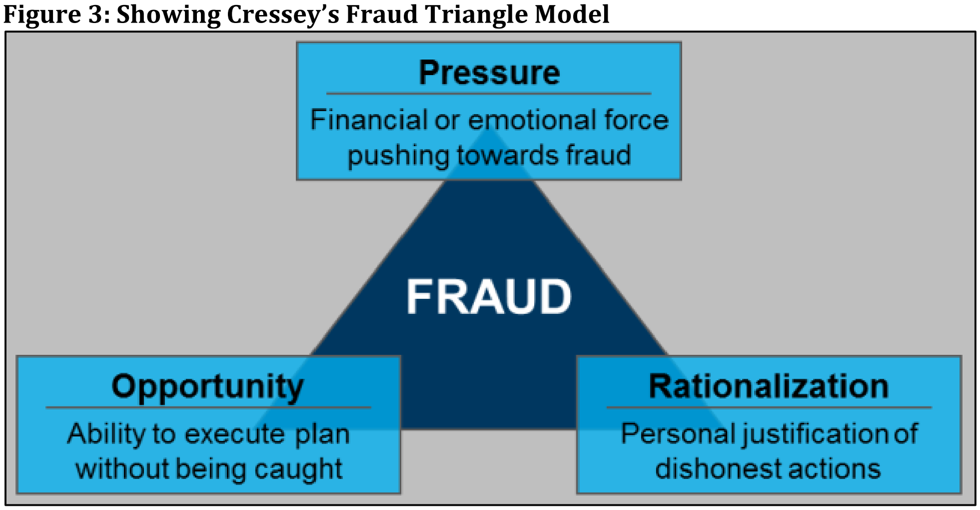
Figure 2: Showing Important Dimensions for Good Economic Governance



Source: See Uneca (2016).

Fraud Triangle Model: As a means to offer a better understanding of what drives individuals to commit corruption practices, the study draws insights from Donald Cressey's (refer to figure 3) Fraud Triangulation Model. This model illustrates the dynamics that cause someone to perpetrate in fraudulent activities. It comprises three drivers which include pressure, opportunity and rationalization commonly referred to as the "Fraud Triangle"

Figure 3: Showing Cressey's Fraud Triangle Model



Source: See Cressey (1953).

Pressure: The element of pressure posits that individuals become involved in corruption as a result of pressure. This may comprise of occupational goals, unforeseen medical expenses, addiction problems, financial constraints, gambling, peer pressure, lavish lifestyle(s), greed and loans. Also, unrealistic goals may also stimulate employees to partake in this form of corruption (Abdullahi, Mansor and Nuhu, 2015).

Opportunity: To Cressey (1953); Lister (2007); Kassem and Higson (2012) opportunity is a process in which a person uses to commit fraudulent practices, often driven by the notion that s/he won't get caught. It is normally formed by poor administration oversight(s), weak internal controls and/or misuse of power. As a result of this, failure to implement and monitor sufficient procedures to identify fraudulent activities may also increase the prospect for fraud to arise. However, this driver is easy to control as organizations could implement measures to better manage these fraudulent activities.

Rationalization: Rationalization is where the perpetrator has justification and some excuses for becoming involved in conducting a crime (Rae and Subramaniam, 2008). If the individual cannot have a reason for participating in corruption, it is not likely that s/he may be involved in crime. For instance, some of the reasons may include "some people did it why not me too", "I was borrowing the money", moreover, "I was entitled to the money because my employer is not paying me enough to sustain myself and family" or "I had to steal to provide for my family" (Abdullahi, Mansor and Nuhu, 2015). It is very difficult to notice such individuals because it is not possible to read someone's mindset. In this driver, most of the individuals partaking in fraudulent activities don't see themselves as offenders' rather normal, honest individuals who are just victims of adverse circumstances.

3. Methodology

This paper adopted a qualitative methodology by relying on secondary sources to collect the required data on the drivers and consequences of corruption in Africa post the colonial era. The researchers exploited relevant published works from books, journals, newspapers, published and unpublished articles such as dissertations and thesis together with credible and reliable online sources of applicable organizations dealing with and/or monitoring corruption trends in Africa post the colonial era. All data retrieved was subjected to comprehensive qualitative analysis through the use of content analysis. To Neuendorf (2002) content analysis is a systematic approach to qualitative data analysis that identifies and summarises message content, it (content analysis) refers to the analysis of books, brochures, written documents, transcript, news reports, conference reports and visual media. As a result, it makes use of acute reflection and analysis of secondary data collection.

4. Results and Discussion

This paper has argued that corruption has over the years played a big influence on hindering Africa's development and economic growth prospects and without a doubt, the general populace has been severely affected by this. So what remedy may African leaders and other third-party role players introduce as frameworks to both reduce and address this enemy? Notwithstanding corruption policies that have been introduced by African leaders, regional economic communities (RECs), civil society, corruption has remained persistent in Africa (Uneke, 2010).

5. Conclusion and Recommendations

Corruption in Africa: What Direction Moving Forward: This paper has explored the drivers and consequences of corruption and good governance in Africa post the colonial era. It has argued that post-colonialism, Africa has witnessed widespread corruption tendencies often measured by various corruption watchdogs. This (corruption) has brought with it vast development implications to a continent that is already viewed as the least developed and corrupt in the world. What has often made the situation worse is the fact that some former and current African heads of states have decided to use their political powers to further impede on the development and economic growth of the continent by looting their state coffers. Such has been drawn from the fact that post the colonial era African states have continued to possess weak anti-corruption fighting agencies coupled with poor policy formulation and implementation. It is evident that by viewing current corruption trends, addressing corruption will continue to pose a challenge in Africa. Apart from those that are present, there needs to other continental and universal corruption fighting strategies.

Presently a legally binding global anti-corruption instrument is that of the United Nations (UN's) Convention against Corruption which entered into force in 2005. Basically, it compels states to fight and manage corruption, enhance global cooperation, retrieve stolen assets and enhance information sharing for both the public and private sectors. As a result, it is themed into four areas which are asset recovery, prevention, international cooperation and criminalization (United Nations, 2011). Therefore, if African heads of states are to successfully address the corruption scourge and revamp their economies, development-oriented leadership is a prerequisite. This pertains to each country implementing adopted national policies and anti-corruption strategies in order to achieve competent and effective public service delivery together with effective economic growth mechanisms. Also, most African states possess unproductive organizations and weak institutions that are failing to implement and monitor transparency and accountability in the public sector. There is a need to implement robust government institutions together with state-owned and independent oversight bodies (corruption watchdogs).

These initiatives can be achieved by strengthening existing institutes that track regional and continental corruption trends but (if possible) these may further be aided by the creation of new anti-corruption institutes that strongly investigate and prosecute corrupt public officials or heads of states that are found guilty in associating themselves in corrupt activities. This sentiment is further echoed by Salim (2000); Anassi (2004) and Kedir (2016), who all contend that African states should implement anti-corruption strategies that ought to monitor incidents of corruption, improve their competence, be accountable and further strengthening existing institutions. Also, these anti-corruption strategies must be achievable, realistic and constantly implemented while also being country-specific, as what may work in another country may not solely work or be implemented in another state. Also (these strategies) should include openness, communication and accountability to African citizens and be complemented with robust monitoring and evaluation mechanisms. Hope (2017) in his analysis opines that developing and implementing well-monitored policies and strategies should be in the form of participatory process which should (if possible) involve engagements and discussions with all relevant stakeholders.

These could include but not limited to the media, civil society and both the public and private sectors. This (participatory process) will grant these stakeholders the platform to also contribute in sharing their ideas in the war against corruption, hence, coming up with a nuanced mechanism on how to further tackle corruption both in the short and long run, nevertheless, these strategies will be in need of political will from African heads of states (Hope, 2017). Goto and Ogunnubi (2014) in their published article entitled *Corruption and Development in Africa: Critical Reflections from Post-Apartheid South Africa* contend that the measures to tackle the high rate of corruption should be of high importance to all African states, irrespective of a country's level of development. African states should perhaps also utilize the African Peer Review Mechanism (APRM)[4] to evaluate whether resources meant for the public are being utilized efficiently, this mechanism provides a robust framework for Africa states to deliver on its structural transformation plan geared towards agenda 2063 (Uneca, 2016).

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[4] Established in 2003 by the New Partnership for Africa's Development (NEPAD) heads of states and government implementation committee (HSGIC), the APRM mechanism is a performance monitoring instrument for African states. It aims to foster political, economic and corporate governance values, continental economic integration, economic growth and sustainable development among African countries (The African Union, nd).

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The Influence of Perceived Human Resource Risk Factors on Financial Problems Faced by Overberg District Municipalities

Juan Pierre Bruwer, Jean-Pierre Rossouw
Cape Peninsula University of Technology Graduate Centre for management, South Africa
BruwerJP@cput.ac.za, jean-pierre@swellenmun.co.za

Abstract: Municipalities are at the forefront of South Africa's developmental agenda. To assist in the foregoing, the municipalities perform the primary task of service delivery - mandated by the Constitution of South Africa. The efficiency of the municipal service delivery function is depended on municipal funds, as derived from various sources. Apart from these funds, municipalities also receive funding through National and Provincial grant allocations, in addition. Notwithstanding the aforementioned most South African municipalities are experiencing financial problems which may adversely affect their relevant service delivery tasks. A possible contributor to the financial problems of South African municipalities is that of human resources (HR) risk factors. For this study, the emphasis was placed on testing whether perceived HR risk factors had any influence on the financial problems experienced in Overberg District Municipalities. Empirical research was conducted through the means of collecting quantitative primary data from 106 respondents, all of whom had to adhere to relevant delineation criteria. Stemming from the results, it was found that perceived HR risk factors did not have any statistically significant influence on the financial problems experienced in Overberg District Municipalities.

Keywords: *Human resource risk factors; Financial Problems; Overberg District; Municipalities; South Africa.*

1. Introduction

The term "municipality" is formally defined in the National Municipal Structures Act No. 177 of 1998, and the South African Constitution, as a body that should be established by every provincial government, with the main intent to provide for the monitoring and support of local government in a province; to promote the development of local government capacity to perform their functions and manage their own affairs (South Africa, 1998). Essentially, municipalities should assist the national government with the rendering of service delivery provincially and locally. Particularly, according to the South African Constitution (South Africa, 1996) the foregoing is done through providing assistance with the democratic and accountable government for local communities, ensuring the provision of basic municipal services[5] to communities in a sustainable manner, promoting social and economic development, promoting safe and healthy environments, and encouraging the involvement of communities and community organizations in the matters of local government.

Notwithstanding the above South African municipalities are divided into three categories, namely: Category A) metropolitan municipalities (municipalities that have exclusive municipal executive- and legislative authority in their areas of operation); Category B); Local municipalities (municipalities that share municipal executive- and legislative authority in its areas of operation with a district municipality); and Category C). District municipalities (municipalities that have municipal executive- and legislative authority in areas of operation that may have more than one municipality) (South Africa, 1996) during the course of 2016, the most recent count of municipalities revealed that South Africa had 257 municipalities which comprised eight metropolitan municipalities, 44 district municipalities and 205 local municipalities (South Africa, 2016). The number of municipalities is justified by the continued growth of local economies, infrastructure and increased basic services in relevant communities (Western Cape Provincial Government, 2006). In order for municipalities to perform their relevant tasks, they need funding. Funding is generally obtained from three distinct sources. According to Local Government Action (2018) municipalities primarily raise funding by means of three methods: 1) billing citizens who own property such as land, houses and businesses relevant rates based on the value of their property, 2) charging tariffs for services rendered.

[5]Basic municipal services pertain to those services that are necessary to ensure an acceptable and reasonable quality of life and which, if not provided, would endanger public health or safety or the environment (South Africa, 2003).

To communities such as access to and provision of water, access to and provision of electricity, refuse removal and the use of municipal facilities, and 3) funding transfers from national and provincial government. To assist in the proper management of these funds and by securing a sound and sustainable management of the fiscal and financial affairs of municipalities, the National Municipal Finance Management Act (MFMA), Act No. 56 of 2003 was introduced. In terms of Section 62 (c) (i) of the MFMA, the Accounting Officer must take all reasonable steps to ensure (South Africa, 2003): "That the municipality has and maintains effective, efficient and transparent systems of financial and risk management and internal control" the MFMA further states that a municipal manager is regarded as the "Accounting Officer" and/or "Head of the Municipal Administration". Hence, clear tangent planes emerge that municipal managers have a lot of responsibility in relation to the financial sustainability of their respective municipalities. To assist the municipal manager in mitigating risks which may adversely affect the financial sustainability of his/her municipality, it is imperative that effective risk management processes should be deployed in municipalities. For the sake of clarity, a "risk" can be viewed as an uncertain event which may have an adverse influence on the overall attainment of business objectives (Smit, 2012). Hence, the inference can be made that 23.3% of respondents perceived their respective municipalities to go "beyond the call of duty" when compared to the expectations of a local municipality.

Based on previous research studies (Tchankova, 2002; Bruwer et al., 2013; Bruwer et al., 2018) risks in general, can be demarcated into four categories namely: 1) strategic risks, 2) compliance risks, 3) operational risks, and 4) reporting risks. In turn, a risk management process can be defined as "a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, and to provide reasonable assurance regarding the achievement of entity objectives" (COSO, 2004). This view is supported by the 2016 Overberg District Annual Report where it was found that due to skill and funding constraints, Overberg District Municipalities[6] might not have sound risk management initiatives in place to mitigate and manage key organizational risks (ODM, 2016). Taking into account that the primary task (service delivery) of municipalities is generally to be executed by human resources, it is highly probable that perceived HR risk factors may contribute to possible financial problems experienced in South African municipalities, particularly Overberg District Municipalities. For the remainder of this paper, discussions take place under the following headings below: 1) literature review, 2) research design and methodology, 3) results and discussion, and 4) conclusion.

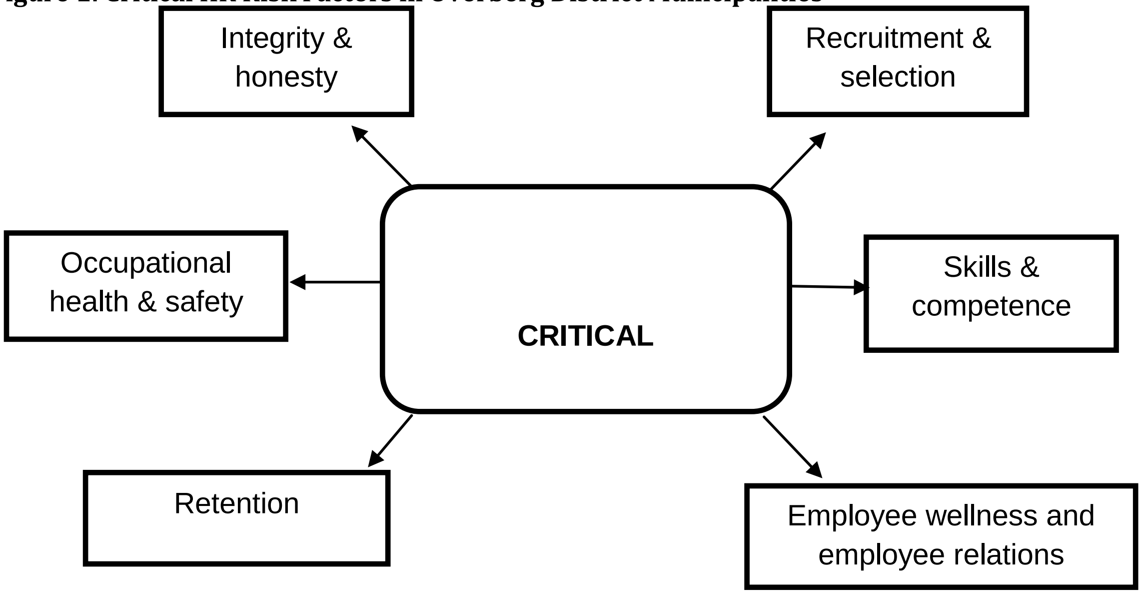
2. Literature Review

Under this section, the relevant discussion takes place under the following two sub-headings: 1) HR risk factors and 2) financial problems faced by South African municipalities.

HR Risk Factors: The primary tasks performed by municipalities are generally performed by human resources. When taking into account the municipal manager's responsibility for sound financial administration, among other responsibilities, it is highly probable that HR risks may adversely affect the financial sustainability of municipalities. HR risks are often spurred on by HR risk factors which are, in turn, can be described as uncertain events or factors which may have an adverse influence on the overall attainment of business objectives (Smit, 2012). Using the most recent revised Risk Management Policy of the Swellendam Local Municipality as a foundation (Swellendam Municipality, 2015), six critical HR risk factors have been identified in Overberg District Municipalities (see Figure 1). For the sake of clarity, each of these HR risk factors is elaborated on below (Menze, 2006; Van Vuuren, 2014; Amo, 2018; Randenberg, 2017; Drake International, 2018; Vesterin, 2018): Therefore, using the above as a basis, the average municipality where respondents managed employed between 251 and 400 employees on a full-time basis that was responsible for the delivery of basic services to the local communities. Regardless of the statistics, it should be noted that all four municipalities are actually classified as local municipalities. In order to better understand the demographical profile of respondents, they were asked to indicate their highest qualification.

[6] The Overberg District Municipalities comprise four local municipalities, namely: Theewaterskloof Municipality Over strand Municipality, Cape Agulhas Municipality and Swellendam Municipality (ODM, 2016).

Figure 1: Critical HR Risk Factors in Overberg District Municipalities



(**Adapted from:** Swellendam Municipality, 2015)

- **Integrity and Honesty:** Integrity and honesty are key morals in any organisation as they are imperative to systems, structures and overall leadership. An organisation's approaches and principles on business morals, whistleblowing, and human rights direct its workers and partners with respect on how it completes its business activities and what is anticipated from them.

- **Recruitment and Selection:** Appointing the ideal employees are critical to any organisation's operations. Employees should be efficient, competent and effective with the main intent to perform their job descriptions too, in turn, help achieve their organisations' primary objectives.

- **Skills and Competence:** Skills and competence refer to the extent to which employees can execute their job descriptions with adequate knowledge and training. Through the proper execution of their job descriptions, employees can not only help an organisation achieve its objectives but also allow them to be promoted. Through organisations' continuous professional development of their employees, a return on investment will become more evident.

- **Employee Wellness and Employee Relations:** Employee wellness is a non-negotiable in any organisation as employees should be healthy enough to perform their respective tasks (physical, emotional and/or spiritual). The negligence of employee wellness can result in lower levels of efficiency, extended absence and high staff turnovers. To assist in this regard, sound employee relations are recommended where organisations make an effort to build trustworthy relationships with employees.

- **Occupational Health and Safety:** In many industries, occupational health is heavily legislated and organisations should comply with relevant policies and procedures. All employees should be reasonably safeguarded from related dangers and risks (e.g. fires, blasts, synthetic risks or other such perils that present a quick danger to employees' lives).

Financial Problems Faced by South African Municipalities: As previously mentioned, municipalities achieve their constitutional mandate by using funds as received from three avenues. Unfortunately, research shows that despite increases in funding responsibilities, many South African municipalities are undergoing financial problems (Kitchen, 2002). These high debt figures place the importance of addressing any contributing factors to the possible financial problems experienced by South African municipalities into context. A total of 8.7% had a postgraduate qualification, 30.1% had a bachelor's degree, 34.0% had a diploma, 14.6% had a higher certificate and 12.7% had matric. This view is supported by the 2016/2017 MFMA Consolidated General Report where it was found that the financial health of municipalities shows a continuing decline in finances which, in turn, put these entities under increasing pressure to provide services (Auditor General, 2018).

In the same report, possible contributing factors to the financial problems of South African municipalities include the inability to collect outstanding debt, lack of financial management skills and the inability to pay creditors. According to the National Treasury's Media Statement on local government's revenue and expenditure for the fourth quarter of the 2017/18 financial year: "Aggregate municipal consumer debts amounted to R143.2 billion (compared to R139.2 billion reported in the third quarter) as at 30 June 2018 (2018)" it further states that a total amount of R1.3 billion has been written off as bad debt. The quarterly report also states.

3. Research Design and Methodology

This study was exploratory in nature and fell within the positivistic research paradigm. In quintessence, survey research was conducted with the main intent to obtain primary quantitative data from respondents. It needs to be acknowledged that not all the outstanding debt of R143.2 billion is realistically collectable as these amounts are inclusive of debt older than 90 days (historic debt that has accumulated over an extended period), interest on arrears and other recoveries" (National Treasury: 2018). Previous studies show that risk management systems deployed in South African municipalities might not be effective in their approach. Taking into consideration the foregoing, this study was also quantitative in nature and constituted survey research. Questionnaires were disseminated to respondents with the main intent to obtain their perceptions on relevant phenomena. The questionnaire used consist mostly of multiple choice questions and five-point Likert-scale questions (1 = very important, 2 = fairly important, 3 = important, 4 = slightly important, 5 = not important). The Overberg District Municipalities employ approximately 280 employees at supervisor-, manager- and director levels. The targeted population of this study included these 280 employees (both female staff members and male staff members) in Overberg District Municipalities. All respondents had to:

- Be employed by one of the Overberg district municipalities;
- Be employed at supervisor/senior management level;
- Be exposed to the risk management processes of municipalities;

This study was subject to financial constraints (no formal budget was allocated to conduct this study) and time constraints (data had to be collected in a matter of two months' time). Moreover, the limitation of this study was that it solely focused on Overberg District Municipalities. It should, however, be noted that Overberg District Municipalities provide service delivery to approximately 260 000 South African citizens – representing an estimated 0.47% of the South African population (Indexmundi, 2018).

4. Analysis of Results and Discussion

In order to better understand the individual municipalities where respondents were based (part of Overberg District Municipalities), respondents were asked to describe their respective municipalities. First respondents were asked how many employees their municipalities employ on a full-time basis. A total of 2.9% indicated "101 – 250 employees", 62.7% indicated "251 – 400 employees", 17.5% indicated "401 – 550 employees" and 17.5% indicated "more than 550 employees". Respondents were also asked to describe the type of municipality they managed. A total of 76.7% described their municipalities as a local municipality while 23.3% described their municipalities as district municipalities. In layperson terms, more than three-quarters of Overberg District Municipalities were described by respondents to be local municipalities, responsible for service delivery. Furthermore, when asked how many years respondents have managed, 34.0% indicated "more than 15 years", 21.4% indicated "between 11 and 15 years", 31.1% indicated "between 6 and 10 years" and 13.6% indicated "between 0 and 5 years".

Hence, on average, the average respondent had a tertiary education with at least 6 years' experience as a manager within one of the Overberg District Municipalities in relation to the posed research hypotheses respondents were asked whether their respective municipality experienced financial problems. A total of 54.4% responded "Yes" while 45.6% responded "No". To better understand where these financial problems stemmed from, respondents were asked to provide possible reasons. A total of 45.63% agreed that is was caused to slow paying debtors, 81.55% agreed that it was caused by overspending, 84.47% agreed that it was caused by irregularities, and 59.22% agreed it was caused by the lack of skilled human resources. Thus, using the above as a foundation, it appears that, Overberg District Municipalities experienced financial problems due to an array of probable reasons.

It should, however, be noted that the severity of the financial problems experienced by these municipalities was not asked and hence it may be that the financial problems experienced by Overberg District Municipalities were not necessarily severe. When taking into account that a lack of skilled human resources was identified by respondents as a possible reason for financial problems experienced in Overberg District Municipalities, respondents were asked to indicate the importance of identifying, assessing and treating perceived HR risk factors through mean of a five-point Likert-scale (1 = very important, 2 = fairly important, 3 = important, 4 = slightly important, 5 = not at all important). A summary of the results is shown in Table 1.

Table 1: Importance of Identifying, Assessing and Treating Risks Related to Perceived HR Risk Factors

HR Risk Factor	Very important	Fairly important	Important	Slightly important	Not at all important	Mean
Integrity and honesty	69.9%	18.4%	9.7%	1.9%	-	1.44
Skills and competence	55.3%	30.1%	9.7%	3.9%	1.0%	1.65
Recruitment and selection	49.5%	35.9%	11.7%	1.9%	1.0%	1.69
Occupational health and safety	52.4%	28.2%	14.6%	3.9%	1.0%	1.73
Employee wellness	35.0%	40.8%	18.4%	3.9%	1.9%	1.97
Employee relations	29.1%	43.7%	20.4%	3.9%	2.9%	2.08
Retention	30.1%	37.9%	25.2%	3.9%	2.9%	2.12

From the statistics in Table 1, the inference can be made that respondents regarded the overall importance of identifying, assessing and treating of perceived HR risk factors as between "very important" (lowest mean score of 1.44) and " important" (highest mean score of 1.12). The top five HR risk factors identified were that of "integrity and honesty", "skills and competence", "recruitment and selection", "occupational health and safety" and "employee wellness". Notwithstanding the foregoing, it is interesting to note that although the perceived HR risk factor of "skills and competence" was regarded to be between "very important" and "fairly important, 55.22% of respondents indicated that this risk factor is to blame for financial problems evident in Overberg District Municipalities.

Reverting to the statistics in Table 1, two inferences can be made: 1) perceived HR risk factors may not be properly managed by management, and/or 2) management may not be properly authorised to appoint competent and skilled employees. Stemming from the above, and in order to better understand whether HR risk factors contributed to the financial problems of Overberg District Municipalities, inferential statistics were performed. To measure the independent variable of perceived HR risk factors, seven items were reduced to a single factor called *HRRF* through principal axis factoring was used (see Table 2). This was made possible[7] through a calculated Cronbach Alpha value of 0.932 and a KMO value of 0.855. All individual values for the seven variables were averaged in order to get to average scores for the factor *HRFF* (as supported by Figure 1).

[7] In order for a factor to be recognized as a legitimate factor, items should have a Cronbach Alpha of at least 0.700 and a KMO value of at least 0.600.

Table 2: Summary of Principal Axis Factoring for Factor HRRF

Item	Component matrix	Cronbach Alpha	KMO value
Integrity and honesty	0.871		
Recruitment and selection	0.845		
Skills and competence	0.878		
Employee wellness	0.887	0.932	0.855
Employee relations	0.885		
Retention	0.749		
Occupational health and safety	0.807		

In order to measure whether *HRRF* contributed to financial problems evident in Overberg District Municipalities financial problems, the Lambda Measure of Association test was performed. This test indicates as to whether an independent variable will have a statistically significant influence on a dependent variable, including the strength of such influence (Johnson & Reynolds, 2011). A summary of the results is shown in Table 3.

Table 3: Summary of the Lambda Measure of Association Test Performed

Independent variable	Dependent variable	Lambda value (λ)	Significance
HRRF	Financial problems	0.213	0.127

Stemming from the results in Table 3, it becomes apparent that the factor *HRRF* does not have any statistically significant influence on financial problems experienced in Overberg District Municipalities. Otherwise stated, when Overberg District Municipalities experienced financial problems, it was not caused by *HRRF*.

5. Conclusion

According to academic literature, South African municipalities are responsible for performing service delivery in national-, provincial- and local dispensations. When taking into account that service delivery is generally performed by employees, as well as the fact that South African municipalities are experiencing financial problems, it is disconcerting to note that perceived HR risk factors may adversely affect the financial sustainability of these entities. After testing whether perceived HR risk factors contributed towards the financial problems evident in Overberg District Municipalities the results allowed for the rejection of the formulated hypothesis. It should, however, be noted that though perceived HR risk factors were not found to contribute towards the financial problems experienced by Overberg District Municipalities, these risk factors may contribute to the financial problems experienced by other South African municipalities.

Avenues for Further Research: From the research conducted suggested avenues for further research include, but is not limited to: The contribution of other risk factors to the financial problems faced by Overberg District Municipalities. The contribution of HR risk factors to the financial problems faced by other South African municipalities.

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Towards an Inclusive Model of African Regional Integration: How Effective has the Linear Model been so Far?

Hannah Muzee[1], Andrew Osehi Enaifoghe[2]*
[1]Humanities and Social Sciences, Pan African University, University of Yaoundé II, Soa, Cameroon
[2]Department of Public Administration, University of Zululand KwaDlangezwa, South Africa
Muzhann2002@gmail.com, andyransey@gmail.com

Abstract: The proponents of African regional integration hoped to create large economic spaces that allow economies of scale, increased efficiency, competitiveness and faster growth of Africa states. Whereas the linear model of regional integration seemed to have worked for the European Union, many have questioned its applicability in the African context. The applicability of the Linear model at the stages of Regional Economic Communities (RECs) like the EAC has met with significant stagnation primarily because of some bottlenecks such as poor infrastructure that limits the connectivity with the continent and lack of political will out of fear for the loss of sovereignty. The question thus lies in how the dream for a regionally united Africa will arise when its people cannot move and interact freely within the continent? By utilizing a secondary research design, this paper, therefore, sought to not only examine the effectiveness of the linear model of regional integration for Africa but also explore the possibility of incorporating the functionalist and federalist approach into an inclusive model for African regional integration. In examining the economic dynamics of regional integration, the paper identifies the benefits of economic integration, such as larger markets as a result of free movement of people and goods that could be harnessed by trading communities within Africa. Thus, the central argument in this paper does not discard the benefits and successes of the linear model of regional integration but concludes that its effectiveness can be enhanced by incorporating functionalist and at later stages federalist approaches to regional integration in Africa. The principal argument is that political and elitist integration agreements are futile when the continent is not connected physically and trade wise.

Keywords: *Development, Functionalism, Federalism, Linear-model, Regional-Integration, Economic growth*

1. Introduction

African integration is rooted in the spirit of Pan Africanism and African Renaissance. The OAU and Economic Commission for Africa spearheaded the uniting of Africa into a regional block in the 1960s. They aimed to unite Africa by promoting political and economic progress on the continent and developing a united bargaining force against imbalances in the international system (Qobo, 2007). Besides, the proponents of African regional integration hoped to create large economic spaces that allow for economies of scale, increases efficiency, competitiveness and faster growth of Africa states (Chingono & Nakana, 2009). Tanyanyiwa & Hakuna, (2014) acknowledged that the continental hope for poverty reduction and economic development rests upon Regional integration. This is further emphasized by the African Union (AU) goal of establishing an African Economic Community by 2028. Against this backdrop, Hartzenberg, (2011) observes that African regional integration schemes tend to be generally ambitious with unrealistic timeframes towards deeper integration and in some cases even a political union. In order to achieve its objective, Africa through the AU has adopted the linear model of integration. The model of integration is also followed by the Regional Economic Communities (RECs) which are considered the building blocks of African integration. However, like Hartzenberg, other scholars McCarthy (2010) doubt the applicability of the linear model for the success of African Integration.

It was maintained by Enaifoghe and Adekoye (2018), that "the final product of a system of the political combination is another political group, superimposed over the pre-existing ones. It is no doubt that regional integration has shown itself verifiably in Africa, America, and Europe as a bureaucratic push to encourage political unification and expansion of capitalism". One of the sub-regional integration that was "revitalized in some ways is the South Africa regional collaboration in Southern Africa mainly because of two major developments that happened at the beginning of the 1990s, this included the abolition of the apartheid regime in South Africa and eventual stabilization of political and economic relationships in the Southern

Africa sub-region." Since the end of the Cold War, and with the rise of capable exchange coalitions, there has been a renewed interest in South Africa regarding the need to create robust Real Economic Impact (REI) mechanisms to promote economic growth for the region and by implication foster South Africa's National Development trajectory (Enaifoghe and Adekoye, 2018). Nevertheless, this study, therefore, aims to examine an inclusive model of regional integration for Africa.

It considers the contribution of the functionalism and federalism theories of integration. It also aims to examine the effectiveness of the linear model of regional integration thus far in Africa and give recommendations. This will begin with a review of the two theories of functionalism and federalism showing their relevance to the African context. It will then examine the linear model, explain the inclusive model and give recommendations. The objective of this study sought to not only examine the effectiveness of the linear model of regional integration for Africa but as well explore the possibility of incorporating the functionalist and federalist approach into an inclusive model for African regional integration, in order to reap true benefit from an integration using the linear model.

2. Theoretical Considerations

Functionalism posits that integration is as a result of the focus on "social and economic issues such as trade, communication, health, sanitation, nutrition, scientific and technological spheres" (Ibrahim et al., 2015). The authors add that functionalism is based on the assumptions that: integration derives from the technical, social and economic sphere and not political spheres regarding a supranational entity. It is also based on the assumption that organizations are focused on task requirements that increase the welfare rewards of individuals beyond the level that the states can afford to attain and lastly functionalism is based on the assumption that an individual's loyalty is weaned from the state by experiencing the fruitful, international cooperation in technical and functional areas. Bolanos, (2016) stated that functionalism is based on the view that "society as a complex system with diverse works together to promote solidarity and stability". Hence, Hartzenberg (2015)'s an assertion that integration is a process that requires the combined efforts of traders, workers, and consumers. Therefore, it not being an entirely elitist driven process and African, needs the contributions of every possible individual for integration to be successful. The challenges of Africa such as: peace and security, the rule of law, political instability, economic development, Kühnhardt (2005). The free movement and extension of goods and services beyond borders will deepen integration in the continent.

Remarked are beyond the capacities of individual states and thus necessitate that integration systems emphasize functional deepening insecurity and parliamentary representation, human capacity building so as to enhance the quality of integration in Africa. Kuhnhardt further added that successful regional integration would require a solid preparation of individual member states for regional grouping because weaker states only provided a weaker integration. Whereas the European Union (EU) started from functional cooperation in the area of mining, African integration on the other hand was initially motivated by a political vision of African Unity and later developmental reasons that necessitated rising above the "challenges of small markets, landlockedness and the need to benefit from economies of scale in production and trade" (Tanyanyiwa & Hakuna, 2014). Most importantly, it is difficult for most of these challenges to be alleviated unless the continent is physically interconnected. Physical interconnection or integration requires the construction of communication channels by connecting transport energy and telecommunication networks which will link more than one country (Bolanos, 2016). This Bolanos argued will support economic integration (Africa is concentration right now) which will guarantee long-term sustainability of the integration scheme. Physical integration Bolanos also claims it will increase productivity by lowering production costs and extend the trade of good and service. This will strengthen the essence of integration as the unification of many independent units into a meaningful whole (Chingono & Nakana, 2009).

Thus similarly Haas, (1970) noted that integration was an institutionalized procedure decided by governments for coping with the condition of interdependence. Consequently, Hooghe & Marks (2005) asserted that functionality is the engine for integration and politicization determines whether, when and how functional pressures lead to regional integration. Alexandrescu, (2007), notes that any unification aims to bring about a peaceful international system. Alexandrescu further notes that functionalism involved how states could converge to develop some fields, ignoring the limitations of political geography. According to

Magu (2014), Mitrany's functionalist ideology is bent on regions and institutions doing things together in the marketplace rather than just signing pacts in chancelleries. The functionalist approach advocates for integration starting from technical and non-controversial sectors, positing that gains in one sector will eventually spill over to other functions like economic and political issues. Unlike Africa, this is what the EU focused on (Sore, 2010). Sore recommends that like the EU, the AU should focus on investment in critical sectors like education, health, infrastructure, and agriculture. For functionalism, priority is given to cooperation rather than integration (Kurt, 2009). Kurt further observes that the idea of internal dynamic cooperation on which functionalism is based on is premised on the fact that if states work together in certain areas or sectors by designing new bodies to direct that particular cooperation, then this will eventually lead to cooperation in other sectors by means of an invisible hand of integration. Kurt, (2009) stated that this invisible hand of integration arises out of the creation of international integrationist institutions which are seen as an acceptance of forces that initially drove states into the surrender of sovereignty. Functionalism involves a transfer of a country's economic sovereignty to an international executive agency serving on behalf of the member countries (Alexandrescu, 2007). These transnational bodies Kurt argues are more efficient in providing human welfare than national governments. The Economic Commission for Africa ECA (2006) emphasizes that flexibility is the key to African integration. It argues that Africa needs to experiment with flexible institutional designs that have worked elsewhere for as long as they fit into the socio-political and economic fabric of the continent, hence the proposition of a functionalist approach towards African integration. Since functionalism emphasizes technical experts and technocrats over politicians (Kurt 2009), and as recommended by the ECA, it fills the institutional vacuum in areas of agricultural, industrial and competitive policy and creates a need for regional economic communities to provide institutional support where national governments are weak. Functionalism assumes that states are insufficient in meeting citizen's needs and thus the need for transnational bodies that will facilitate in problem-solving at a global level hence encouraging growing interdependence among states (Kurt, 2009).

Functionalism eliminates the state by seizing its functions through "a welfare-oriented myriad of functional entities" (Chime, 1977). Chime further notes that Functionalists forsake the constitutional approach of federalism and concentrate on the functional approach. They "capitalize on welfare, economic and social organization at the expense of politics. While the constitutional approach emphasizes the individual index of power, the functional approach emphasizes the common index of need" (Mitrany, 1948). Chime adds that for functionalism, the central concern is needs and that the recognition of felt needs creates functional entities and on the downside become defunct once those needs are met or subside. Therefore, as Zormelo (1994), notes functionalism proposes that national and international activities go along the functional lines. That individuals with shared needs come together to perform tasks that mutually satisfy those needs. Hence, Mitrany, (1966) suggests that public action should be taken with democracy in mind, regarding the need for a collective action that is evident and acceptable by all parties for the common good. Mitrany, (1948) further added that since functional arrangements have the virtual of technical self-determination, this makes it readily acceptable. Thus, whereas early proponents of African unification sought a "political kingdom" without building functional areas, this paper proposes that Africa considers building its functional capacity first and then move towards a political union.

However, functionalists tended to look with suspicion at regionalism and viewed it as a hindrance to global development. To functionalists, the end product is a network of functional agencies stretching over the globe, sidetracking politics, eliminating war and rendering the nation-state superfluous (Chime, 1977). However, political leadership at some point is inevitable, and Chime observes that although functionalists do not envisage a federation, they recognize that it might serve their aim hence the relevance of federalism to a functionalist agenda. Federalism is the division of sovereign authority among levels of government (Eskridge et al., 1999). In federalism, each government is sovereign in its sphere (Hazlewood, 1967). Federalism is also a system by which states create an entity to which they relinquish their sovereignty in parts or whole for collective gain (Ibrahim et al., 2015). The authors also note that a federation could constitute an intergovernmental unit in a narrow sense with a combination of self-rule and shared rule through constitutionalized power sharing in a non-centralized basis in the broader sense. The federalism theory assumes that: regional integration derives from the need for a region cohesion anchored in unity in diversity rather than the existence of different competing states; it assumes that states have lost property rights since they cannot guarantee political and economic safety of their citizens and that ideal continental unity is a political goal; it also assumes that states exercise local autonomy in appropriate fields of policy within the territory (Ibrahim et al., 2015; Bergmann & Niemann 2013).

Moreover, Ziblatt (2004) in accord with one of the assumptions of the federalism theory states that federations form through a combination of coercion and compromise. Chime (1977)) states that "a strong federal system requires three important characteristics; a precise allocation of power between the states and the federation and that the state powers" tend to be significant a robust federal system requires a range of supportive institutions like the constitutional court. That there should be a distribution and division of powers within the federal states such that each is within a sphere, co-ordinate and independent. Chime adds that with Federalism allocating demarcated "powers to units in a national system, it seeks to preserve the virtues of local autonomy, diversity, and freedom". Hence for federalism to be successful, it needs to be carried out in a context of pre-existing units of a potential federation that are highly institutionalized and deeply embedded in the society (Ziblatt, 2004).

For the case of Africa, that is multi-ethnic; Federalism is considered an appropriate framework for such societies (Ojo, 2009). Ojo notes that federalism is reputed to be an effective political-constitutional design for managing complex government challenges usually associated with ethnic and cultural diversity. Federalism is also considered to be suitable for enlarging governments. It is a system that can accommodate communities of different political taste and protect political liberties at the same time (Beramendi, 2007). It further added that federalism is presumed preferred because it prevents large-scale governments from imposing the 'tyranny of the majority' upon political liberties. Rothchild, (1968) notes that African politicians are freer to join or not to a federation because interest groups in Africa are neither as powerful nor as transnationally oriented as in Europe. However, Rothchild (1968) remarked that for federalism to be applicable, it requires an adequate, geographical-based diffusion of power, favourable ethos, a climate of political tolerance, and a sense of community, and a myth of potential benefit.

Kühnhardt, (2005) too observes that without trust in the honesty, sincerity, and objectives of one's partners no regional building initiative will be successful. Kuhnhardt further noted that successful regional building requires mutual recognition of the governance regime of all partners in a regional grouping. Consequently, federalism brings together previously separate autonomous territorial units to constitute a new form of union with the central authority in which the units retain some power (Bergmann & Niemann, 2013). The authors further add that federalism involves incorporation of regional units in the decision-making procedures. Hveem, (1974) posits that the federalists emphasize the creation of an international institution through the correct division of power between supranational organizations and the national institutions. Thus, Chime (1977) acknowledges that "federalism upholds the right of securing a political union by a dramatic and immediate subscription to a blueprint for allocating powers to the system and the units". Accordingly, Mitrany, (1948) stated that federalism rested on a rigid division of power and functions between territorial authorities which have equal status.

Mitrany further suggests that federalism also helps to mitigate the problem of equal sovereignty by pooling as much as is needed for the joint performance of a particular task. Therefore, Federations succeed once regional governments do not try to take advantage of one another and the central authority does not try to usurp power from the regions (Eskridge et al., 1999). Inversely, Hamad, (2016) stated that a political federation through inter-governmentalism allows for member states to retain their sovereignty. For the EU surrender of sovereignty was difficult but it was handled through a functional approach that didn't directly compromise on state sovereignty. For Africa, states insist on respect of their sovereignty, and this has impeded the progress of the AU hence the suggestion of a functionalist approach before federalism. Federalism is possible for Africa only if applied from the functional perspective. Bergmann & Niemann, (2013) mention two types of federalism; classical federalism which involves a dramatic act of constitutional revolution initiated by political elites and decided through formal rules, and functional federalism which achieves integration through a gradual process of forging functional links between states in areas with unchallenged national sovereignty. Mitrany, (1948) too adds that federalism brings together countries that are adjacent for a general purpose while retaining their separate identity.

Chime (1977) argued that although federal theorists believe in a federal end, they may be willing to use functional means to get there. Regards to federalism, a supranational body-political community is the end state of integration. Hamad, (2016) on the other hand, recognizes two types of political unification a one-tier system (a supranational organization with a single president and common policies across the region) and two-tier system (an inter-governmental organization with a single president and shared economic and security policies among member states. Hamad remarks that most heads of states would most prefer the latter for sovereignty reasons. This point leads to the culmination of a political integration were many governments begin to create and use shared resources committed in the pursuit of specific common objectives (Lindberg, 1970). Lindberg defines political integration as the evolution over time of a collective decision-making system among nations. Both approaches of the functionalist and federalist "subscribe to a supranational state as the end point" of an integration process (Chime, 1977) and not as a starting point.

3. Method and Materials

Qualitatively this research allowed the researchers to study and make sense of written or documented materials, which may be available in the public or private domain (Mogalakwe, 2006). This recommends that researchers are only able to determine the relevance of the documents consults from their significance to the study. Furthermore, (Dey, 2005, p.105) argues that "in qualitative analysis, a certain criterion is set or determined by the researcher for selecting documents, or for focusing on particular extracts, which should reflect the issues on which the researcher is seeking evidence." This method made it possible for the researchers to explore the factors responsible for the African integration which viewed to be rooted in the spirit of Pan Africanism and African Renaissance. The uniting of Africa into a regional block as the OAU and Economic Commission spearheaded it for Africa in the 1960s.

The primary study objective looks at the linear model with regards to trade, which led to a process of economic integration; it was expected to lead to the complete economic union of Africa. It is comprised of the Free Trade Area (FTA) as the first stage, through to the Customs Union (CU), Common Market (CM) and lastly the Economic and Monetary Union. This study, therefore, looks at the Inclusive Model of African Regional Integration, and to find how effective has the Linear Model been so far in the achievement of African integration. Thus, the central argument in this paper does not entirely discard the benefits and successes of the linear model of regional integration but concludes that its effectiveness can be enhanced by incorporating functionalist and at later stages federalist approaches to regional integration in Africa.

4. The Economic Dynamic Effects of Regional Integration

Generally, it is not all welfare impacts of the regional monetary combination or integrations are static. They are likewise dynamic and powerful impacts which can affect a member nation's long-term development rates. These incorporate as indicated by the hypothesis of optimum or ideal currency, are to be gotten from sharing money over nations' fringes (Carbaugh, 2004). These economic gains incorporate more uniform costs bring down trade and exchange expenses, and conviction for financial "investors, economies of scale, factor efficiency and improved rivalry. The dynamic additions of regional monetary coordination stem or curtail basically from the making of bigger markets by the development to more liberated exchange under custom unions" (Carbaugh, 2004). On a fundamental level, economic and financial combination joins markets, making it conceivable to diminish restraining infrastructure control, as more firms from various nations are carried into more serious rivalry with one another. The advantages related to a customs union's dynamic increases could balance out any negative static impacts. It was argued, "that nations, whose pre-union economies were more specialized are probably going to profit more by integrating" (DeRosa, 1998).

Tovias, (1992) sees it from another viewpoint that few authors' concluded that a nation that trades with its prospective partner before the arrangement of an association was probably going to gain from synchronization. This is genuine except if the last can enhance their positions of exchange with the rest of the world through exchange redirection or diversion. In any case, the enhancement of terms of exchange relies upon the extent of the association in connection to different nations. The bigger the size and more noteworthy the number of nations in the association, the more prominent the additions are probably going to be. Furthermore, market amplification additionally enables firms to abuse economies of scale all the more thoroughly. Tovias, (1992) noted that "there is a trade-off between economies of scale and rivalry, which is if organizations are bigger there are less of them, and the market is less aggressive." Developing the market moves this trade-off, as it ends up conceivable to have both more prominent organizations and more rivalry. If a RIA can build the force of rivalry, at that point, it might instigate organizations to dispense with central wasteful aspects. For this situation, the essential inquiry is regardless of whether Africa will have the capacity to exploit these advantages. Even though the effect of the territorial joining of integration on development has been hard to evaluate, the hypothesis of endogenous development should give Africa trust.

This hypothesis recommends that the development rate of an economy is mainly influenced by the financial and economic approaches, the rate of mechanical advancement and learning aggregation, and also the nature of foundations and administration. In such a manner, the ECA (2004) has bolstered this endogenous development hypothesis by demonstrating that territorial financial incorporation and integration can add to monetary development by amplifying the effect of three variables. Initially, the exchange frequently connects with mechanical overflows, because a nation can import innovation and learning grew abroad. In this manner, by invigorating exchange, territorial financial combination and integration can build the rate of mechanical advancement. Thus, the central arguments in this paper, does not entirely discard the benefits and successes of the linear model of regional integration but concludes that its effectiveness can be enhanced by incorporating functionalist and at later stages federalist approaches to regional integration in Africa. Foreign Direct Investment (FDI) (as one of the dynamic economic gain of coordination animated by a vast market) can likewise channel innovation and information crosswise over fringes or border, and as local combination advances FDI the mechanical.

The second factor is holding fast to particular macroeconomic assembly criteria and compelling nations to make a macroeconomic situation that is steady of worldwide rivalry. Hence encouraging sound monetary results, for example, low swelling and inflation, low shortfalls and predictable trade rates. The third factor is that, as a significant aspect of reconciliation and integration, member nations are regularly required to refresh and enhance regulatory and administrative structures — another issue regarding the effect of the territorial financial combination on development concerns destitution lightening the alleviation of poverty. This connects to the customary view that quicker development may convert into scattered pay conveyance, and have ramifications for the alleviation of poverty. In any case, the ECA (2004) presented some counter-evidence which proposes that the development rate of normal wage is coordinated precisely by the development rate of the pay of poor people. Along these lines, regional monetary integration could advance development and decrease destitution and poverty. Another contention is that regional coordination can have an effect on income convergence across nations.

Schiff and Winters, (2003) have shown that, even though the adjustments in exchange and trade have turned out to be of significant advantage to the economies concerned, not all exchange changes originate from regional coordination. In testing the noteworthiness of changes in impacts, they have searched for three separate impacts as far as the exchange of each RIA: consequences for intra-bloc exchange, extra-bloc imports, and extra-bloc trades. They discovered that in RIAs between developing nations, the advancement of exchange over a specific period seems to have been overwhelmed by outer liberalizations. Nevertheless, contrary to what is argued above by Schiff and Winters that “there appears to be a consensus that regional economic integration offers developing countries substantial benefits.” This consensus based on the evidence provided by the ECA (2004), as a positive, impacts trade liberalization has on efficiency, through economies of scale and expanded rivalry. The ECA group this kind of agreement into two. The first consensus shows that a large number of these advantages can be accomplished through exchange progression or development. Moreover, secondly, the full acknowledgement of these advantages expects firms to take part in a more straightforward and extreme rivalry. This implies that member nations must actualize profound coordination in order to benefit from a linear approach to regional integrate fully.

Examination of the Linear Model of Regional Integration for Africa: The linear model is a trade-led process of economic integration that is expected to lead to the complete economic union. It is comprised of the Free Trade Area (FTA) as the first stage, through to the Customs Union (CU), Common Market (CM) and lastly the Economic and Monetary Union (AEC, 2006). The AEC recognized that the Linear Model an EU blueprint for integration cannot be followed to the latter due to the specific socio-political, economic circumstances. It is also on this basis that this paper proposes an inclusive model with a slight modification incorporating the linear model. It may, however, be entirely unrealistic to disregard the linear model, because it has achieved some gains, but it is because of its downsides that this paper proposes the incorporation of the functionalist and federalism approach. According to McCarthy, (2010) in Jawoodeen, (2010), the linear model is a sequential process that allows for incremental changes and for members discretion to proceed at their own pace. Jawooden noted that many trade agreements do not follow the linear process. This is because particular criteria need to be met before one move to the next stage and this makes it hard to deepen integration while following this process, for instance, the movement to a CU requires countries to give up its revenue from customs, and yet most African countries depend on customs revenue.

McCarthy (2010) observes that it is impossible to achieve deeper integration with poor economies that design and implement poor policies and have a weak institution in place. McCarthy believed it a fallacy that Regional Integration could be implemented and managed by states that are weak in policy, governance institutions and cannot produce tradable products competitively. For instance; SADC as one of the RECs in Africa has got good quality institutions, efficient goods, labor markets, and well developed financial institutions but poor health and education sectors and generally a low level of technological capacity. East African Community (EAC) although with the well-developed market, suffers the lack of proper infrastructure, macroeconomic stability together with poor health and education indicators. The ECOWAS on the other hand although with strong institutions and innovation is also besieged by weak health, education and infrastructural development. McCarthy (2010) recommends a commitment to schemes that will contribute to the development of competitiveness and capacities on the supply side of economies like transport infrastructure and communication services. Sakyi & Opoku (2014) to affirm that especially for Africa, challenges to regionalism and economic integration range from transportation and mobility of factors of production.

Multiple memberships and duplication of programs and procedures, minimal intra-regional trade to macroeconomic divergence and conflict these the Functionalist approach proposes as initial starting points for cooperation and consequent integration among states. Because the linear model is an economic model of integration, for Africa, economic integration tends to be besieged by many problems including; overlapping membership, unfulfilled commitments, unrealistic goals hence requiring a reconsideration of the process (Draper, 2010). Sakyi & Opuku, (2014) assert that transport is imperative to the smooth functioning of regionalism and economic integration; people need to be able to move around quickly without any structural impediment. They too add that multiple memberships make it hard for countries to meet their obligations thus stalling the process of integration especially when it means moving from stage to another. Tsikata & Melo, (2014) inversely, argued that for Africa if economic unification was to work out and contribute to development, it required a political union. Importantly, a pursuit for political union regardless of its downsides has been the goal of African regional integration, right from the 1960s, Hence the need for Africa to prioritize on its functional areas as a foundation for integration, the OAU charter 1963 and the Lagos Plan of Action (LPA) 1980.

Their failure led to the AEC treaty of Abuja in 1994 that planned to achieve African integration through the six stages of economic integration using Regional Economic Communities (RECs) as the building blocks (Hailu, 2014). Hailu however, claims that the AU endeavors to use RECs as building blocks for African integration will be fruitless so long as African states remain fragmented due to the low level of infrastructure development and state-centred nature of integration efforts. Additionally, argued that the lack of political motivation is one of the driving factors behind the slow progress of regional integration in Africa and is responsible for the overlapping memberships. As noted by Geda & Kibret (2002), its time, African countries reconsider integration not as just a lingering pan African ideology but as a means for economic survival and a strategy for combating African marginalization from the global world. Furthermore, Geda and Kibret claim that unwillingness to surrender sovereignty is one of the reasons why African integration is stalling and yet increased cooperation is necessary among African states and one of the major precursors for intra-regional trade and consequently deeper integration (Hazlewood, 1967).

The Inclusive Model of Liner Integration: Regional integration has been seen to be “the way forward in Africa as there are numerous regional externalities that must be tended to through local collaboration”. The proposed Continental FTA (CFTA) and the Tripartite FTA (TFTA) are the most recent African activities towards regional and territorial participation. It is believed that to succeed; these need to go up against an extremely uneven dispersion of assets that have honed the exchange off between the advantages of systematic approaches expected to handle cross-outskirt externalities and their costs which are increased by the sharp contrasts in arrangement inclinations crosswise over individual nations. Relinquishing the direct linear model of joining integration and coordinating in small gatherings should help in many ways. In the light of the execution of the Economic Community of West African States' (ECOWAS) in the West Africa with common external tariff (CET), there witness the dispatch of the Tripartite Free Trade Area among 26 nations, representing over about half of Africa's GDP and, with 632 million individuals, 56 percent of the population of the continent. A Continental FTA which is the Stage I of the TFTA proposes unobtrusive endeavours at incorporation as it is based on the standards of variable geometry shunning a more yearning 'single exertion' and the acquits with the modest levy decreases on the table. A rundown which was as opposed to an all-inclusive basis, for principles of origin, exchange solutions for location dumping, and import floods.

African Regional Integration Effort, Beyond the Linear Integration Model: The establishing of the “Organization of African Unity (OAU) in 1963, which marked the first wave phase of the RIAs occurred along regional economic communities (RECs) behind high exercise duty”. These RECs were meant to be the 'building blocks' of the sought after African association in the post-colonial period. Presently, they play an integral part in the actualization of the New Partnership for Africa's Development (NEPAD). The first wave fizzled for economic and financial reasons, as a result, that the pioneers of the post-independence African states were hesitant to support the development of a supra-national proficient, which was quite imperative to extend the relationship to deal with the African Union plan. Huge diversity in the RIAs converted into various interests that fortified nations' emphasis on the 'regard for the sway and regional uprightness of “each State and the basic appropriation to free manifestation,' as written in the Organization of African Unity agreement of 1963”. Responsibility to skillet “Africanism” was debilitated, prompting dubiousness and a large number of announced destinations in these RIAs that helped states disregard the issues that isolated them (Melo and Laski, (2015).

The plan for stage II was yet to be set. However, it ought to incorporate administrations and harmonization of principles on rivalry arrangement. The TFTA is relied upon to be confirmed by the individual member, so, all things considered, it will come to life (Luke, David, and Zodwa Mabuza, 2015). The Abuja Treaty of 1991 began the second wave of RIAs in Africa. Taking a glance at the ten striking Regional Integration Arrangements (RIAs) according to Melo and Laski, 2015), in the “second wave of RIAs demonstrates that only about three have completed the FTA status, and all others going for more deep integration”. With the coordination of integration moving along the direct linear model after stepwise incorporation of products, work, and capital markets, this will, in turn, end up in the monetary and financial combination of integration. However, the FTA integration would likely begin with an 'imports market,' then proceed onward to a customs union (CU) with a standard common external tariff or duty and to a typical common market. Along with this straight linear grouping except for the Southern African Customs Union (SACU), none have genuinely achieved full Customs Union (CU) status. Furthermore, the ECOWAS for example, CET incorporates a "special cases list" of around 300 items qualified for exclusion from the new duties that incorporates 200 items from the previous Nigerian Import Ban list (Melo and Laski, 2015).

Debatably, the frustrating exchange and trade execution of this linear model of joining integration has been broadly talked about. This among others is the evaluations of the volume of intra-territorial trade and exchange of African RIAs which recommend that exchange and trade are, by and large, 40 percent under the potential exchange. The proportion of genuine exchange to potential exchange among partners has fallen by 10%. This invariably mirrors on the geography of African exchange trade, which also impacts on the low exchange complementarity crosswise over accomplices, poor coordination, and unnecessary delays in the border, and more so the disregard of administrations “in the African linear integration model is attuned to 21st-century exchange and trade”. In the new condition, administrations play an information work through space, that is, transport, broadcast communications, and time-besides, coordinated contributions to a financial movement as they create learning and human capital. It is, therefore, argued that the on-going improvements in the investigation "of global value chains by the OECD prove that administrations may represent more than 50 percent of fares" when estimated in value inclusive.

Since administrations do not meet custom for enrolment, and controls are, incompletely fixed, administrations. Arguably, splitting in the direct linear model of the "Africa regional integration by underlining exchange help measures at the outskirt that have the full support of the business network" is an initial step now underway. Nonetheless, even on account of the East African Community Common Market, there has been little advancement at expelling limitations for expert administrations or services, communications, and transport either singularly or on a local premise. In like manner, advance with the progression of administrations through the harmonization and shared acknowledgment has been moderate where deciding on "common identicalness,' the course that was trailed by the European Union Services Directive may have worked better, as this methodology is less requesting on trust than universal acknowledgement or harmonization" (Melo and Laski, 2015). At this point, the AU will be acting as a facilitator of the integration process, just like the EU in the European Union in Europe today.

What Challenges are ahead in Dealing with Heterogeneity and Small Markets: The potential advantages of economies of scale and weakened imposing business model power present a case for RIAs to have broad participation, as found in the TFTA and the CFTA. Be that as it may, extensive participation likewise infers greater heterogeneity and more noteworthy wellsprings of potential clashes - ethnic gatherings, expansive and smaller nations, and with higher political expenses in the arrangement of open products. Insubstantial acceptance meetings, joining integration organization was regarded as shallow since it is hard to achieve assertion, and it is likely that the interests of an influential member that is usually less open to the outside world will win. Take a look at the ECOWAS, where Liberia and Nigeria belong to the same organization. In this regards for Liberia, according to Melo and Laski, (2015), the idea to "move to the CET, could double the normal duty and raise the current expenses of living for rural and urban family units by 6 percent and 3 percent, separately". With impermanent unique insurance estimates made-up for items presently, over their particular set, yet no thought is given for taxes beneath their band. It is observed that one of the challenges is the experience above epitomizes a trial for the 26 part TFTA because 21st-century regionalism is never about the trade of market access to the detriment of non-individuals. However, it is about actualizing changes that will pull in Foreign Direct Investment (FDI), which conveys to the local supervision exercises essential to partake in the redistributing of the group.

In this new condition, where the exchange is exchanging assignments and progressively includes a trade of middle of the road merchandise, insurance -trade of market get to, sums to denying oneself support in worldwide re-appropriating. Not exclusively is a profound joining of integration, which is essential to pull in FDI, this is prone to be difficult to complete in a substantial enrolment. However, there is additionally the hazard that security towards non-individuals could stay high. Profound combination necessitates some locus of power to a supranational level. This is less demanding to do with little participation. "The five-part EAC, which in 2010 began executing a typical common market in the capital, merchandise, and administrations, utilizes a scorecard approach to measure progress". The last is the current promotion of competition in telecommunication as they are banning roaming charges in the sub-region and issue of single tourist visas to countries of Rwanda, Kenya, and Uganda. Finally, in a nutshell, the argument therefore as proposed in this paper is that if indeed Africa is to reap the full benefits by reaching its full potentials as a regional organization, the African Union should begin by building functional areas within Africa. Such as infrastructural development, agricultural development, ICT, energy and power development, and human capacity building regarding skills and training in higher education. This will facilitate the FTA within African RECs and facilitate weaker states to get on board, thus eliminating the slow effects of variable geometry.

5. Conclusion and Recommendations

It is without a doubt that the linear model has led to some successes towards integration in Africa, but its progress is stifled by many factors like poor infrastructure on the continent. This limits the interconnectedness of the continent and makes the cost of trade and business expenses. This paper, therefore, did not set out to entirely discard the linear model but to look for ways of boosting its process. Hence, the proposition of the Functionalist approach, which like the EU would focus on building functional areas within the continent, these functional areas will help facilitate stages of the linear model, like the FTA and CM. An integration is incomplete unless it leads to total unification of a region, hence the proposition of Federalism. Since the African States are wary of losing their sovereignty, a fully functional Africa would have already prepared African countries for supranational leadership because it is inevitable. Additionally, African states will still get to retain some of their power especially when it comes to decision making. This will further enable movement of most RECS from the trapped position of the customs union, to the common market.

In examining the economic dynamics of regional integration, the paper identifies the benefits of an all-inclusive regional and economic integration, such as larger markets as a result of free movement of people and goods that could be harnessed by trading communities within Africa. At the monetary union, the AU will come in to facilitate the formation and implementation of the Single currency and policy convergence, hence the development of the monetary union and finally towards a political union which is the highest level of integration. It was noted that there are also dynamic economic effects which influence member countries' long-term growth rates-the gains which, according to the theory of optimum currency, arise from sharing a currency across countries' borders. The dynamic effects and the gains of having regional economic integration are to curtail mainly from the creation of superior markets by the movement to freer trade under customs unions. On a fundamental level, the joining of an economic integration consolidates markets, making it conceivable to lessen imposing business model power, as more firms from various nations are carried into increasingly serious rivalry with one another.

The advantages related to the unfavourable to customs union's dynamic additions may more than balance any negative static impacts. This paper employed the exploratory research methods, aimed at stimulating more thinking on the subject. This study recommends that it is necessary that integration in Africa does not become elitist which invariably lead to ignoring the views of the people, because then it may be doomed for failure. It also recommends that it is imperative to carry out an empirical study to get governments, institutions and citizens opinions on how they think African integration can be carried out. It is observed in this study that on a fundamental level, an economic and financial combination of integration can join markets, and make it conceivable to diminish restraining infrastructure control, as more firms from various nations are carried into more serious rivalry with one another. It is recommended that in order to reap the advantages related to a customs union's dynamics of economic integration which increases balance and eliminate the negative static impacts, the inclusive linear model should be considered to guarantee economic development across the region in all member states.

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Risk Tolerance: The Influence of Gender and Life Satisfaction

Zandri Dickason-Koekemoer, Suné Ferreira
North-West University, South Africa
20800274@nwu.ac.za

Abstract: Financial managers base an investor's risk profile on their demographics and level of risk investors are willing to tolerate. Risk tolerance is often influenced by the different levels of life satisfaction that an investor experience and may differ based on the demographic composition of that investor. Demographic variables such as gender can differentiate between investors level of life satisfaction, which can ultimately affect investment decisions. As a result, the degree of life satisfaction can affect investment decisions by manipulating the level of risk that investors are willing to tolerate. Male and female investors can be categorised into different risk tolerance levels based on their satisfaction with life status. The aim of this study is to determine the risk tolerance level of male and female investors considering their level of life satisfaction. The results of this study indicated that the more unsatisfied investors are with their lives the less likely they will be to take on high-risk investments. Therefore, low life satisfaction is accompanied by a low-risk tolerance level. Male investors had higher life satisfaction compared to female investors. Female investors were only willing to tolerate high risk when experiencing extremely low life satisfaction or extremely high life satisfaction stages.

Keywords: *Risk tolerance, satisfaction with life, investors, gender, investment decisions*

1. Introduction

An investment can ultimately be defined as the commitment of funds where consumption of funds can only be enjoyed at a later stage (Marx et al., 2013). Investors invest money to ensure value and wealth creation. Investments can only be rewarding if investors have skills and some financial knowledge, however, it can still be exciting and profitable without financial knowledge. The link between risk and reward is undeniable and should be treated with rational reactions. Risk is known as a theoretical concept; however, the risk-reward trade-off is measured by life experience (Crouhy et al., 2014). The risk-reward trade-off is unknown for the majority of investors which cause them to make investments through an investment brokerage company. These investment companies focus on maximising returns without sacrificing returns by minimising risks (Marx et al., 2013). These companies, usually with the aid of investor risk profiles (Rachev et al., 2011), profile investors before making any investment decisions. Such a risk profile consists typically out of a demographic section that includes factors such as age, gender, education, employment, income and marital status. Moreover, financial objectives divided between long term, medium term and short term goals form an integral part of these risk profiles. The investment goals specified by investors are not only determined by accepted risk levels, rather these goals are formulated by incorporating other factors such as financial security, the desired level of life satisfaction and current lifestyle (Marx et al., 2013). One of the factors that determine investment goals are known as risk levels, more commonly known as financial risk tolerance levels.

Financial risk tolerance is the amount of risk an individual is willing to tolerate when making financial decisions that can ultimately affect financial status (Grable, 2016). Selective and considerate investment decisions should be made regarding investment products and asset allocation. The variables that can possibly influence the level of risk tolerance are important to investigate as it can influence investment choices. One of the variables that can influence the risk tolerance levels is gender. Looking at previous research conducted, it is still not universally agreed upon whether gender differences can have an influence on risk tolerance levels. Grable and Lytton, (1998) concluded in their research that age and gender are regarded as the most important influences on risk tolerance levels. In contradiction to the above, Grable and Joo, (2000) found gender, age and marital status to be insignificant towards risk tolerance. Researchers such as Higbee and Lafferty (1972), Blume (1978), Coet and McDermott (1979), Rubin and Paul, (1979) and Yip, (2000) considered the gender factor to be significant towards contemplating investor risk tolerance. An accord was reached between these researchers that male investors take more risk compared to female investors. Slovic,

(1966) stated that from a cultural perspective, that males take more risk than females, thus males are more risk tolerant compared to females. However, this viewpoint that males are more risk tolerant compared to females are not commonly accepted (Yip, 2000; Marinelli et al., 2017).

Also, researchers such as Hanna et al. (1998) and Grable and Joo, (2004) found in their research no evidence of a relationship between gender and risk tolerance. Despite the fact that international studies such as Grable and Joo (2000), Higbee and Lafferty (1972), Blume (1978), Coet and McDermott (1979), Rubin and Paul, (1979) and Yip, (2000) have investigated the factors that influence investment decisions, research within the South African context is still absent. Research within investment companies is necessary to assist financial planners to accurately identify the factors that may influence their client's financial risk tolerance and ultimately the performance of their portfolios. Therefore, the objective of this paper is to identify whether demographic factors such as gender and life satisfaction influence an investors risk tolerance level.

2. Literature Review

Investors, just like any other individual, strive to understand what is meant by a good life. Diener, (2000) stated that in terms of social sciences, a good life includes factors such as financial stability, pleasure, affection from others and self-insight. Subjective well-being is a specific measurement tool that measures satisfaction with life (SWL) based on the perceptions of personal life experiences of individuals. Diener, (2000) regarded perceptions to be a more accurate measure of actual feelings and thus can be regarded as a direct measure of actual experiences. Investors tend to be more satisfied with their life when experiencing more pleasant than unpleasant emotions in terms of investment activities (Diener, 2000). The quality of life of an investor tends to be increased when positive emotions are experienced regarding good investment choices. As soon as deviations exist between the current level of life satisfaction and the desired level of life satisfaction, potential investment decisions may be influenced. Investment choices of investors are based on the suggestions of an investment company. However, these profiles do not indicate which investment was chosen by the investor (Mayo, 2000).

Thus, individual investors and investment companies should take into account the consequence SWL could potentially have on investment decisions. Diener, (2009) highlighted that if individuals are deemed happy, they are happy in almost all areas of their lives. Moreover, if an individual seeks approval and experience unhappiness most of the time, the individual is deemed to be unsatisfied in most areas of his/her life. Typically, such individuals will take active steps to experience happiness in order to improve their SWL status. If the SWL status is already negative, individuals tend to be more pessimistic and reluctant to put in efforts to improve financial situations (Diener et al., 1991). Confirmed in their research that demographic factors, such as age, health and financial status have an influence on the overall well-being of the individual moreover, any changes in these factors can have an influence on the SWL status of the individual. In terms of gender, it was found by Shirazi and Khan, (2013) that males tend to be more satisfied with life than females. Glenn, (1975) concluded in research conducted that married males presents more happiness and higher life satisfaction status than widowed, divorced, separated or never married males.

Moreover, it was also concluded that married females display only a little more happiness compared to unmarried females. Also, married men tend to have a greater SWL status than married females. Investment goals are formulated by accepted risk levels, financial security, the desired level of life satisfaction and current lifestyle mix (Marx et al., 2013). The linkage between well-being and social capital can be found and those linkages may be direct or indirect (Helliwell, 2003). A better quality of life is offered by present good conditions as well as good financial prospects along with monetary security. People who are more satisfied with their lives are those with job security, higher financial stability, higher monthly income and quality financial management (Diener, 2012). These individuals will be more willing to tolerate risk. In contrast, poor people lack enough resources that can enable them to have an income that could impact their lives in a meaningful way whereby this will result in lower life satisfaction accompanied by lower levels of risk tolerance (Meyer & Dunga, 2014).

3. Methodology

Research Purpose and Design: The overriding objective of this research study was to conclude whether the SWL of investors influences the risk tolerance levels of male and female investors. As a result, a positivistic world view was adopted, typically associated with a quantitative study (Goulding, 2005; Creswell & Plano-Clark, 2011).

Research Instrument: In order to measure, the risk tolerance level of participants, a validated risk tolerance question was used which consists of a single risk tolerance question. Various researchers use the Survey of Consumer Finance (SCF) because this question directly measures the risk attitude of participants (Gilliam et al., 2010). Participants' happiness was evaluated with the aid of a self-reporting measure. The perception of participants is captured by assigning a numeric score to the participants' quality of life. A comment was made by Baird et al. (2010) that if the scoring system is accurate, this scale is regarded feasible in terms of accounting for a large section between participants' variation in self-assessed well-being by using demographic variables. A seven-point Likert scale was used to rate the life satisfactions statements which ranged from (1) strongly disagree to (7) strongly agree. The five-factor SWL scale (derived from 48 items) focus on emotional as well as judgemental aspects.

Research Sample: The research population of this paper consisted of all investors in South Africa, over the nine provinces whereby a financial investment company granted permission to gather online information from their clientele. A purposeful sample was selected as investors were specifically chosen for this study. A sample of 800 participants (n = 800) participated in an online questionnaire out of own free will. The selected sample meets the requirements of the statistical analysis that was applied to achieve the stated objective of this paper.

Hypothesis: The following hypotheses were formulated to research the primary objective of this study:
Null hypothesis (H_{01}): investor gender does not influence investor risk tolerance.
Null hypothesis (H_{01}): investor satisfaction with life does not influence investor risk tolerance.
The null hypotheses state there are no differences between the risk tolerance of investors based on their gender and life satisfaction.

Statistical Analysis: Despite the use of descriptive statistics such as cross-tabulations, logistic binary regression was also used to test how SWL and gender influence the risk tolerance level of investors.

$$SCF_i = \emptyset_0 + \emptyset_1 GEN + \emptyset_2 SWL + \varepsilon_i \quad (1)$$

The dependent variable SCF_i was created using the SCF scale explained in the methodology. SCF_i Represent dichotomous dependant variable that was created using the mean value of the scale - the risk tolerance level of investors (0 for low risk tolerance and 1 for high risk tolerance). The variable $\emptyset_0$ give the constant, $\emptyset_1$ $\emptyset_2$ are the estimated coefficients while ε_i represents the error term. Two independent variables were created $\emptyset_1 GEN$ was given as the gender of investors (1=males, 0=female) and $\emptyset_2 SWL$, shows the life satisfaction of investors; (1=extremely dissatisfied, 2=dissatisfied, 3=below average life satisfaction, 4=average life satisfaction, 5= high life satisfaction, 6= highly satisfied).

4. Empirical Results

Demographical Background of Participants: The descriptive statistics indicate that 56.1 percent of the participants were female investors while 43.9 percent were male investors. The results suggest that 5 percent of the investors were extremely dissatisfied with their lives while 13 percent were dissatisfied. Almost 16 percent of investors were just below the average life satisfaction whereas 23.5 percent had an average SWL. The majority of investors (28.4%) indicated that they have a high SWL and 14.5 percent indicated that they are highly satisfied with their lives. The mean value of 4.01 indicated that the majority of investors within this sample have an average life satisfaction.

Investor Risk Tolerance According to SWL: Table 1 indicates the cross-tabulation of the investors level of risk tolerance based on investors life satisfaction according to males and females.

Table 1: Gender Satisfaction with Life and Risk Tolerance

Variable (SWL)	Category	Risk tolerance level: Low risk tolerant	Risk tolerance level: High risk tolerant	Pearson Chi-square
Extremely dissatisfied	Male	93.3%	6.7%	0.038**
	Female	64.0%	36.0%	(4.302)
Dissatisfied	Male	46.5%	53.5%	0.005***
	Female	73.8%	26.2%	(7.996)
Slightly below average life satisfaction	Male	64.7%	35.3%	0.622
	Female	68.9%	31.1%	(0.243)
Average life satisfaction	Male	57.1%	42.9%	0.004***
	Female	76.9%	23.1%	(8.367)
High life satisfaction	Male	58.7%	41.3%	0.024**
	Female	72.9%	27.1%	(5.073)
Highly satisfied	Male	44.9%	55.1%	0.026**
	Female	65.7%	34.3%	(4.980)

*significant at <0.10; ** significant at < 0.05; ***significant at <0.01

Table 1 categorises investor risk tolerance levels (low risk tolerant or high risk tolerant) in light of their gender and level of SWL. The life satisfaction of investors was divided into six categories, ranging from the lowest SWL to the highest SWL. In view of gender, the Pearson Chi-Square value of 4.302 and the p-value of 0.038 indicate a statistical difference between the risk tolerance levels of male and female investors with an extremely dissatisfied SWL. Results further indicate that male investors who have an extremely dissatisfied SWL (93.3%) are low risk tolerant while 6.7 percent of males are high risk tolerant. This is in comparison with the female investors from whom 64.0 percent were low risk tolerant and 36.0 percent were high risk tolerant. Within the extremely dissatisfied SWL category female investors were slightly more willing to tolerate higher risk than male investors. Considering the dissatisfied SWL category, more female investors were perceived to be low risk tolerant (73.8%) while only a quarter of them were willing to take on higher risk. Within this category more than half of the males (53.5%) were high risk tolerant while the remaining (46.5%) were low risk tolerant. A shift in the risk tolerance between males and females can be seen between the extremely dissatisfied category where females were more willing to take on higher risk (36.0% compared to 6.7% of males) and the dissatisfied SWL category where male (53.5% compared to females 26.2%) are now more willing to take on higher risk.

This proves again that males are more risk tolerant than females and those females will only take on higher risk during extreme cases such as being extremely dissatisfied with life. These results are similar to Slovic, (1966), Sung and Hanna (1996), Sharma (2006) and Rahmawati et al. (2015) who reached a consensus that females take less risks than males, thus males are more risk tolerant than females. No statistical difference exists in gender risk tolerance of investors within the slightly below average SWL. More than 60 percent of male and females within this category were low risk tolerant while the remaining percentage of male and female, investors were high risk tolerant. On the other hand, a statistical difference existed between gender risk tolerance for the average SWL category. The bulk of female investors (76.9%) who have an average SWL were low risk tolerant while more than 40 percent of the male investors who have an average SWL were high risk tolerant. In the high and highly SWL category the positive relationship can be seen between a high SWL and a high-risk tolerance level. The risk tolerance levels for males (41.3%) in the high SWL category and females (24.1%) showed an upward trend in the highly satisfied category for both male investors (44.9%) and female investors (34.3%).

Binary Logistic Regression Results: Table 2 indicates the results found for the logistic regression in terms of the influence of gender SWL on risk tolerance considering South African investors.

Table 2: Binary Logistic Regression of Investor Life Satisfaction and Gender with in Risk Tolerance

Variable	Beta	Std. Error	Wald	DF	Sig.	Exp (B)	Odds ratio
Gender (Male)	0.647	0.151	18.220	1	0.000***	1.909	0.909
Highly satisfied			6.763	5	0.239		
Extremely dissatisfied	-0.808	0.415	3.798	1	0.051*	0.446	0.554
Dissatisfied	-0.233	0.279	0.696	1	0.404	0.792	0.208
Slightly below average life satisfaction	-0.441	0.271	2.655	4	0.103	0.644	0.356
Average life satisfaction	-0.508	0.247	4.218	1	0.040**	0.602	0.398
High life satisfaction	-0.437	0.237	3.388	1	0.066*	0.646	0.354
Constant	-0.557	0.201	7.660	1	0.006***	0.573	
-2 Log likelihood 1007.240			Omnibus Test 24.911				Beta
Hosmer & Lemeshow 5.761 (0.568)			P-value 0.000				-0.636
Nagelkerke R-squared 0.042							

*p<0.10; **p < 0.05; ***p <0.01

The Omnibus test for model coefficients represented in Table 2 indicates that the test was significant at 1 percent with a Chi-square value of 24.911. Consequently, the model is significantly better and passed the goodness fit model concerning the Hosmer & Lemeshow test obtained a p-value of 0.568. The Nagelkerke R-squared test as indicated in Table 2 also recommends that the model coefficients explain 4.2 percent of the variation in investor satisfaction with life. This value is considerably low and can be attributed to the low number of independent variables. The negative beta value (-0.636) for the equation suggests that an inverse relationship exists between the dependant and independent variables the more unsatisfied investors are with their lives the less likely they will be to take on high risk. Hence, the results would suggest that low life satisfaction indicates low levels of risk tolerance. Considering the first independent variable, gender, male investors are more likely to be highly satisfied with their lives compared to female investors since a positive coefficient (0.647) was observed.

The p-value smaller than 0.1 for gender suggests that gender has a significant influence on the risk tolerance level of investors. Therefore, the alternative hypothesis was concluded. The odds ratio (1.909-1) suggests that male investors in South Africa are 90 percent more likely to be risk aggressive compared to female investors in South Africa. Considering investors life satisfaction, those who are extremely dissatisfied with their lives are less likely to be high risk tolerant since a negative coefficient (-0.808) was obtained. As a result, the alternative hypothesis can be concluded. The odds ratio suggests that investors who are extremely dissatisfied with their lives are 55.4 percent less likely to be high risk tolerant with a p-value of 0.051 significant at the 10 percent level. Investors who are dissatisfied with their lives were only 20.8 percent less likely to be high risk tolerant (-0.233) due to the negative coefficient observed. This is similar to Statman, (2015) who found people who are unsatisfied with their lives tend to tolerate more risk (such as gambling) and try new things.

For investors who have a below average SWL where a negative coefficient was also observed (-0.441). Investors who have a below average SWL are 35.6 percent less likely to be high risk tolerant than investors who are highly satisfied with their lives. However, the statistical difference proofed not to be significant (p-value of 0.103). For investors who have an average life, satisfaction was found to be 38.9 percent less likely to be high risk tolerant than those investors that are highly satisfied with their lives. This was proved to be significant at the 5 percent confidence level with a p-value of 0.04. Investors that have a high SWL were found to be only 35.4 percent less likely to be high risk tolerant than those investors who are highly satisfied with their lives. Previous researchers suggest that more satisfied people tend to be less risk averse and are willing to take on higher risk since they have already achieved their desired level of life satisfaction (Weber, 2013).

5. Conclusion

The overriding objective of this research study was to conclude whether the SWL of investors influences the risk tolerance levels of male and female investors. The literature of this study revealed that the risk tolerance of investors is influenced by demographics and behavioural finance decisions. However, the results also indicate that SWL contributes a great deal to the risk tolerance of investors. It is therefore recommended that financial advisers, portfolio managers and investment companies take the investors SWL into account when constructing the risk profile of the investor. The results of this research study proved similar results of previous studies which found that male investors have an overall higher risk tolerance level compared to female investors. The study also revealed that female investors will only be willing to tolerate more risk in extreme situations such as when they are extremely dissatisfied with their life or when highly satisfied with their life. In terms of investment, this indicates that female investors will only take risky financial decisions or invest in risky assets either when they are extremely dissatisfied with their life or extremely satisfied with their life. The study further exemplified the positive relationship between the SWL of investors and the level of risk they are willing to take.

The binary logistic regression indicated that the more dissatisfied investors are with their lives the less willing they will be to take on high-risk investment. As a result, low SWL influences low-risk tolerance levels of investors whereas high SWL influences high-risk tolerance levels of investors. This will significantly contribute towards the risk profiling of investors to accurately invest according to a specific risk tolerance level. Future recommendations are that researchers can make use of a more complex structural equation model (SEM) in order to integrate more variables such as a complete demographic composition of investors and behavioural finance to assist in the creation of a comprehensive structural investor profile. Future studies can also make use of a more condensed sample focusing on one of the nine provinces in South Africa.

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Leadership's Thinking Process with Contextual Intelligence in Executing Diversification Strategy

Caren B. Scheepers, Camrin Roberts Maher
Gordon Institute of Business Science, University of Pretoria, South Africa
scheepersc@gibs.co.za, camrinmaher@gmail.com

Abstract: Diversification is a popular strategy for growth in response to a volatile economy. Current research, however, devotes little attention to the leadership required to ensure successful diversification, except for theoretical contributions on leaders' thinking processes from scholars within the strategy discipline. This study thus conducted fieldwork in South African organisations to explore empirically how senior leaders' thinking processes, demonstrating contextual intelligence, contributing to successful diversification. A qualitative study was conducted by collecting data through semi-structured interviews from 15 executives with an average of 21 years' experience in senior management roles, who had been involved in diversification in South Africa. A critical incident interview technique was used, and interviewees offered examples of how they changed their way of thinking in creating an environment for successful diversification. The analysis revealed that continuous change was required to successfully implement a diversification strategy. Leaders demonstrated specific thinking processes, for example: being intently aware of their context, they filtered and compared this information to their schema or preconceived cognitive representations. In case of a mismatch, they changed their way of thinking; and directed contextual information to challenge others' current way of thinking. Surprising findings included leaders' sensing other's emotions and appealing to these through storytelling to elicit support for their diversification. Diversification requires organisations to invest in developing the agility and global perspective of leadership to increase awareness of trends in their context, their own biases and to shift their mindsets as well as purposefully challenging other's thinking.

Keywords: *Strategy Management**;** Leadership**;** Contextual Intelligence; Complexity Theory; Diversification**;** Dominant logic; Decision-making; Cognitive Psychology*.

1. Introduction

Competitive advantage is no longer sustainable over the long haul but is achieved through continually creating, eroding, destroying and recreating it through strategic manoeuvring (D'Aveni 1994; D'Aveni, Dagnino & Smith 2010). One of the strategic manoeuvres an organisation can employ, suggested by Stern and Henderson (2004), is diversification, to adapt faster to environmental changes. Diversification involves a strategic change in more than merely product ranges or exploring new markets, instead it includes both (Ansoff 1958). While diversification is strategically important, limited research has been conducted on leaders' thinking processes to execute a diversification strategy. The objective of this study is thus to explore, how do leaders in organisations with successful diversification strategies think about their contexts; and how do their thinking processes then influence their organisations' diversification? Scholars in the strategy discipline, namely Bettis, Hall and Prahalad, in their seminal work already in 1978, argued that the quality of leadership thinking was as critical in explaining performance in diversification as any other factor, yet limited empirical studies explored the role of leadership in diversification processes.

Lau, already in 1993 and later Mumford et al. (2000), contend that diversification is different to other strategies since, it requires a fit between strategy and organisational characteristics, which include leaders' characteristics and mindsets. In this regard, Kofman and Senge's, (1993) classic concept of a learning organisation, urge leaders to shift their current ways of thinking, classifying and assimilation of information to fit the organisational context. In his turn, Azmi, (2008) advocates for an intentional, active and planned attempt towards strategic rethinking, with a conscious decision to clear out knowledge that had been producing insufficient outcomes. Weeks, (2007) contends that fundamental transformation of strategic leadership thinking is required. These scholars advocate for research in thinking processes associated with strategy management since there is limited empirical research in this area and the present study adheres to this call. Weeks, (2007) specifically advise that leaders conceptualise the business environment as an ecosystem of various interacting contextual determinants that collectively impact on business. Mayo and

Nohria, (2005) also argued that there is a connection between business performance and the context understood by leadership.

The ability to diagnose context, and identify its variables, is thus an important competency for leaders to operate effectively (Kutz, 2008) within a volatile, uncertain, complex and ambiguous (VUCA) economy, as defined by Bennet and Lemoine (2014). Prahalad (2004), Prahalad and Bettis (1986) Bettis and Hitt, (1995) and Grant, (1988) reason that performance of diversified firms can be improved through leadership's application of their intelligence, which they referred to as dominant logic or the filtering of information that supports the logic or main reasoning about what causes the organisation to be successful. While these scholars offered valuable models that linked constructs like the dominant logic of leadership's thinking processes with successful diversification, the present study set out to examine empirically how these complex conceptual models function in practice.

2. Literature Review

Diversification Strategy: Diversification was introduced in the fifties by Ansoff (1958), in his classic growth strategy matrix, and has since attracted a plethora of strategic management research (Chandler 1990; Ramanujam & Varadarajan 1989; Rumelt 1974). Diversification differs from other strategies in that it requires new skills and techniques. Lau, (1993) furthers Ansoff's (1958) argument that the implementation of a diversification strategy requires a fit between strategy and leaders' mindsets. Hutzschenreuter and Horstkotte, (2013) admit that even though diversification itself is complex, the amount of complexity that it brings is likely to differ, depending on the changing context. Penrose and Pitelis (2002), reason that firms that diversify require leaders with experience-based knowledge, akin to tacit knowledge, and firm-specific capabilities. Amongst the four types of product market strategies, illustrated in the table below, Ansoff (1958) found that diversification stands apart, as it invariably leads to physical and organisational changes in the structure and functioning of the business, which represents a break with past business experiences.

Table 1: Ansoff Growth Matrix

Business Growth Alternatives	Description
Market penetration	Increase market share for a firm's products in the existing market, whilst remaining with the original product-market strategy. Increasing volume to new or existing customers can increase sales.
Market development	Finding and developing new markets for current product lines. This entails adapting the business strategy of the current product lines to these markets.
Product development	Enhancing the current products to the current market, through improved changes to the existing offering.
Diversification	Develop new product markets in addition to the existing business. * Due to expansion into new markets/ customers as well as developing new products; this business growth strategy is the most disruptive to the current organisational structures and resources.

Source: Adapted from Ansoff (1958)

Ansoff, (1988) emphasised, though, that in most situations, a well-run organisation would follow several of these paths simultaneously, like market penetration, market development and product development. He advised that this approach predicts the survival of the firm in the face of economic competition. Prahalad and Bettis (1986) and in subsequent works (Bettis & Prahalad 1995; Prahalad & Bettis 2000; Prahalad 2004;), advocate that the insight and vision of top leadership is the key to successful diversification. It is thus not necessarily the product-market diversity, but rather the strategic logic of leadership that influences firm performance. This implies that diversified firms without this capability may not perform well. Prahalad and Bettis, (1986) presented a framework in which dominant logic is a primary characteristic of leadership in a diversified firm, defining it as a "mindset or a worldview and conceptualisation of the business and administrative tools to accomplish goals and make decisions in that business" (Prahalad & Bettis 1986, p. 41). In later publications, Bettis and Prahalad (1995) reason that dominant logic is thus an antecedent for strategic change, for it allows the organisation to strike a balance between the need for direction and control, and adherence to the strategy. Lampel and Shamsie, (2000) note that as corporations expand in size and complexity, dominant logic indeed offers leadership a framework that assists them in providing direction and support to their followers. The impact of diversification on a firm and its performance is varied and complex. It is affected by variables such as related versus unrelated diversification, capability of top managers, industry structure and the mode of diversification (Pandya & Rao, 1998).

Jarzabkwoski, (2001) posits that diversification also enables the flexibility and speed needed to adjust to contexts changes. However the trick to strategy, according to Levy, (2007) is to know when to make a move; a balance needs to be struck between moving too quickly and too late. Understanding this is key when diagnosing the context of a situation and adapting by diversifying. As the knowledge-based economy grows, environmental instability increases and unanticipated events occur, which fundamentally change the context in which institutions function. New ways of dealing with this complexity and chaotic contexts are needed (Drejer 2004). Consequently, the ability to change rapidly and continuously, especially by developing new products, is not only required as a core competence, it is also essential at the heart of company cultures, enabling them to compete and transform (Brown & Eisenhardt 1997; Chakravarthy 1997). Prahalad (2004), in contrast to his earlier scholarly work, considered the velocity of environmental change as decisive in whether dominant logic is ultimately beneficial or negative for a firm, arguing that should the environment be subject to rapid changes, *"the blinders of dominant logic may make it hard to recognise new threats and opportunities"* (Prahalad 2004, p. 172). He further reasoned that for organisations to succeed with strategic change such as diversification, leaders need to have peripheral vision and flexibility that can keep up with the dynamic changes of the environment and ideally anticipate them.

It requires leaders to discard their current dominant logic and develop a new, more relevant one, in obtaining a distinct competitive advantage. His reasoning was that best practices only show what had been done, and likened it to a current dominant logic, whereas a new dominant logic may be required. Grant (1988), Jarzabkowski (2001) as well as Von Krogh and Roos (1996) supported this, arguing that leaders need to have self-reference, built upon existing knowledge banks, which they apply within a context. Should these self-reference concepts or schemas not be relevant, they need to utilise their intelligence to adapt and form new ones. Schemas represent a repertoire of tools, beliefs, theories, values and propositions that have developed over time through leaders' personal experiences and exposure (Prahalad & Bettis, 1986; 2000), enabling them to categorise an event, assess its consequences and consider appropriate actions relatively quickly. Nonetheless, it is hard for an individual to let go of attachments, with human error and biases likely to occur (Tsang & Zahra 2008). Bettis, Wong and Blettner, (2003) as well as Prahalad, (2004) reasoned though that dominant logic can and does breed success, as long as the environment stays stable; but when faced with radical changes, the path dependencies that the individual has may lead to fatal cognitive entrapment, rendering the ability to adapt virtually impossible. Since this contingency seems important and current literature depicts organisational context as being highly volatile, the present study undertakes to gain an understanding of how senior leaders perceive their contexts.

Leadership Enabling Diversification: Vermeulen and Barkema, (2002) argue that rapid diversification does not enable learning due to the rapid speed of change, and as Kor and Leblecici, (2005) found, eventually overextends leaders, creating bottlenecks and ultimately leading to poorly adapted structures. Frisina and Frisina, (2011) also maintain that leadership behaviour is a central predictor to individual employees and organisational performance. Marx, (2013) advocates for an integrated view of leadership and strategy, where the analytical, interpersonal, and decision-making skills of leaders are acknowledged as core functions. The present study thus reviewed leadership literature to gain an understanding of how leadership might enable successful diversification, as an important context. Leadership scholars identified a lack of contextual diagnosis, especially within the volatile dynamics of the global economy, and therefore introduced leadership concepts based on non-Newtonian frameworks, such as chaos theory (Burns 2002; Tetenbaum & Laurence 2011), adaptive capacity (Heifetz, 1998) and complexity theory (Uhl-Bien et al., 2006).

The overarching criticism of traditional and charismatic leadership theories is that they lack contextual consideration, which limits their application, hence Osborn et al. (2002), and Uhl-Bien and Marion (2009), argue that leadership is embedded in the context within which it operates, which acts as a trigger for specific leadership facets. Kutz and Bamford-Wade (2013, p.8) describe context as, *"the interwoven and tied together the fabric of a situation, which creates an intricate and unique appearance"* Kellerman (2013) declares that contextual intelligence is of paramount importance to leadership, even more than emotional intelligence. To diagnose context, leaders must be cognitively aware of the interactions and interdependencies of the situation, with a global perspective, while they consider and operate within local circumstances (Kutz 2008). Ireland and Hitt (2005) agree that globalised thinking is essential. To diagnose context accurately an individual's current thinking may have to shift (Kofman & Senge 1993).

Mayo and Nohria (2005), also emphasise contextual sensitivity of leaders to understand an evolving environment, capitalise on trends, align resources with objectives and move with the flow of events to implement the strategy. Blass and Ferris, (2007) call this skill contextual learning. Kutz, (2008) contributes that contextual leadership intelligence is an ability to grasp relevant elements from the past, being aware of the present contextual variables and knowing what the future should be like. This orientation to time had not received adequate attention in leadership literature (Thomas & Greenberger 1995). In turn, Osborn et al. (2002) seminal study towards a contextual theory of leadership, explains that leaders attempt to influence others within their environment by directing what is seen and analysed. They called this emergent dimension, patterning of attention since it includes discussing what is important, not dictating what to do or how to do it. Osborn's later research indicates that leaders' facilitation of dialogue transforms tacit knowledge into collective understanding (Osborn & Marion 2009). Lord and Maher, (2002) emphasise that leaders connect others to a broad variety of potential information sources. Knowing how is the scholastic measure of intelligence, applicable in situations that are predictable or repeatable, whereas the knowing what is context-based intelligence needed in unpredictable, novel or unexpected situations (Kutz & Bamford-Wade 2013).

3. Methodology

Given the literature review on diversification and leadership, the research questions in this study are summarized as follows:
Research Question 1: How are leaders in diversifying organisations describing their contexts?
Research Question 2: How are leaders' thinking processes enabling diversification?

Research Approach: The nature of the research questions required a deeper understanding of phenomena. This study thus utilised what Saunders and Lewis, (2012) and Creswell, (2014) refer to as an exploratory approach, focusing on conducting a detailed analysis of the existing literature and conducting interviews. This research was unfolding in nature, making it more suited to a qualitative study (Punch, 2002). The researchers used semi-structured interviews, which offered the opportunity to inquire about themes, to probe and ask additional questions to garner a more profound understanding of the answers of the participant (Saunders & Lewis 2012). Since the leadership literature above emphasised thinking processes, while contextualizing leadership in a dynamic environment, the present study explored how these thinking processes of leaders might enable successful diversification. The researchers applied the critical incident technique, a flexible set of procedures used for obtaining facts concerning behaviour in defined situations (Flanagan, 1954). For example, the typical question was, "Tell me about an incident where you had to take a decision on diversification: what led to the incident what did you take into account and what was the outcome?" The technique that was applied during the data collection was scheduled and unscheduled probes, enabling the researcher to draw out more complete narratives specific to particular topics (Qu & Dumay, 2011).

Research Sample: Since the purpose of this study was to explore the thinking processes of leadership, involved in diversification, the targeted population had to be senior managers in corporate organisations, which were executing a diversification strategy. The business environment had to be complex and volatile. Because an emerging economy such as South Africa can be described as particularly ambiguous, and complex with high uncertainty (HSBC, 2016), the South African business environment formed the context of the study. In order to achieve data saturation and representative sample size, Guest, Bunce and Johnson (2006) recommend that for semi-structured interviews a minimum sample size of 12 is required. There were thus 15 interviews conducted in the current study. This enabled the researchers to explore significant occurrences, as identified by the theory and participant, in terms of the management of such incidents and the outcomes or perceived effects.

The information provided enabled the researchers to understand the incident, taking into account cognitive, affective and behavioural elements. The population for this study thus had the following inclusion criteria as boundary (Robinson, 2014): Individuals within a leadership role; between the ages of 30 – 60; employed by an organisation following, or have followed a diversification strategy within the last five years; senior management role; minimum of three years' experience within the current role / similar role. The sample consisted of 14 males and one female, reflecting the current demographics of senior managers in the South African workplace, ranging in age from 31 to 53, with an average of 21 years' experience. Seven of the interviewees were CEOs; six were directors or executives of either new business or strategy; one senior consultant and one head of the business. Judgement sampling was adopted as a screening measure, to ensure that the leaders had been through a diversification strategy at a senior level. It was thus a non-probability and purposive sample. The interviewees were from 15 different organisations across nine different sectors, for example, pharmaceutical, banking, insurance, finance, manufacturing, FCMG, ITC, consulting, logistics and advertising. While the researchers did not use objective performance measures to establish whether the organisations were successful in their diversification strategy, the participants' perception was that they were successful.

Data Analysis: Guest, Bruce and Johnson, (2006) found that for this type of population selection, the first 12 interviews are sufficient to achieve saturation of codes and themes; therefore, the variety and expanse of the proposed sample pool should provide for adequate data analysis to be done. The researchers used a qualitative data analysis programme, Atlas ti to assist in the coding, categorising and discovery of relationships to shape the data analysis process. The initial 81 codes were refined to 63, by creating concept families to categorise the data (Spiggle, 1994). Data saturation was reached at 13 interviews when limited new information could be generated. Since the interviews had already been scheduled, they were still conducted.

4. Findings

Research Question 1: How Are Leaders in Diversifying Organisations Describing their Contexts: Ansoff, (1988) identified specific vectors to enable diversification, namely vertical integration, horizontal integration, concentric integration and conglomerate diversification, as described in table 2 below. From the interview transcripts the researchers established that the interviewees' descriptions of their organisation's diversification strategies represented Ansoff's (1988) vectors and mostly used more than one vector in their diversification strategy, for example, six organisations used three of the four strategies, as table 2 illustrates.

Table 2: Vectors of Diversification

Diversification Growth Vector	Description	Vectors used by Companies in Sample
Vertical integration	The organisation moves into or acquires suppliers / customer's areas of expertise to ensure the supply or use of its own products and services	
Horizontal integration / related diversification	New products (technology unrelated) are introduced to current markets with the realisation of economies of scope and integration.	2
Concentric integration	Products that are closely related to current products are introduced into the current and / or new markets, leveraging off the companies' technical know-how to gain an advantage.	6 5
Conglomerate diversification	Completely new products are introduced into new markets (technologically unrelated)	6

Source: Adapted from (Ansoff, 1988)

The interviewees indicated that when there was a higher degree of diversification, the complexity in their context increased. Complexity referred to the number of variables or aspects to consider and the interrelationships between these variables or aspects that increased. In these instances, even more, attention was required from the leaders in the organisation to offer direction and clarify 'why' they were diversifying. For example, an interviewee emphasised, "getting the 'why' right". In describing their contexts, the interviewees mentioned the external market conditions that created the need for change, as well as internal organisational contexts like the employees that were required to adapt, for example, an interviewee observed, "it is a continuous process". The requirement of continuous change was thus identified as a theme in enabling a diversification strategy. Interviewees were acutely aware of the challenges in the South African context, such as the low Gross Domestic Product (GDP) and rating agencies' negative perception. Several reported on their difficulties in expanding their businesses into the rest of Africa; prompting them to divest from non-profitable markets.

Question 2: How Are Leaders' Thinking Processes Enabling a Diversification Strategy: From the rich dataset, the researchers derived several themes that described the capacity that enabled diversification? The researchers identified broad categories of codes that linked to enabling diversification. Five of these high-level themes are listed in the section below and in the summary table (table 3), more quotes are offered per theme.

Theme 1: Obtaining Cognitive Awareness of Context: Interviewees had an acute awareness of the context of operation and their diagnosis of it, and it had a direct impact on their decisions. For example, an interviewee advised that one needs to keep "evolving due to the nature of the business environment". In this regard, the interviewees perceived opportunities in the context as one of the codes that were most frequently reported. These opportunities enhanced the competitive advantage which the diversification strategy ultimately sought. Diagnosing context was thus awareness of the current opportunities, but also looking to the future, enabling agility and speed to be first to market, which positively influenced diversification. The researchers thus identified the focus on time in terms of past, present and future, with a greater emphasis on the future. Another code that frequently came up was purposefully diagnosing context.

The interviewees referred to "the right vantage point" in the interviews, as well as having an "intimate knowledge" of South Africa. The interviewees were also highly aware of the fact that context influenced their decision making. The code for external context (outside of the organisation) was more frequently mentioned than the code for internal context. For example, an interviewee reported that "one needs to keep evolving due to the nature of the business environment." In the diagnosis of context, aspects such as, "knowing when and knowing what", enabled interviewees to select products or refine products for diversification. An interviewee reported ability of "absorbing information at a much faster pace, and knowing what is relevant and what is not". The ability to diagnose context and its impact played a key role in driving the success of a diversification strategy.

Theme 2: Translating Awareness into Context Knowledge: The researchers identified that interviewees went further than awareness they actually gained knowledge from being in tune with context. Interviewees reported that they remained open-minded to the changes in context and were willing to gain knowledge from the dynamics. The interviewees furthermore reported a need to be open to "different perspectives", striking a balance between their own views and those of others. The researchers observed that the willingness to learn was mentioned most frequently by interviewees. These types of quotes in the transcripts were categorised under the theme of learning. For example, interviewees indicated that they were "learning from exposure to other leaders". They extracted best practices or behaviours and applied them to their own context. Through this exposure, a process of reinvention or re-imagination occurred that allowed them to adapt to the dynamics of the context and required diversification. Several interviewees observed evolution in their own awareness, through reflection on their past experiences, which shaped their mindsets. Learning from mistakes formed a tacit knowledge or, according to an interviewee, "a kind of muscle memory". The researchers observed surprisingly that the interviewees had an acute awareness of other people's emotions and their needs; for example, interviewees were focused on whether employees had "an appetite for being stretched".

Theme 3: Influencing Others' Focus on Context: An interviewee observed, "It's more about the contextual issues of the current situation, which will make data or information important". Another called the focus on certain information an "influence technique", to obtain buy-in of individuals towards the strategic goal of diversification. It was noteworthy that asking the right questions were not limited to the situation between leader and subordinate, but also applied by leaders to those outside of this immediate relationship, to enable them to better understand the context and get perspective on the diversification. Asking the right questions and "zoning in on certain things" provided a clearer platform on which subordinates could move forward, without "leaving them with too many questions." Through reflection, respondents were able to learn from 'mistakes' or experiences. Leaders enabled individuals to seek out answers themselves. Adjusting behaviours were illustrated by an interviewee who emphasised the importance of "resetting…hitting the hard, reset button in certain areas".

Theme 4: Influencing Through Networks and Appealing to Emotions: Interviewees reported that developing networks enabled them to gain knowledge, affording the opportunity to "learn from mistakes so as not to repeat them". The majority of respondents viewed networking as both an internal and external leadership function. By focusing on both internal and external networks, it increased the network's diversity. Interviewees established direct and indirect interpersonal communication to exert influence into the context. Awareness of context also played a role in this theme, for example, an interviewee explained the importance of, "staying abreast of where your environment is…create where you want to be going and what you want to be doing." Building relationships contributed to leaders being able to exercise wider social influence. A key aspect identified by the interviewees was that these relationships were primarily dependant on them having the "right people surrounding them, partnering with the right people". Another important aspect was connecting individuals to information in engendering empowerment and inspiration, for example, an interviewee observed "It's how you deal with what…so connecting information, employees with information…to wow them to inspiration." The empowerment of individuals fostered conditions for the development of organisational capacity for diversification.

Theme 5: Creating Feedback Loops and Initiating More Change: In terms of the capability for continuous change, interviewees reported that they initiated measurement or a feedback loop of how successful the diversification strategy had been and then initiated more change if required. One of the deciding factors to diversify even further was the driving force for competitive advantage. Interviews regarded sensitivity to context, as enabling them in decision-making on further diversification, for example on new products and expanding into yet another market. Interestingly, the interviewees were able to inspire others, by appealing to their emotions. They used storytelling to relate their own experiences in inspiring others. An interviewee warned for example, "…make decisions in that context, otherwise diversifying could be suicidal". A new level of functioning then requires another wave of change, through the creation of a "compelling vision" or "future state" to drive an organisation forward.

5. Discussion

Describing and Diagnosing Diversification Context: As mentioned under findings of research question one, interviewees in this sample, regarded their contexts as being highly complex and requiring continuous change. Pandya and Rao, (1998) suggest that for organisations to remain competitive, diversification was popular, especially in response to environmental changes. However, to diversify, organisations need to be able to rapidly and continuously change their offering into vectors, such as those outlined by Ansoff (1958), which invariably required new skills and techniques to enable them to change their structure and functioning. Scholars like Uhl-Bien, Marion and McKelvey (2007) also emphasised the complexity of context in the knowledge-era, requiring new approaches and continuous adaptation. In this regard, D' Aveni et al. (2010), concur that contemporary competitive advantage requires a cycle of creating, destroying and recreating, through strategic manoeuvring. The current study supports these previous research findings. The interviewees description of their dynamic context relates to the construct of a volatile, uncertain, complex and ambiguous (VUCA) environment (Bennet & Lemoine, 2014).

Kutz (2008) also emphasises a conceptual understanding of multiple contextual variables, representing internal and external dimensions. The self-reflection or intrapersonal aspect was also mentioned by the interviews, as well as their awareness of others' emotions, that Kutz (2008) initial theory had not referred to.

The current study likewise emphasised continuous change and adaption relating to diversification. Thomas and Greenberger, (1995) assert that having an orientation to time is a critical success factor in leadership and a driving force behind the firm performance. The interviewees in the current study also reported on their orientation to time. Zimbardo and Boyd (1999) explain the evolution of the notion of time, from Einstein's relativity theory to Heidegger's existential philosophy and Kurt Lewin's explanations on the influence of both the past and the future on current behaviour. Similarly, the contemporary social-cognitive thinking of Albert Bandura's (1997) classic self-efficacy theory, states that self-regulation is generated by efficacy beliefs grounded in past-experiences, as well as current appraisals and reflections on future options.

Cognitive psychologists like Carstensen, Isaacowitz and Charles (1999) emphasise that the perception of time plays a fundamental role in the selection of social goals. For example, when the time is perceived as open-ended, meaning future orientated, then people are more focused on gaining knowledge, but when the time is perceived as limited, emotional goals like focus on the family, are more important. The interviewees reported on their investment in the present to have an outcome in the future. These findings relate to another study that showed that when individuals assign more importance to the delayed future consequences of their behaviour than the immediate consequences, they are more responsible in taking financial decisions (Joireman, Sprott & Spangenberg 2005). Moat, Olivola, Chater and Preis, (2014) report that there is a greater focus on the future in countries with a higher per capita GDP. While the sample was from South African organisations, where the country has a low GDP, the senior managers in this sample had a distinctive future orientation.

Translating Awareness into Context Knowledge: The concept of translating awareness into context knowledge was supported by Kutz and Bamford-Wade (2013), who described the idiom of transforming data into useful information, information into knowledge and knowledge into practice. Interviewees referred to the process of screening the information present within the environment, interpreting and cataloguing it for its relevance to the desired outcome of diversification. Prahalad and Bettis (1995) describe this cognitive process of interpreting the filtered information to ascertain if it applied to any relevant schema categories and Osborn et al. (2002) called this process the patterning of attention. Ericsson, Prietula and Cokely (2007), note that the ability to analyse actions and decisions in light of real outcomes requires a far-reaching interpretative system. Hastsopoulos and Hastsopoulos (1999) found that tacit understanding comes from two sources: experience and analogical reasoning. This sense-making process included self-reflection. Harrington and Loffredo, (2011) emphasise the importance of internal self-awareness or self-focused attention to one's feelings and mental processes for a greater sense of well-being that is generally used in mindfulness practices. Kutz and Bamford-Wade (2013) contend that the best source of tacit knowledge comes from experience, which enhances performance through tactile experience. Interviewees in this study also mentioned their immersion into context to gain exposure.

Influencing Others' Focus on Context: The thinking process above on deriving knowledge, went further than the individual leader. Interviewees described how they elicited involvement by defining boundaries and allowing employees to experiment. They injected ideas, which related to Uhl-Bien and Marion (2001) notion of leadership being able to foster conditions that develop organisational capacity, which instead of being control-driven, generated positive emergence and enabled bottom-up dynamics. The researchers observed that the knowledge that interviewees gained prompted them to act differently. Brown et al. (2005) emphasise in this regard that through contextual awareness leaders are able to adjust their style to the situation and their followers' needs. In the current study, interviewees also reported on the adjustment of their leadership styles. Interviewees observed a process of unlearning, likened to Rautenbach, Sutherland and Scheepers' (2015) notion of environmental triggers for the process of unlearning and relearning. It relates to the contextual variables highlighted in the current study.

Influencing through Networks and Appealing to Emotions: Interviewees appreciated that they did not know everything, enabling them to consciously go out and seek new information from people, to better understand their position within the operating context. Through this exposure, a process of reinvention or re-imagination occurred that allowed them to adapt to the dynamics of the context and required diversification. This process spoke to the dimensions of the network development of Osborn et al. (2002). Lichtenstein et al. (2006) reason that to solve complex situations, a leader needs to bring individuals and groups around a problem, facilitating the flow and interaction to bring about the change, rather than self-imposing the answers. The majority of interviewees described networking as both an internal and external leadership function, providing for network diversity. This was in line with the original multiple influence models developed by Hunt et al. (1983) and expanded by Brass and Krackhardt (1999). It links closely to the relational perspective on the leadership of Uhl-Bien (2006), in which the focus is on relationships and not individuals; the combination of interacting relations and contexts are important. Day, (2001) contends that leadership is a social process. Leaders' story telling also linked to this relational aspect, since the emotional connection with employees enabled leaders to share those stories that inspired others.

Creating Feedback Loops and Initiating More Change: The interviewees reported that they had to investigate the real truth on the level of performance of their diversification strategy. They realised that diversification requires continuous change and as a result had to question the fundamentals on which their current strategies were based to ascertain where new mental models would be required. Prahalad and Bettis' (1986) views are relevant to this process since they emphasised that when leaders were asking relevant questions, it enabled individuals to scan environments selectively. The current study adds to current scholars' contributions, by pointing to interviewees' reports on using their judgment, in balancing the extension of the diversification strategy; and at other times reducing diversification, by maintaining the status quo. This careful consideration of the pace of diversification, was, however, not represented in the whole sample. A couple of the leaders appeared oblivious to the dangers of continuous change; for example they had not recognised change fatigue as a possible consequence of their diversification strategies. These characteristics of the sample assisted the researchers' understanding of the findings, since these types of diversification strategies would require continuous change. The need for consolidation and regrouping before more diversification is initiated, was unfortunately not recognised.

Managerial Implications: The study's findings suggest that leadership development must include examining organisations' external environment or environment of business' courses. Lectures should focus on the development of leaders' contextual intelligence, by analysing contextual variables. Organisations' investment in leadership development must thus include wider exposure to global trends in the market and opportunities that could be capitalised on. Selection processes of leadership must include the assessment of future orientation, as the interviewees' pointed to the importance of this attribute in leadership within diversifying organisations. Leadership will benefit from creating space in their busy schedules to reflect on influences from their business environment to inform their decision making around diversification. The findings of the current study show that an increase in the degree of diversification requires more change and the more complex the environment becomes. Since the organisations in the sample had various types of diversification strategies simultaneously, the complexity would have been high and thus required a higher degree of leadership attention as illustrated in the figure below.

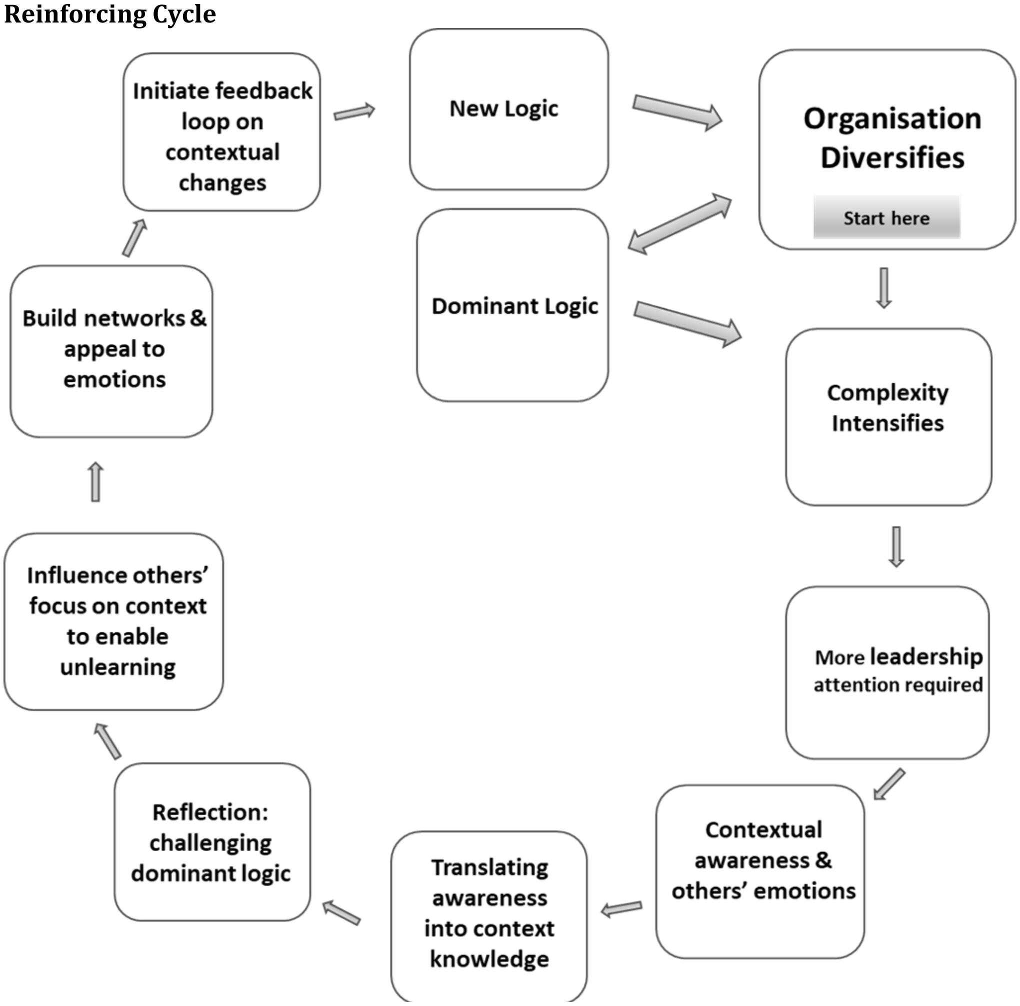
Figure 1: Illustration of Increase in Complexity through Diversification Requires Leadership Attention

Source: Authors' own summary, based on Ansoff's (1988) framework

The figure above illustrates the increase in complexity with the relating requirement of leaders paying attention to continuous change, especially in cases where the diversification strategy includes new products as well as new markets for these products. Failure in diversification might relate to leadership's lack of insight into these implications. The leaders who were interviewed in the present study played an important role in staying in touch with the external environment to seize opportunities. Leaders must stay in touch with their organisations and ensure that they include employees in diagnosis of context. The study revealed that luckily, leaders were sensing others' emotions and could ascertain when there is change fatigue present. In these cases, leadership must align the roll out plan of new diversification strategies, to the organisation's capacity to deal with more change. Leaders must thus ascertain the optimal pace of diversification.

The findings of this study provide leaders with a framework of thinking processes to enable successful diversification. For example, the findings encourage leaders to reach out to other leaders external to their organisation for exposure. An important finding was that leadership was required to regularly adjust their mindsets and own styles. Critical reflection played a crucial role here. A business coach offers mind space and facilitates leaders' discovering their own biases. It is in these moments of reflection and awareness that leaders see ways of challenging the status quo. For example, leaders must use information from their context to enable: either more diversification or time for consolidation prior to the next wave of diversification. The figure below illustrates the findings in the present study on the thinking processes of leaders' that enable diversification:

Figure 2: Illustration of Leaders' Cognitive Processes Enabling Diversification as a Continuous Reinforcing Cycle



Source: Authors' own synthesis based on the interviews

The figure above illustrates the concrete findings of this study: When an organisation diversifies, the first thinking process that is activated is dominant logic (as described by Prahalad and Bettis (2000)). This is the existing belief or schema of what makes an organisation successful. However, dominant logic was later on pronounced by Prahalad (2004) as not static, but dynamic. It is influenced by the diversification strategy, which in turn intensifies complexity in the environment. The increased complexity then requires more leadership attention. As the themes in the present study indicated, leaders had contextual awareness of the internal organisational and external market environment. In addition to Kutz (2008) perspective, the interviewees also reported on awareness of others' emotional needs. Another theme that was discussed above was the translation of awareness of context into knowledge. There are a range of thinking processes involved here, like filtering of information. A key thinking process is a reflection that enables leaders to compare their context knowledge with their existing schemata or mindsets. This process then results in challenging the dominant logic, which enables in turn, unlearning of current mind-sets.

In addition to the personal change in mind-sets, leaders purposefully inject ideas and patterning the attention of others to enable them to increase their awareness of context. This exposure challenges others' dominant logic and in turn, enables unlearning. Another key action that leaders take is exposing themselves and their teams to networks, also external to the organisation. In the final phase, leaders ensure a feedback loop on changes in the context, challenging the current dominant logic once again and through reflection, create a new aspirational cognitive map or new logic of what the future should look like. This might entail more diversification and would thus link the process with the previous cycle and create a spiral of increased intensity of change and complexity. Organisations could take cognisance of this reinforcing cycle to increase awareness and enable conscious choice on what the next phase of change should entail and manage the pace of change to ensure the organisation builds capacity for continuous change. Since globalisation requires globalized thinking (Ireland & Hitt 2015), senior leaders must thus be aware of global trends (Bowen, Baker & Powell, 2015). This exploratory research revealed that exposure contributed to lateral thinking and it follows that international educational experiences for South African senior leaders are essential.

Limitations and Suggestions for Future Research: The present study was limited to the perceptions of senior managers in the sample of organisations that diversified. While a valuable understanding of their thinking processes was gained in this study, future research could involve a sample of employees reporting to these managers. In this regard, scholars like Osborn et al. (2002) emphasise that leadership is embedded in its context and that different managerial levels experience their reality quite differently and these differences could be an interesting topic for future research. The current study was conducted in South Africa, with a unique history and contextual variables. Several organisations in this study diversified by exploring markets in other African countries, with mixed levels of success. The present study explored leaders' thinking processes where diversification was perceived to be successful. Future studies could compare organisations, where the diversification was a failure, to those where the diversification was successful, especially where the diversification included expansion to new markets in Africa. These future samples must also include objective data on performance as a result of the diversification, instead of relying on the perception of senior managers with vested interests in whether the diversification is successful.

Conclusion: The present study contributes to a deeper understanding of leaders' cognitive processes to enable diversification. The study highlights the importance of regular reflection. Leaders interviewed injected ideas and directed the attention of employees to relevant information. They inspired others by appealing to their emotions. The study offers insight into the mechanism to enable diversification, by keeping in touch with external contextual variables, such as international trends; and to feed this information back into the organisation to prompt more change towards diversification.

Appendix: Table 3: Themes with Quotes from Interviews and Associated Literature

Themes and Codes	Quotes	Link with Literature
Perceptions on Diversification		
Types of diversification: a higher degree of diversification - increase in complexity	Product development: *"It's basically all metal in our products...so all these products that we diversify into, all come from metal"; "This year, we rebuilt our website, we wanted to diversify more into online…so build less physical stores"*	Diversification as growth strategy and types of diversification (Ansoff, 1958; 1988)
Diversification requires direction: Why do we diversify?	*"I think getting the 'why' right for me is very important because the 'what' is there, it's factual, you need to get the results, but 'why'?"; "We call it ring-fences: what we can control, what we can't control and based on that what makes us ready to move"*	Insight of top management to choose the right strategy (Prahalad and Bettis, 1986)
* Continuous change required	"*For survival: you have to diversify and it's a continuous change, it's that continuous moving, that keeps you alive"; "We are working in fast-paced times, that changes every day"; "How do you keep one step ahead of the curve?"*	Context characteristic: VUCA (Bennet and Lemoine, 2014); Chakravarthy (1997)
Leaders demonstrated being in touch with their context and others' emotions		
Cognitive awareness of complex context: Diagnosis of context	*"This whole inter-connectedness of life"; "Understanding who will affect me directly or indirectly; a stakeholder map"; "Your biggest brand ambassadors are your clients because they hold more data than anyone else."*	Contextual intelligence of Zeitgeist: Spirit of time (Mayo and Nohria, 2005); Diagnose context: Kutz and Bamford-Wade, 2013)
Time orientation: Balance	*"Only by what history has done can you plan forward"; "Understand the paradox: You need to look for now, and you still look into the long-term distance"; "You learn from your past, in terms of your life experiences"; "…to put context to what's relevant today and what needs to be done today, which will get you to where you're going"; "You are where you are today based on the sets of decisions you made to get there."*	Time Perspective (Zimbardo and Boyd, 1999) Convergence of past, present and future in 3-Dimensional thinking (Kutz, 2008)
* Future time orientation: opportunity focus	*"Follow an evidence-based approach, to find out what's going on, and through which, to find a gap to create the opportunity for you"; "…to engender that inspiration, that passion, that fire that keeps on fuelling"; "You can make one-degree positive moves in anybody's life that can turn out to be 30% positive in three years' time"; "Be the game changer in your greater context"; "where you want this business to be"; "Creating a compelling enough story that people want to follow you"*	Future focus leads to responsible financial decisions (Joireman, Sprott and Spangenberg, 2005)

Openness to new information assisted in gaining knowledge	Immersion in context: *"Engaging and listening to people in your immediate space"; "I learn a lot from folks who have different backgrounds, perspectives";* *"I enjoy, sort of, functioning with them (the team)"*; *"humility in the university of life";* *"I have to be very aware of what's going on around me"*; *"my exposure to other leaders assisted me in gaining knowledge."*	Humility in Leadership vs. Arrogance (Vera and Rodriguez-Lopez, 2004)
Reflection: conscious of the lens; meta-thinking	*"It's the time to think, the time to connect the dots";* *"You look back and you think I could have been better here";* *"I have the ability to influence the lens, which I look through";* *"Introspect as to why you're feeling that way and to look beyond the peripherals"* Self-knowledge: *"I can be difficult, but also participative. I want the results"; "I don't particularly like networking"; "it's actually my weakness";* *"I have the iron inside: unwavering determination"*	Self-awareness; insight that leads to wellbeing (Harrington and Loffredo, 2011)
* Sensing others' emotions and needs	*"What is their appetite for really being stretched";* *"Choose the right people within the team"; "knowing others' personally and their home situation"*	Emotional Intelligence (Goleman, 1996)
Leaders demonstrated adaptability and influenced others' thinking and emotions		
Filtering information: Dominant Logic	*"You got to manage your brain and that's why I call it cognitive load management"; "listening to others' way of thinking";* *"assess what is important";* *"give the organisation a sense of direction"*	Choosing relevant information; Peripheral vision of Dominant logic (Bettis and Prahalad, 1995)
Patterning of attention of others	*"You need to teach people how to think";* *"the strategic dance";* *"injecting ideas and brainstorming is incredibly important"*	Patterning of attention (Osborn *et al*., 2002)
Courage to ask challenging questions: Dialogue and conflict resolution	Building consensus:*"How we can collectively own a decision to move forward"; "it would start generally with a whiteboard and brainstorming where they are involved";* *"I like to create thinkers. I'm here to create change agents"; "the leader steps back"; "I do not give them answers anymore…I ask questions"; raising difficult questions"*	Encouraging different viewpoints (Kutz, 2008) Enabling leadership (Uhl-Bien, Marion and McKelvey, 2007); Consensus builder (Kutz, 2008)
Building collaborative relationships across boundaries: Network Diversity	Connect others with networks: *"Engaging with different industries, trying to see where there may be an opportunity"; "partnering with the right people"; "relationships in terms of finding a purpose/a joint purpose";* *"finding out what people did wrong because you learn more from that than what people did right"*	Social Capital (Arena and Uhl-Bien, 2015); Building networks (Osborn *et al*., 2002); Communication (Kenny, 2012)
Intentionally adjust leadership style	*"I think you have to reimagine yourself"; "I have to really force myself to go to these events"; "I have to make a conscious effort to do it"; "That was outside of my comfort zone";* *"I have a business coach"; "I can't control the market…but I can*	Contextual intelligence consequences: adjustment (Nye,

	control the way I feel and the way I behave"; "I have chameleon-like behaviour"	2011); behavioural adjustment (Kutz, 2008); fixing context: (Sternberg, 1988)
* Increase speed of learning: unlearning and relearning	Creating a safe environment: *"Learning not to make the same mistake again";* *"leaders must catalyse the collective reflection";* *"give them the freedom to fail quickly and to relearn at the fastest rate";* *"First, you need to define the boundaries, then let them play";* *"freedom to be able to do what you need to do and make the rules that you need";* *"You reflect - you learn and you unlearn. It's an iterative process"*	Unlearning (Rautenbach, Sutherland and Scheepers, 2015); reflection on learning (Heyler, 2015)
* Appealing to others' emotions; enrolment through inspiration	Affective component: *"connecting employees with information can 'wow" them"; "use storytelling";* *"people are only willing to die for a cause, if it is their cause"; "use metaphor to explain: you take a telescope as if you're looking into a tunnel at different scenarios and you go back again, back and forth"*	Vision and inspiration from Transformational Leadership (Bass, 1985)
Leaders enabled measurement and feedback and initiated more change		
Feedback loop and New Logic	*"Understanding the fundamentals, the real truth and seeing where and how we can be better";* Challenge Dominant Logic yet again: *"Reimagine…to start opening up one's mind to see things differently"*	Behavioural logic: thinking, feeling and acting (Bettis and Wong, 2003)
Balancing consolidation and more change	Use judgment on whether new wave of change is required: *"Having an intimate knowledge of the context by within which we operate, and then being able to make decisions in that context, otherwise diversifying could be suicidal";* Timing of next wave of diversification: *"Diversification doesn't necessarily mean adding continuously, but it's a balance of knowing when to add and sometimes you need to take away"*	High-performing individuals (Kenny, 2012); (Ansoff, 1958)

* The rows with an asterisk, indicate constructs not previously identified in relation to contextual intelligence and thinking processes during diversification

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Urgency of Fiscal Policy to Overcome Welfare Gap in Indonesia

Abdul Aziz
Fiscal Policy Agency (FPA), Ministry of Finance of the Republic of Indonesia
kingabaz@gmail.com, aaziz@fiskal.depkeu.go.id

Abstract: This study aims to describe the condition of the welfare gap between residents and regions in Indonesia on a number of welfare indicators namely poverty depth index, poverty severity index, Gini Coefficient Index (GCI), and the Human Development Index (HDI). This study also aims to analyze the importance of fiscal policy, especially in the form of state expenditure allocations to minimize the gap. This study uses a quantitative descriptive analysis method that is by some of the indicator data needed through the approach of average value, termun, standard devasi, and others. The result is a description of the welfare gap between people / regions in Indonesia and an overview of government policies that have been carried out. Whereas one of the recommendations is that the government should allocate state expenditures that are more effective, efficient, quality and pay attention to priority scale so that it can solve the welfare gap problem above.

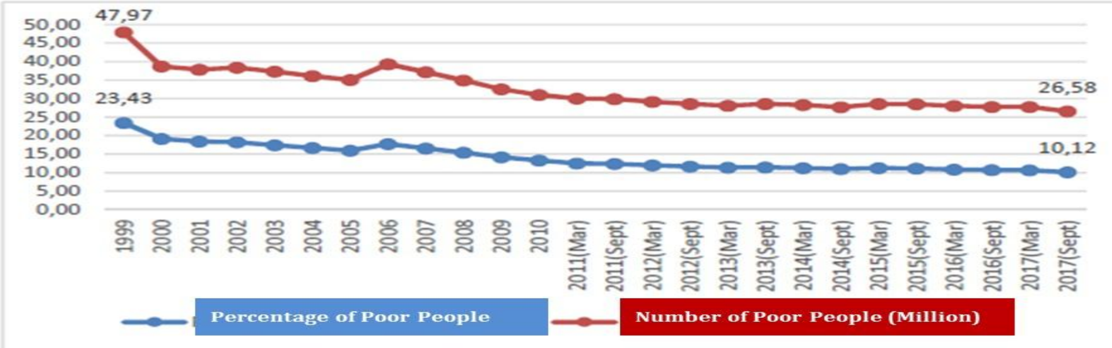
Keywords: *Welfare Gap, Welfare Indicator, Fiscal Policy, State Expenditure* calculating *Allocation.*

1. Introduction

One of the mandates in the Preamble of the 1945 Constitution of the Republic of Indonesia is that the state is obliged to protect the entire Indonesian nation and to promote the general welfare. Both countries' goals must be felt by all Indonesian people. The Government is determined to realize the noble goals in the Preamble of the Constitution including fiscal policy by allocating state expenditure to the State Budget (APBN) which aims to reduce the gap in the welfare of the Indonesian people and regions through various programs and activities financed by the APBN. The official data available turns out to still show a gap in welfare in the community. This gap can be seen from the conditions of poverty, community income disparities, and gaps in key areas of life such as education and health in the sample areas in Indonesia.

Poverty Conditions in Indonesia: Central Government Financial Report, the Ministry of Finance of Indonesia (LKPP MoF, 2017) explains that in the period 1999-September 2017 the poverty rate in Indonesia experienced a decline in both numbers and percentages except in 2006, September 2013 and March 2015. The increase in the number and percentage of poor people during that period triggered by the increase in prices of staple goods as a result of rising fuel prices. Still according to LKPP, MoF (2017) that the number of poor people in Indonesia in September 2017 reached 26.58 million people (10.12 percent) decreased compared to the conditions in March 2017 which amounted to 27.77 million (10.64 percent). There was a decrease in the number of poor people by 1.19 million people compared to March 2017. While compared to September of the previous year, the number of poor people decreased by 1.18 million people. Based on the area of residence, in the period March 2017-September 2017, the number of poor people in urban areas decreased by 401.28 thousand people while in rural areas decreased by 786.95 thousand people. The percentage of poverty in urban areas dropped from 7.72 percent to 7.26 percent. Meanwhile, in rural areas fell from 13.93 percent to 13.47 percent. This downward trend can be seen from graph 1 below.

Graph 1: Development of the Amount and Percentage of Indonesia's Poor People



Source: BPS, (2017) in the LKPP 2017: May 2018

In Indonesia, the poverty level of a society is usually measured through various indices including the poverty severity index, the poverty depth index, and the Gini Coefficient Index.

Fiscal Policy Implementation in Indonesia: Actually, the government has done a lot of fiscal policies, especially in allocating state spending to reduce the gap in the welfare of its people. This can be seen from the classification of state expenditures based on Functions and Subfunctions as shown in table 1 below:

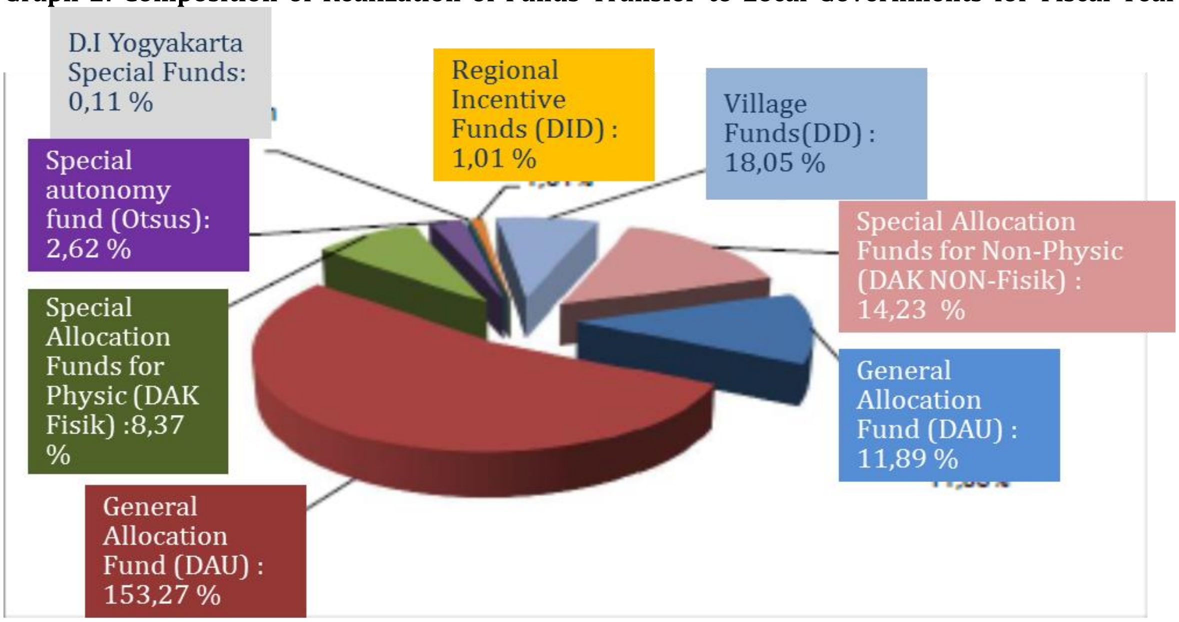
Table 1: State Budget Expenditures Based on Functions and Subfunctions Related to Efforts to Reduce Poverty and Improve People's Welfare

Function and Sub Function Code	Function	Sub Function
06	Housing and Public Facilities	
06.03		Supply of Drinking Water
06.04		Street Lighting
07	Health	
07.01		Drugs and Health Supplies
07.02		Individual Health Services
07.03		Public Health Services
10	Education	
10.01		Early childhood education programs
10.02		basic education
10.03		Middle education
10.04		Non-Formal and Informal Education
10.07		Aid Services to Education
11	Social Protection	All Sub Functions
11.01SD 11.09		

Source: LKPP, MoF (2017)

The central government also allocates financial transfers to the regions and village funds (Funds Transfer to Regional Governments) at the district, city, and province level in the form of balance funds in each year of approximately 26% of budget state natural revenues. Fund transfers to the Regional Government consist of (a) Village Funds, (b) Balancing Funds consisting of General Allocation Funds (DAU), Special Allocation Funds (DAK), and Revenue Sharing Funds (DBH), (c) Regional Incentive Funds , (d) Yogyakarta Special Funds, and (e) Special Autonomy Funds. Village Funds are mandated by the Law on Villages and the first time distributed by the Central Government in 2015.

Graph 2: Composition of Realization of Funds Transfer to Local Governments for Fiscal Year 2017



Source: LKPP, 2017 (May 2018), data edited

With the proportion of expenditure allocations as described above, this shows that in fact the Central Government and Regional Governments have programs and budgets which are aimed at improving public welfare. Based on the explanation above, this study has 2 objectives, namely:

- Describe several indicators of the gap in welfare between regions in Indonesia
- How the government implements fiscal policy (read: APBN) in order to support efforts to reduce the gap in welfare between regions in Indonesia.

2. Research Methodology

The Data Collection Method is carried out purposively, namely selecting a sample of poverty indicator data, welfare, and financial data of the central government expenditure and Fund Transfer data to the Regional Government at the provincial level. The selection of data at the provincial level has an important reason, that aside from being easy to compare between objects, observation is also easier to process and analyze because the amount of data is relatively small (only 33 data), unlike data at the district and city level which amounts to 542 pieces. The data analyzed are data on Poverty Depth Index, Poverty Severity Index, Gini Index, and Human Development Index. The data used in this study is secondary data derived from the official publication of the Indonesian Central Statistics Agency (BPS). In addition to these data, the author also uses State Budget data, especially on the side of state expenditure at the central government agencies and data on the balance funds received by the regional government from the central government.

This data is formally obtained from the Central Government Financial Report (LKPP, MoF)) that has been audited by the Indonesian Republic of Indonesia State Audit Agency (BPK). The year of observation used in this study is 2015-2016 and the maximum is up to 2017. The method of analysis used in this study is quantitative descriptive analysis by conveying a general description of the characteristics of the object under study without generalization. Data processing carried out in this paper is calculating data centre size measurements (such as: calculating averages), calculating the size of data dissemination (such as calculating range and standard deviation). The following are the formulas used in this article as instruments to explain the object of the indicators.

The Formula of Standard Deviation

$s = \sqrt{\frac{\sum_{i=1}^{n}(x_i - \bar{x})^2}{n-1}}$	*Where:* xi = value of x for-i $\bar{x}$ = average n = sample size

2. The Formula of Range

R = Xmax – Xmin	Where: R = Range/ Reach Xmax = the largest data value Xmin = the smallest data value.

3. The Formula of Mean

$\bar{x} = \sum X / n$	*Where:* X = observation n = Sample size

3. Literature Review

Welfare State: The welfare gap that occurs in a country demands the role of the state (read: the Government) to be involved in solving it. Such involvement can be carried out by issuing policies in the economic, political and other fields which aim to protect rights, improve welfare, and apply justice to all its people. Here are some things that are allowed by the formation of the welfare state as intended by Briggs and Orosz.

Briggs (1961) in Andersen (2012): "A welfare state is a state in which organized power is deliberately used (through politics and administration) in an effort to modify the play of the market forces in at least three directions: first, by guaranteeing individuals and families a minimum income irrespective of the market value of their work or their property; - second, by narrowing the extent of insecurity by enabling individuals and families to meet certain "social contingencies" (for example, sickness, old age and unemployment) which lead otherwise to individual and family crisis; and - third, by ensuring that all citizens without distinction of status or class are offered the best standards available in relation to a certain agreed range of social services."

Orosz (2017): "The concept of "The Welfare State", which appeared in the 1940s, is generally accepted as a wider definition of the role of the State in the field of social and economic policy. Most scholars of the subject, whether on the right or left politically, take it to mean a more positive and purposeful commitment by the government".

Fiscal Policy and Income Inequality: Income inequality is an obstacle to achieving successful development and high economic growth in a country. This condition must be resolved immediately, one of which is through the implementation of measured fiscal policies. Among the fiscal policies that can be done is by combining tax and transfers policies to the public simultaneously, fairly, and proportionally.

Bhatti, Naqvi, and Batool (2018): Income inequality is one of the critical barriers in most of the developing countries for growth and development. Income inequality remains a core issue in designing an effective fiscal policy. the inequalities in income are significantly higher than the inequalities in consumption. There are many factors which can affect income distribution. Many studies have been done in developed and developing countries to find out the effective policy measures to reduce the inequality in income distribution (In case of Pakistan). Furthermore, these three authors explained that a fine policy mix of tax and transfers can significantly improve the distribution (Leubker, 2011). Cubero and Hollar, (2010) prove in their study that the government can give any shape to the income distribution pattern by using tax and transfers. The nature of tax plays a very critical role in policy-making. Joumard et al. (2012) work on the same ground and find that a country having relatively small tax and transfer scheme attains the same redistribution effects as a country with higher tax rate and transfers if they rely on income tax which is progressive in nature. In evaluating the impact of fiscal policy, many researchers find a visible trade-off between equity and efficiency due to which many policymakers and politicians are seen reluctant in using fiscal policy for fair distribution of income.

Fiscal Policy for Pro-Poor Growth: Fiscal policy is also aimed at resolving the problem of poverty that continues to increase, but at the same time the fiscal policy implemented must also pay attention to the limits of the number of deficits and the amount of public debt allowed by existing laws and regulations.

Lustig (2018): Two key indicators of a government's (or society's) commitment to equalizing opportunities and reducing poverty and social exclusion are the share of total income devoted to social spending and how equalizing and pro-poor this spending is.3 Typically, redistributive social spending includes cash benefits4 and benefits in kinds such as spending on education and health. 5 As shown in Enami, Lustig, and Aranda (2018) and Enami (2018), the redistributive potential of a country does indeed depend on the size and composition of government spending and how it is financed, as well as the progressivity of all the taxes and government spending combined. While fiscal policy unambiguously reduces income inequality, this is not always true for poverty. In Ethiopia, Tanzania, Ghana, Nicaragua, Uganda, and Guatemala the extreme poverty headcount ratio is higher after taxes and transfers than before. In addition, to varying degrees, in all countries, a portion of the poor are net payers into the fiscal system and are thus impoverished by the fiscal system

Roy and Weeks (2004): Every government must maintain a sustainable fiscal policy. This includes a deficit that is manageable in the short term, and that the associated public debt it creates is serviceable. The economic function of government is not merely to maintain a stable macro environment; its primary responsibility to its citizens is to foster the general welfare. A deficit target should not be set that undermines a government's ability to achieve the latter.

Poverty Indicators

Poverty Depth Index: According to BPS (2017), Poverty Gap Index (Poverty Gap Index-P1), is a measure of the average gap in the expenditure of each poor population to the poverty line. The higher the index value, the further the average population expenditure from the poverty line. At each level, government decisions / policies that are very important are about the amount of the budget, what is the purpose and for what expenditure, and how to find funding to finance the budget.

Poverty Severity Index: According to BPS (2017), the Poverty Severity Index (P2) provides an overview of the spread of spending among the poor. This index means that the higher the index value, the higher the inequality of expenditure among the poor.

Gini Coefficient Index (GCI): Still according to BPS (2017), there are other measures that are usually used to determine the level of welfare gap between regions and communities, namely the Gini Coefficient Index (IKG). IKG is a number between 0 and 1, where 0 means "perfect equality" (i.e. everyone has equal income) and 1 means "perfect inequality" (where there is one person who makes all income, while others have zero income). Income distribution can vary greatly in the distribution of a country's wealth. The income from underground economic activities is not included in the calculation of this index.

Human Development Index (HDI): Besides the three indicators above, BPS (2017) also has other welfare indicator data, namely the Human Development Index (HDI), one of the measures that can show the success or failure of development in a region / country while showing the level of welfare, especially in education and health is to see the number of HDI in the region / country. The HDI was introduced by the United Nations Development Program (UNDP) in 1990 and is published regularly in the annual Human Development Report (HDR) report. BPS (2017), HDI explains how residents can access development results in obtaining income, health, education, and so on. The higher the HDI figure shows that the higher the level of population access to development results, especially in obtaining income, health and education. The HDI is formed by 3 (three) basic dimensions: long life and healthy life, knowledge, and a decent standard of living. The benefits of the HDI are:

A). is an important indicator to measure success in efforts to build the quality of human life (community / population).
B). HDI can determine the ranking or level of development of a region / country.
C). is a strategic data because it is a measure of the Government's performance (especially the Indonesian case).

The Role Of Fiscal Policy In Reducing Welfare Gap: As known that fiscal policy can include income, expenditure, financing, and others. Because this study focuses on discussing the welfare of the population / region and is also closely related to the discussion of poverty, the most suitable fiscal policy to prioritize is related to the state expenditure policy. With this concept, there is a narrowing of meaning because poverty is only seen as an economic inability to meet basic food and non-food needs.

Prasetya (2012) in Aziz (2016): Said that in macroeconomic theory, state expenditure consists of three main elements that can be categorized as follows:

- State expenditures on employee salaries and changes that have an effect on macroeconomic conditions because changes in government employee salaries will affect the level of public demand for goods and services indirectly.
- State expenditures for routine purchases of goods and services by the government.
- State expenditures in the form of direct gifts to citizens such as payment of subsidies or direct assistance to various groups of people, interest payments for government loans to the public, pension payments, and others. According to the author, financial transfers to the regions in the form of balancing fund policies also fall into this category. The government can also direct state expenditures for certain purposes that have been set before. That mean, if the government wants to focus on resolving the welfare gap between people and regions in Indonesia then this can be pursued by allocating the priority expenditure of the state to implement programs / activities that have the aim to reduce the welfare gap.

Wildavsky (2003) in Aziz (2016): Argued that the control of state expenditure included the following points:

- Controlling state expenditure is when the public needs a program but on the other hand the government cannot suppress overall state spending which is also important and on the other hand, the source of national income is very limited.
- Controlling state expenditure is when the government approves certain types of expenditure but needs to choose and prioritize which types of spending are the broadest choice of the community and which are the limited choices of citizens.
- Reducing or increasing state expenditure is the absolute right of the government the government does not require recommendations from any party in managing its spending, especially when in non-emergency conditions.

Busatto (2011) in Aziz (2016): which explains that public expenditure is generally a tool used by the state to influence the living conditions of its citizens directly. Examples of state expenditures are school construction, teacher salaries, and provision of school books that seek to improve population education, payment of doctors' honorariums, construction of hospitals, or actions to improve the health of the population and others.

4. Results and Discussion

The Indonesian state faces a number of crucial problems in order to realize economic prosperity for its people. The fundamental problem that must be faced is the occurrence of a welfare gap between residents and regions in Indonesia. The most relevant measure of the welfare gap is by knowing poverty indicators and other indicators such as the condition of education and health of a population in a particular area.

Poverty in Indonesia: The annual development of the Indonesian population can be seen in table 2 below.

Table 2: Number of Poor Population, Percentage of Poor Population and Poverty Line, 2010-2017

Year	Number of Poor People (Million))			Percentage of Poor People			Poverty Line (RP/capita/Month)	
	City	Village	City + Village	City	Village	City + Village	Kota	Desa
2010	11.10	19.93	31.02	9.87	16.56	13.33	232,989	192,354
Mar 2011	11.05	18.97	30.02	9.23	15.72	12.49	253,016	213,395
Sept 2011	10.95	18.94	29.89	9.09	15.59	12.36	263,594	223,181
Mar 2012	10.65	18.49	29.13	8.78	15.12	11.96	267,408	229,226
Sept 2012	10.51	18.09	28.59	8.60	14.70	11.66	277,382	240,441
Mar 2013	10.33	17.74	28.07	8.39	14.32	11.37	289,042	253,273
Sept 2013	10.63	17.92	28.55	8.52	14.42	11.47	308,826	275,779
Mar 2014	10.51	17.77	28.28	8.34	14.17	11.25	318,514	286,097
Sept 2014	10.36	17.37	27.73	8.16	13.76	10.96	326,853	296,681
Mar 2015	10.65	17.94	28.59	8.29	14.21	11.22	342,541	317,881
Sept 2015	10.62	17.89	28.51	8.22	14.09	11.13	356,378	333,034
Mar 2016	10.34	17.67	28.01	7.79	14.11	10.86	364,527	343,647
Sept 2016	10.49	17.28	27.76	7.73	13.96	10.70	372,114	350,420
Mar 2017	10.67	17.10	27.77	7.72	13.93	10.64	385,621	361,496

Source: LKPP, 2017 (May 2018), data edited

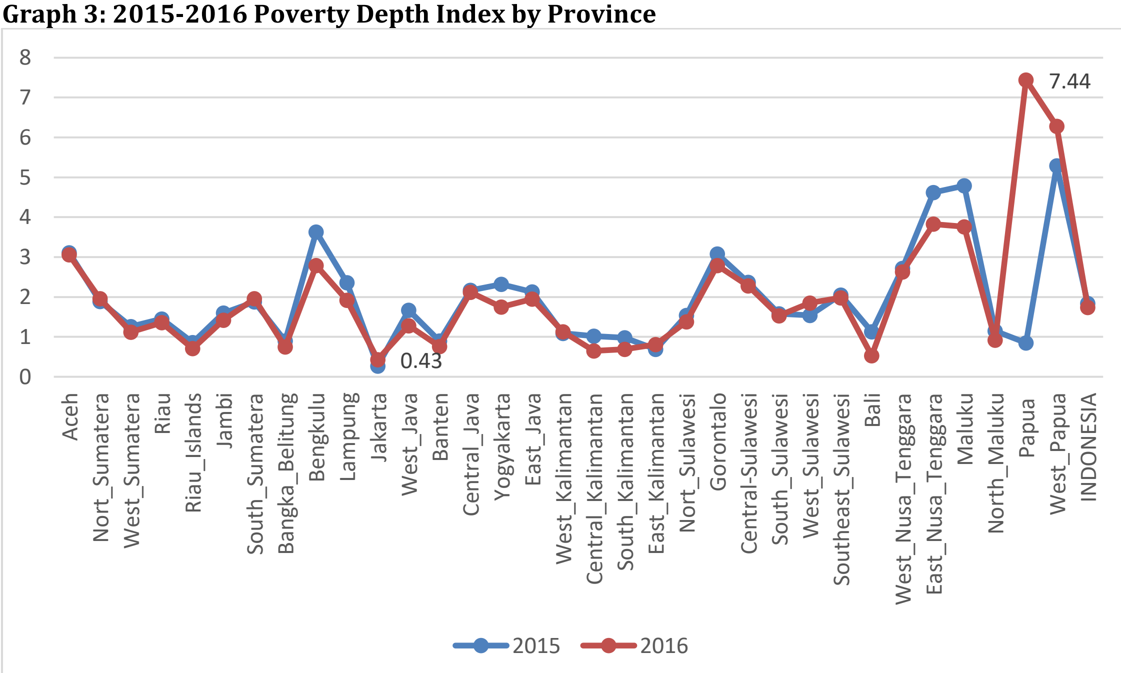
The data above shows that (1) the number of poor people in urban areas tends to be smaller than those in the village both in nominal and percentage terms, (2) the number of poor people continues to decline both in nominal and percentage terms and both in the village and in the city even though with a relatively small decrease, (3) the poverty line in the city is bigger than in the village, from time to time, and (4) the poverty line always experiences a nominal increase over time. Poverty will always occur as long as there is a gap in income distribution, according to Tumengkol (2012), poverty can be interpreted as a situation where a person is unable to choose himself according to the standard of living of the group and is also unable to utilize energy, mental, or physical in the group. And can also be interpreted as an economic gap or inequality in income distribution between high-income groups of people and low-income groups and the level of poverty or the number of people who are below the poverty line. Poverty that occurs above is also measured by a person's inability to fulfil his basic needs, both food and non-food, according to BPS (2017), BPS uses the concept of the ability to fulfill basic needs. With this approach, poverty is seen as an economic inability to meet basic food and non-food needs measured in terms of expenditure.

So the poor population is the population that has an average per capita expenditure below the poverty line. Similarly, it was concluded by Syawie (2011) that one of the concepts of poverty calculation applied in many countries, including Indonesia, is the concept of the ability to meet basic needs. The views related to the difficulty of poverty alleviation efforts are as described by Iryanti (2015) that since 2011, the decline in poverty rates has slowed down in absolute terms to decrease by less than 1 million poor people per year. This condition, according to Aryani, is caused by the condition of poverty that has now reached a stage that is already chronic and also because of macroeconomic conditions that have not been optimal. Disparities between provinces still occur with provincial poverty levels in Eastern Indonesia relatively higher than Western Indonesia. Therefore, the policy of reducing poverty in the future must pay attention to the following factors, such as (1) reducing economic inequality or inequality in income distribution between community groups, (2) meeting basic food and non-food needs, (3) conditioning macroeconomics to be more optimal and encourage economic growth; and (4) reduce disparity in poverty levels between provinces, namely in Eastern Indonesia and Western Indonesia.

Welfare Gap: One of the causes of poverty and also a problem in Indonesia is the problem of the welfare gap. This gap not only affects the economic but also psychological, health, and other aspects. Wide gaps result in various community weaknesses, such as unemployment, high crime, and other diseases. The following is a description of some indicators of welfare gap in Indonesia that focus on the provincial level as explained in the methodology section. The exposure of the data only to the provincial level allows the writer to analyze it more easily and also easier to compare between one/group of people or region with one/group of other people or other regions.

Poverty Depth Index: Graph 3 explains that there has been a gap in the average household expenditure in Indonesian society in 2015-2016, but the level of disparity in the DKI Jakarta province is relatively very low compared to the 2 years of observation while in Papua (2015) and in West Papua (2016) there is a very high level of inequality and above the average level of Indonesian household expenditure. So, there are serious problems in the different levels of depth of poverty and at the same time the level of welfare of this indicator, namely in the provinces of DKI (West Indonesia) and Papua / West Papua, especially in the 2 years of observation.

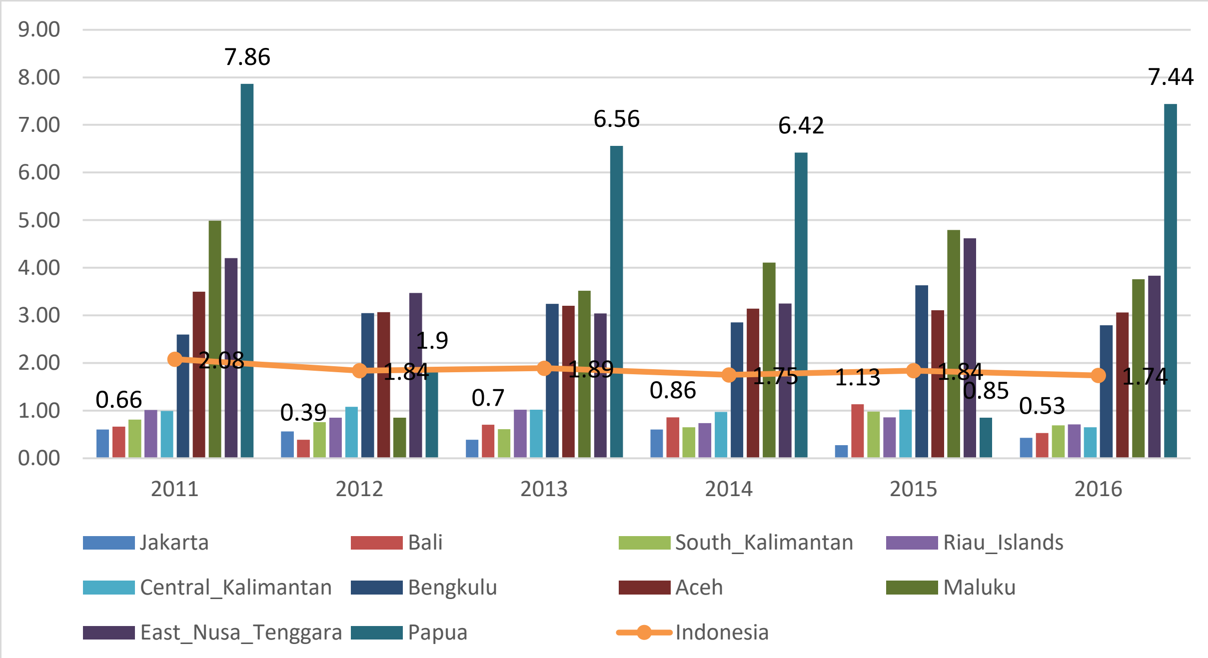
Graph 3: 2015-2016 Poverty Depth Index by Province



Source: BPS (2017), data edited

Data processing by the authors from BPS data (2017), shows that on average there are 5 provinces which tend to experience very good expenditure gaps (with a low index number) even below the national index, namely Jakarta, Bali, South Kalimantan, Riau Islands, and Central Kalimantan. And there are 5 provinces which on average tend to experience high expenditure gap indexes, namely Bengkulu, Aceh, Maluku, East Nusa Tenggara and Papua provinces, as shown in Graph 4 below.

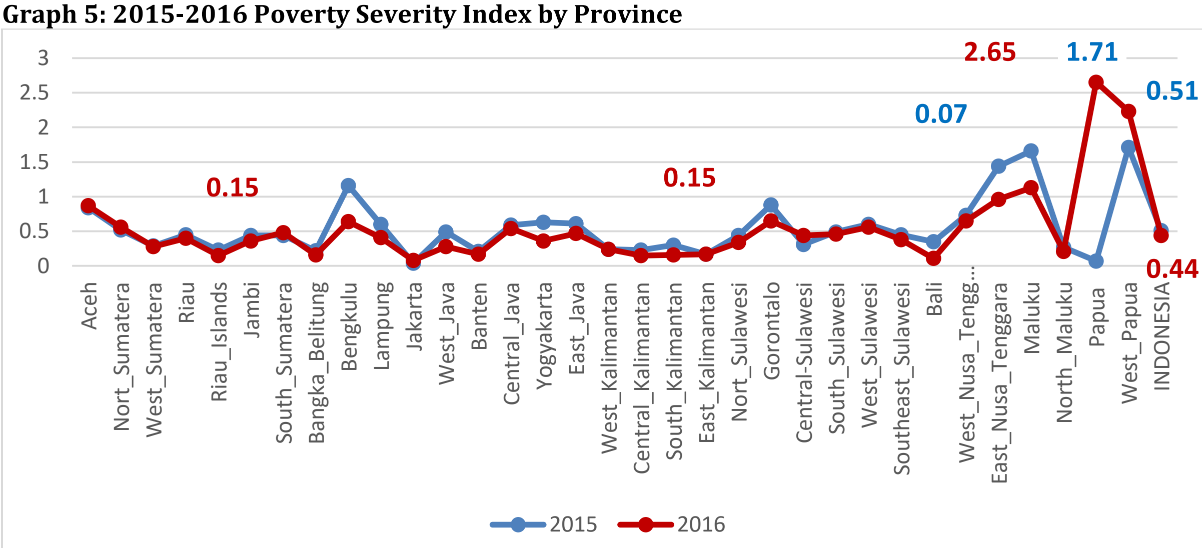
Graph 4: National Poverty Depth Index and 10 Lowest / Highest Provinces (Urban and Rural) in 2011-2016



Source: BPS (2017), data edited

Poverty Severity Index: Graph 5 explains that there has been a gap in the distribution of household expenditures in Indonesian society in 2015-2016, but the level of inequality in Papua (2015) and Bali (2016) is relatively very low from these 2 years of observation while in West Papua (2015) and in Papua (2016) there is a very high level of inequality and above the level of distribution of Indonesian household expenditure. So, on this indicator, there are also serious problems in the difference in the level of poverty severity and at the same time the level of welfare, especially in Bali (2016) and in Papua (2016).

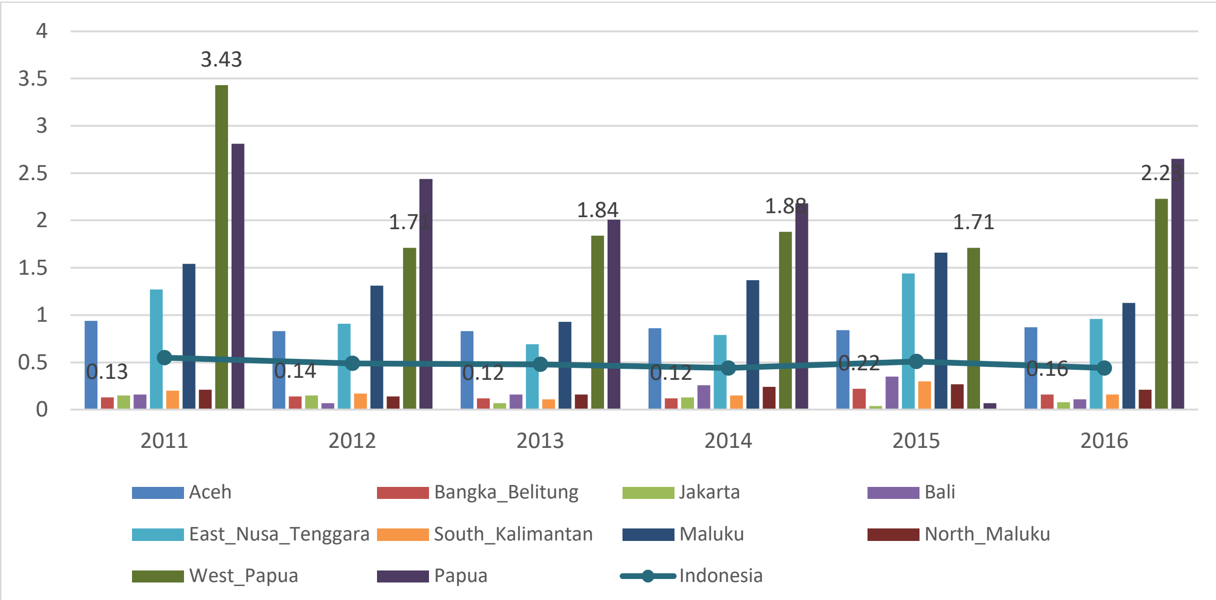
Graph 5: 2015-2016 Poverty Severity Index by Province



Source: BPS (2017), data edited

Based on data processing by the authors from BPS data (2017), it shows that there are 5 provinces that tend to experience disparities in the distribution of households that are able to make very good expenditures (with a low index number) even below the national index, namely DKI Jakarta province , Bali, Bangka Belitung, South Kalimantan, and North Maluku. And there are 5 provinces that tend to experience a high average expenditure gap index, namely the provinces of Aceh, NTT, North Maluku, West Papua and Papua, as shown in graph 6 below.

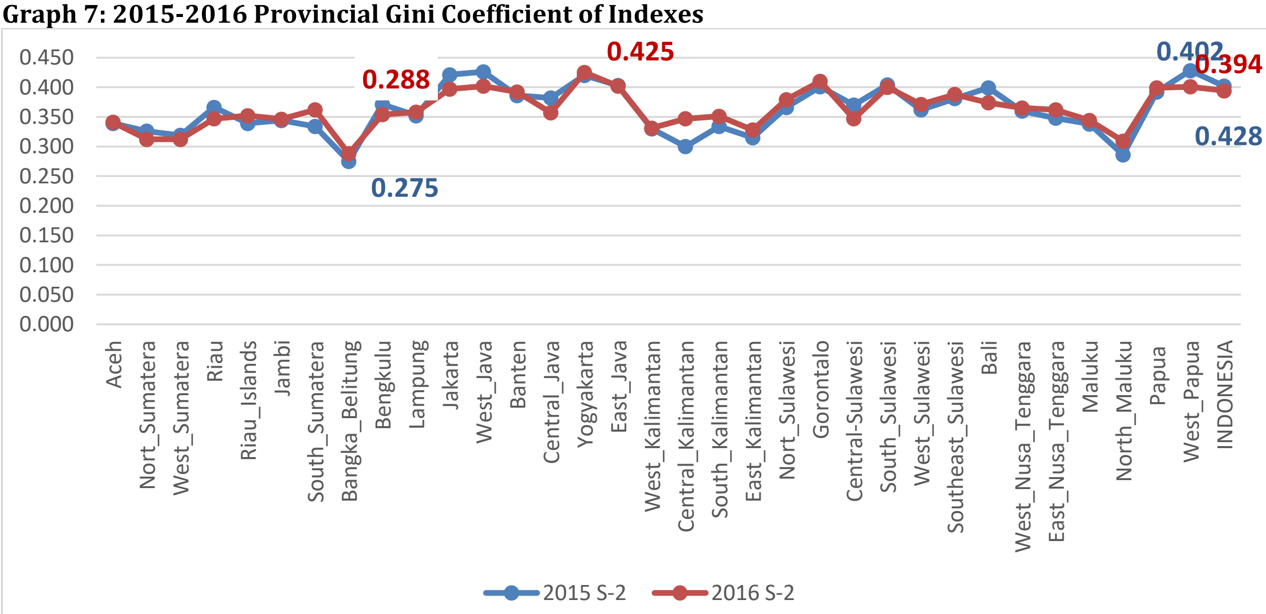
Graph 6: National Poverty Severity Index and 10 Lowest / Highest Provinces (Urban and Rural) in 2011-2016



Source: BPS (2017), data edited

Gini Coefficient Index: From graph 7 above it can be explained that there has been a severe inequality in the income of Indonesian people both nationally and per province except certain provinces in certain years such as Bangka Belitung province (Babel) which has a fairly low level of income inequality and under other territories.

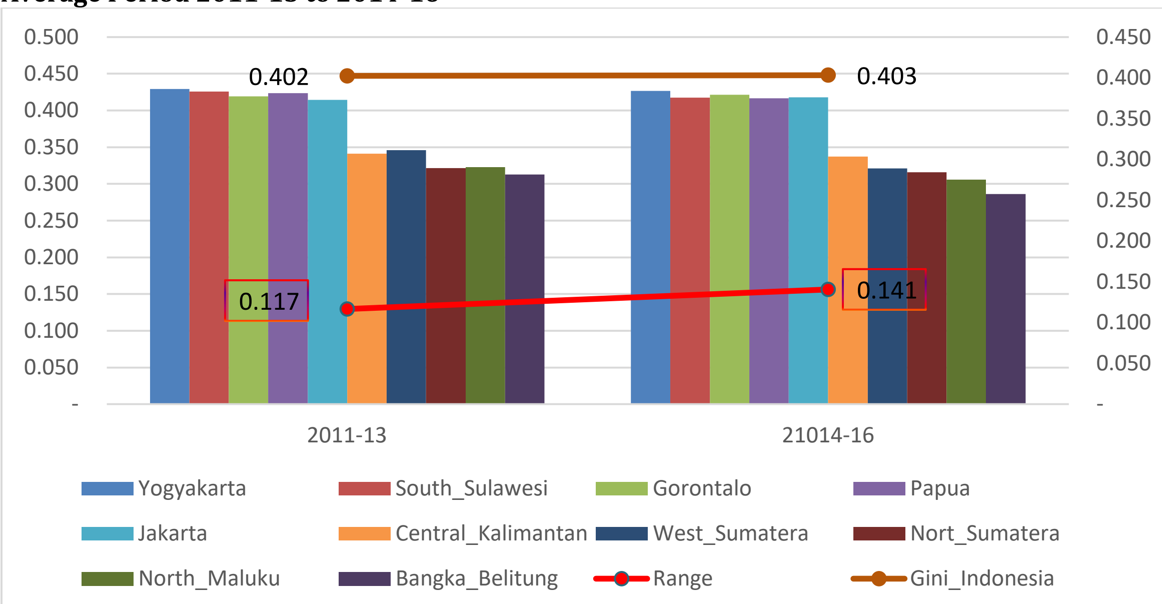
Graph 7: 2015-2016 Provincial Gini Coefficient of Indexes



Source: BPS (2017), data edited

The results of data processing by the authors from BPS data (2017) in graph 8 show that there are 5 provinces that tend to experience severe inequality in the community's income on average (during 6 years of observation) which is the province of Yogyakarta, South Sulawesi, Gorontalo, Papua and Jakarta even at the national level. The Gini Coefficient Index of Indonesia is also at a level of inequality in fairly poor income. While the other 5 provinces have a fairly low Gini coefficient index, this means that the 5 provinces have an average level of good income distribution, the five provinces are Central Kalimantan, West Sumatra, North Sumatra, North Maluku, and Bangka Belitung.

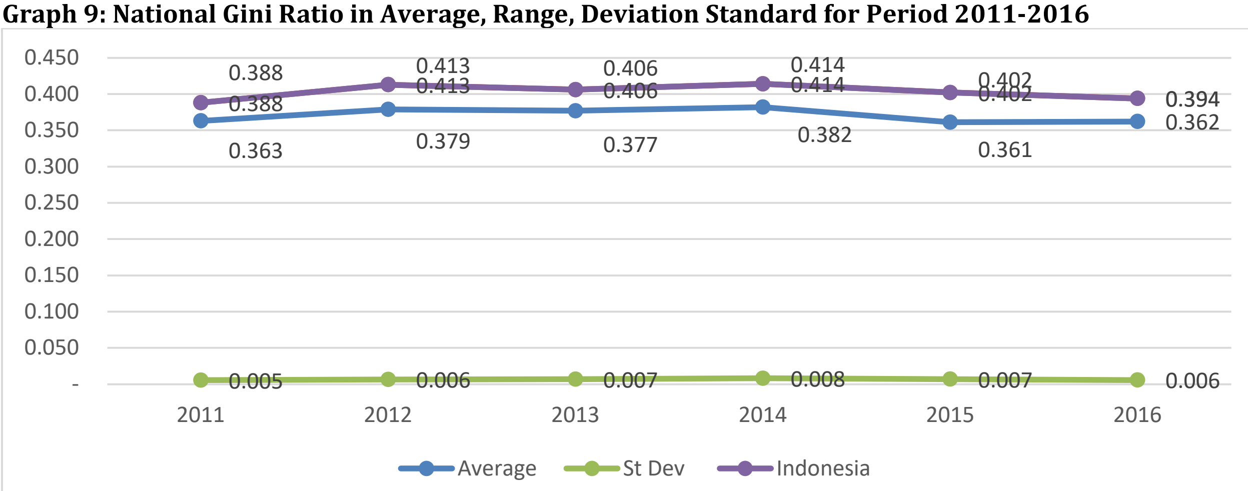
Graph 8: National Gini Ratio & 10 Provinces with Highest / Lowest Gini Ratio and Range in the Average Period 2011-13 to 2014-16



Source: BPS (2017), data edited

And based on the processing of data on graph 9, it can be explained that if calculated by the standard deviation formula the inequality between provinces shows a fairly low number, this means that generally, all provinces in Indonesia tend to experience a level of inequality in the income of people who are in almost the same condition. However, in the provincial average, there is a far difference with the index at the national level.

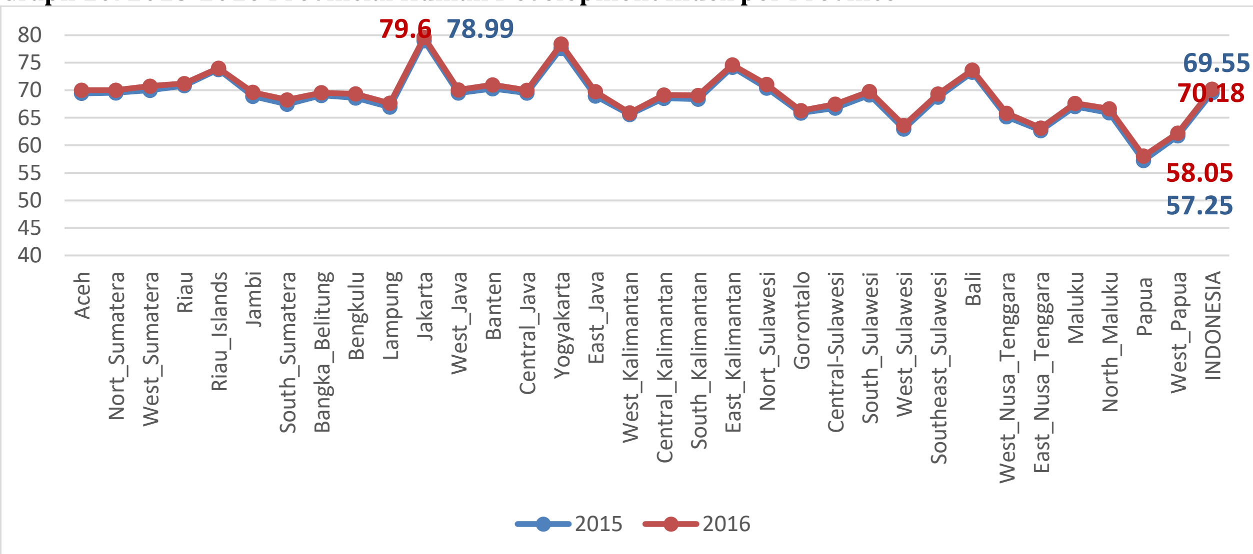
Graph 9: National Gini Ratio in Average, Range, Deviation Standard for Period 2011-2016



Source: BPS (2017), data edited

In graph 10 it can be explained that DKI Jakarta province has the highest level of human development success in these 2 years of observation even exceeding the National HDI. On the contrary, Papua Province has the lowest HDI figure from all provinces in the 2 years. This again proves that in general the provinces in the western part of Indonesia have relatively better human development conditions and levels of welfare. When viewed from the HDI condition in graph 10 below, it can be concluded that in these two years of observation there was no significant shift / change in human development from the three elements of the HDI, this is evidenced from the position of the HDI number that barely changes in all provinces.

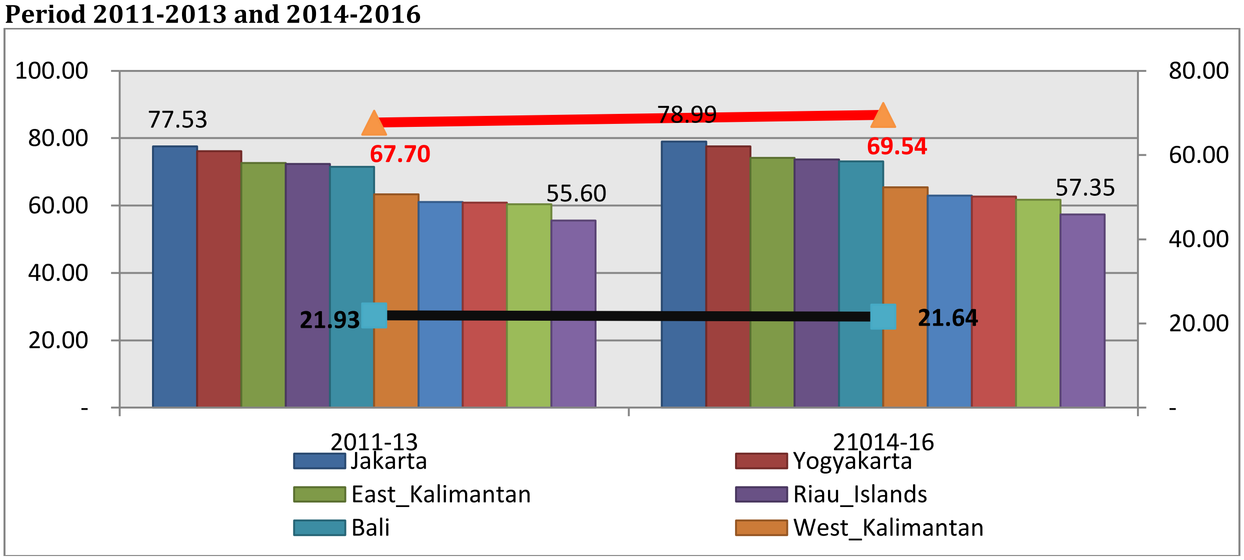
Graph 10: 2015-2016 Provincial Human Development Index per Province



Source: BPS (2017), data edited

The results of data processing by the authors from BPS data (2017) on graph 11 show that there are 5 provinces that tend to experience a good process of human development (during 6 years of observation), namely DKI Jakarta, DIY, East Kalimantan, Riau Islands, and Bali. The average number of HDI from the 5 provinces even exceeds the average national HDI figure, while the 5 provinces with low HDI scores are West Kalimantan, West Sulawesi, East Nusa Tenggara, West Papua, and Papua.

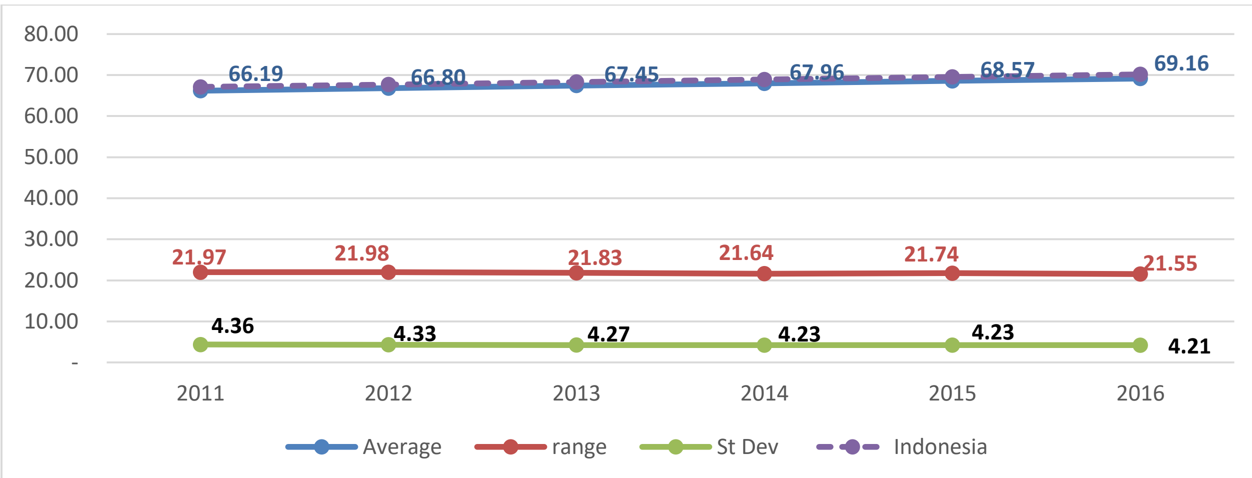
Graph 11: National HDI and 10 Provinces with the Highest / Lowest HDI and Range in the Average Period 2011-2013 and 2014-2016



Source: BPS (2017), data edited

However, in general, in the years of observation in all regions or groups of regions in Indonesia, it has been pointed out that there is a prosperity gap of the 4 indicators used although with different levels of inequality. Indirectly, this condition shows that the development in Indonesia is not evenly felt by all Indonesian people proportionally, this can occur due to several factors such as the different conditions of natural resources and human resources, government management in each region, economic development in a general sense (such as the production and investment side), fiscal capacity between regions, central government policies for each region, and others that may indicate different conditions and levels in each region (province).

Graph 12: National HDI and HDI 33 Provinces in Average, Range, Standard Deviation, Periode 2011-2016



Source: BPS (2017), data edited

According to Faisal, (2011) in Siswanto, (2012) several things that cause differences that cause gaps (in each indicator), including

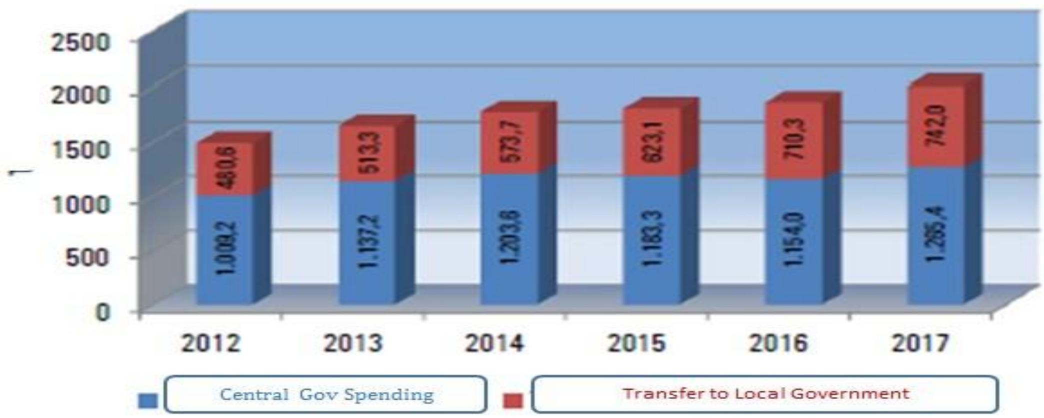
- Differences in the characteristics of the abundance of natural resources.
- Demographic differences.
- Differences in human resource capabilities.
- Differences in potential locations.
- Differences in aspects of accessibility and power in decision making.
- Differences in aspects of market potential.

While the factors causing the occurrence of the economic gap between provinces or regions in Indonesia according to Faisal: 2011 in Siswanto: 2012, among others are:

- Concentration of regional economic activities.
- Investment allocation.
- Low level of factor production mobility between regions.
- Differences in natural resources between provinces.
- Economic development in natural resource-rich areas will be more advanced and prosperous communities compared to areas that are resource-poor.
- Differences in demographic conditions between regions.
- Lack of trade between provinces.

Graph 13 below shows the proportion of state expenditure on an annual basis both managed directly by the central government and in the form of Funds Transfer to Local Governments. The graph illustrates an increase in the realization of state expenditure from 2012 - 2017.

Graph 13: Development of Realization of State Expenditures FY 2012 – 2017 (IDR Trillion)

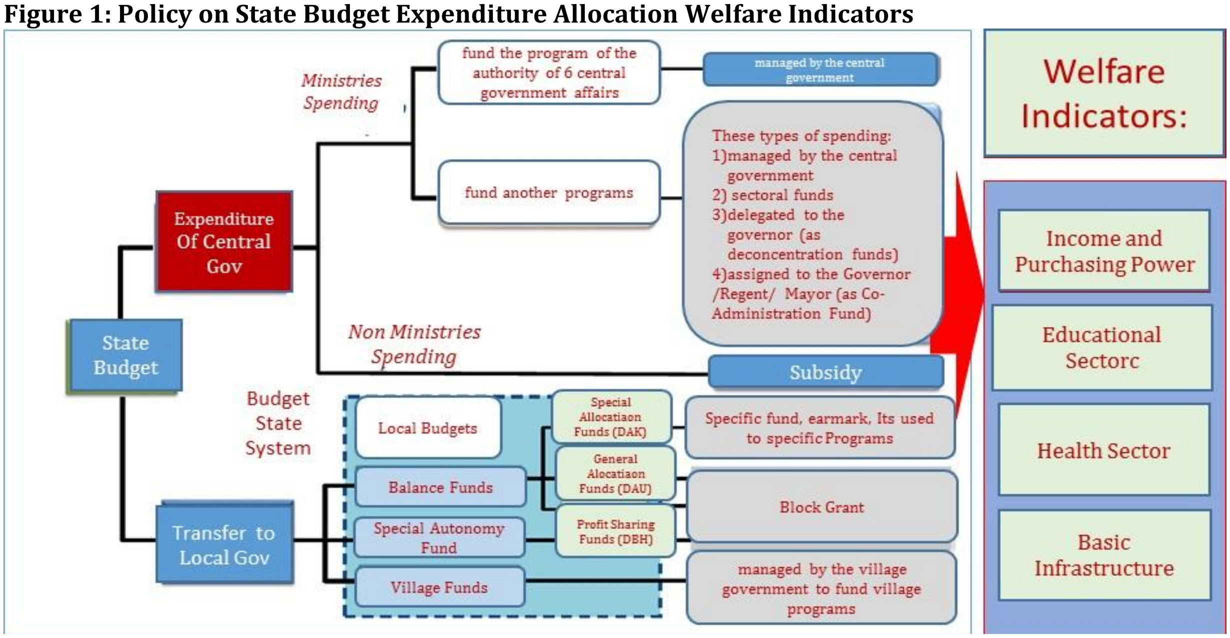


Source: LKPP, 2017 (May 2018), data edited

In terms of spending, central government spending remains focused on efforts to fund national priority programs in the form of infrastructure development and reducing inequality and poverty.

Application of Fiscal Policy: At the level of implementation, the government has actually allocated APBN budget/expenditure which aims to increase the level of people's welfare both directly and indirectly through various programs and activities in the fields of education, health, infrastructure development for basic services, and spending to reduce poverty in Indonesia. In general, the flow of utilization of APBN expenditure (whether through central government spending or in the form of Funds Transfer to Local Governments) for programs / activities related to the welfare indicators of the people is as shown in Figure 1 below.

Figure 1: Policy on State Budget Expenditure Allocation Welfare Indicators



Source: Illustration of the author, TNP2K (2016), data edited

From Figure 1 above, it can be seen that in general the APBN expenditure is divided into 2 major posts, namely, expenditures managed directly by the Central Government and expenditures in the form of Funds Transfer to Local Governments allocated to 34 provinces, 542 districts and cities as well as 74,754 villages. Among these expenditures, there are several types of APBN expenditures in each fiscal year that specifically enter into the four types of programs / activities in order to improve the welfare of the people, both directly and indirectly.

Table 3: Realization of Central Government Expenditures by 2017 Function (IDR Billion)

Code	Function	Budgetc	FY 2017	%
1	Public service	362.640,5	307.147,2	84,70%
2	Defensec	115.038,9	117.506,6	102,15%
3	Public order and Security	145.469,6	135.748,1	93,32%
4	Economy	327.079,7	307.787,5	94,10%
5	Environment	12.562,9	10.613,7	84,49%
6	Housing and Public Facities	30.074,1	27.277,4	90,70%
7	Health	58.728,2	57.225,1	97,44%
8	Tourisme and Culture	6.457,5	5.770,6	89,36%
9	Religion	9.786,4	8.870,4	90,64%
10	Education	143.997,6	138.507,3	96,19%
11	Population dan Social Protection	155.121,3	148.905,5	95,99%
	Total	**1.366.956,6**	**1.265.359,4**	**92,57%**

Source: LKPP, 2017 (May 2018), data edited

Table 3 shows that the realization of central government spending on functions including improving welfare such as housing and public facilities, health and social protection reached more than Rp.370 trillion. In LKPP, MoF (2017) explained that in order to solve the welfare gap problem, the implementation of fiscal policy in the form of state expenditure allocation can be carried out on two dimensions of development which are the government's priorities, namely:

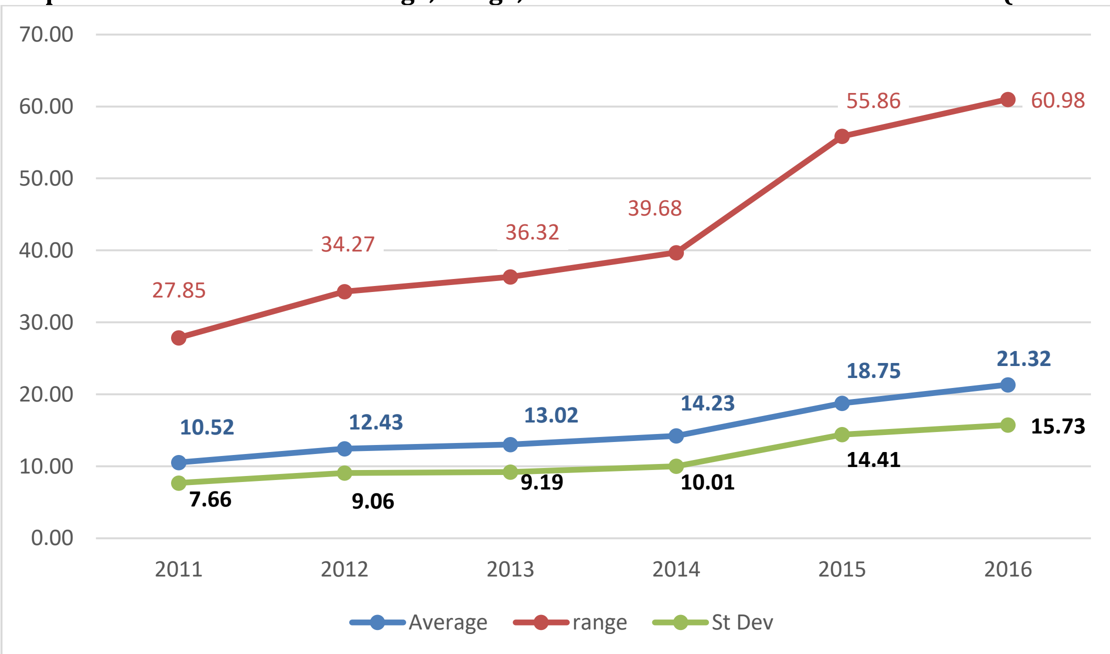
A. Dimensions of Equitable and Regional Development. One of the national priority agendas is to improve income distribution so that the bottom 40 percent of the population's income can grow much better so as to create a better quality of life. Through this priority, the improvement of the quality of life is pursued through equal distribution between income groups, and the reduction of inter-regional development disparities.

B. Leading Sector Development Dimensions, aimed at increasing people's productivity and competitiveness in international markets; and realize economic independence by moving the strategic sectors of the domestic economy. Priority development priorities for the sector include food sovereignty, maritime and maritime affairs, energy sovereignty, tourism development, as well as accelerating industrial growth and Special Economic Zones (SEZs). Furthermore, to achieve this development focus, the utilization of central government spending is directed at improving the quality of productive spending and priorities as explicitly contained in LKPP, MoF (2017), which among others is focused on:

- Increase the efficiency and sharpening of non-operational spending to increase fiscal space so that the efficiency of spending can be diverted to priority spending to finance programs to reduce poverty and economic disparities between populations and regions.
- Increasing productive spendings such as the construction of electricity facilities and infrastructure, connectivity between regions, housing, sanitation and clean water. This is important to facilitate the flow of goods and services between regions and can reduce the cost of living so as to improve the welfare of life.
- Strengthening the implementation of priority programs in the fields of health, education, energy and food sovereignty, marine and maritime affairs, and industry and tourism.
- Increasing the effectiveness and quality of social protection programs in all fields such as health and education.
- Distributing non-cash social assistance programs and subsidies that are more targeted so that the effectiveness of the program can be achieved well.

Graph 14 also shows that the nominal balance fund figure on average refers to the number of realization that continues to rise in each province, even though the range between the highest and lowest daper recipients is also higher which shows that there is a potential to cause social inequality economy between regions.

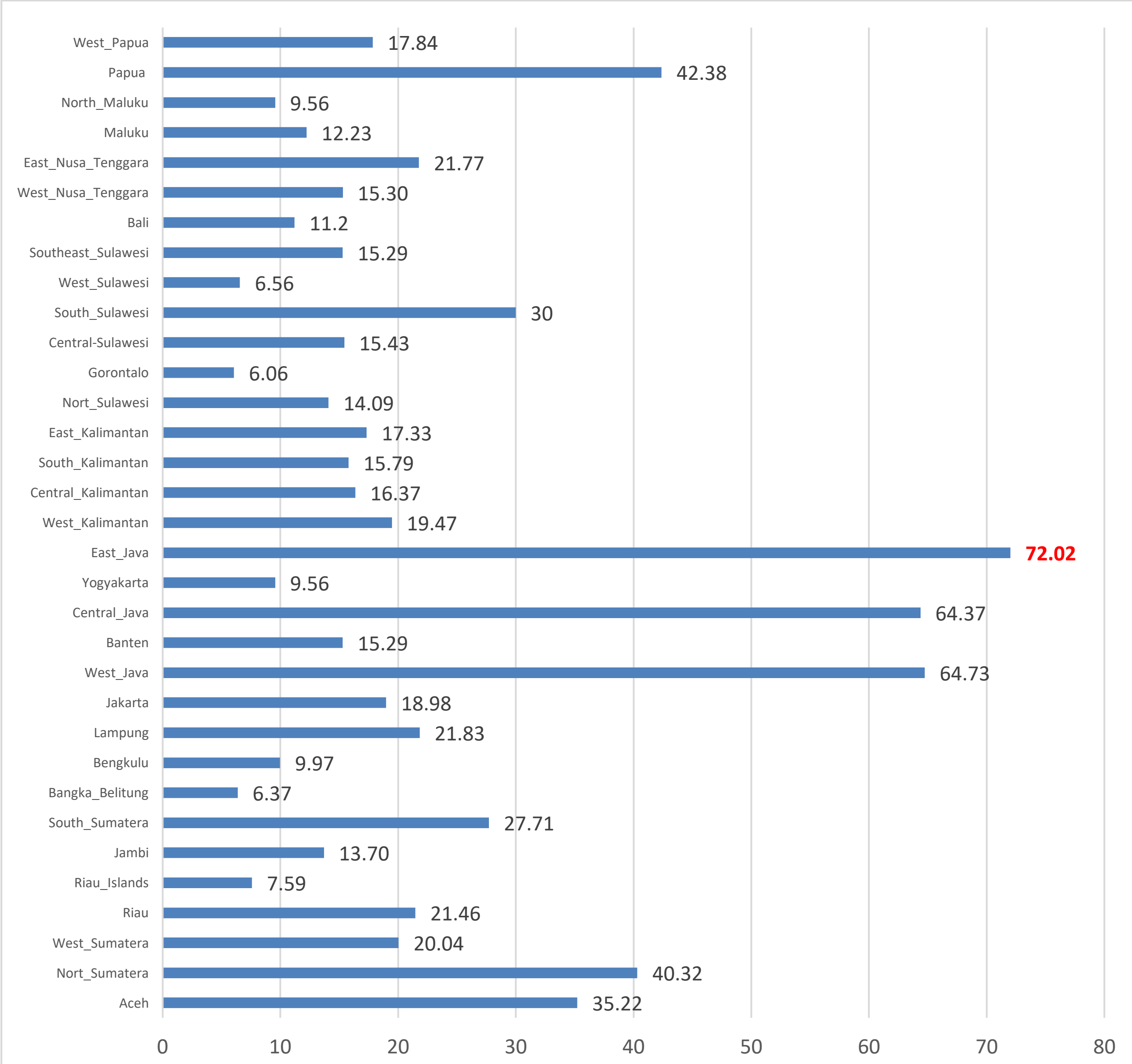
Graph 14: 33 Provinces in Average, Range, Standard Deviation Period 2011-2016 (IDR Trillion)



Source: LKPP, 2017 (May 2018), data edited

Sometimes there is a difference between planning (in this case the allocation of APBN expenditures) made by the Government as a policy maker and the output produced and expected, for example, is whether the allocation and realization of functional APBN expenditures can improve welfare and reduce poverty. Suryono (2014) has warned that the policy problem or often called the implementation gap is a condition in the policy process that is always open to the possibility of differences between what is planned by the policymaker compared to the results / achievements achieved from the implementation of the policy. In realizing a product of public policy (such as APBN expenditure allocation policy) which has the nuances of people's welfare, the problem lies not only in the national political will but also in the implementation of the actions of the national political will. Therefore, the APBN expenditure allocation policy must pay attention to many factors such as: calculating the level of effectiveness, determining the scale of priority spending, maintaining spending efficiency, and improving the quality of state spending. As in previous budget years, the Government has also channelled Fund Transfers to Regional Governments in 2017 amounting to 741.99 trillion (+ 25 percent of total expenditure on the APBN). The details are as shown in graph 15 below.

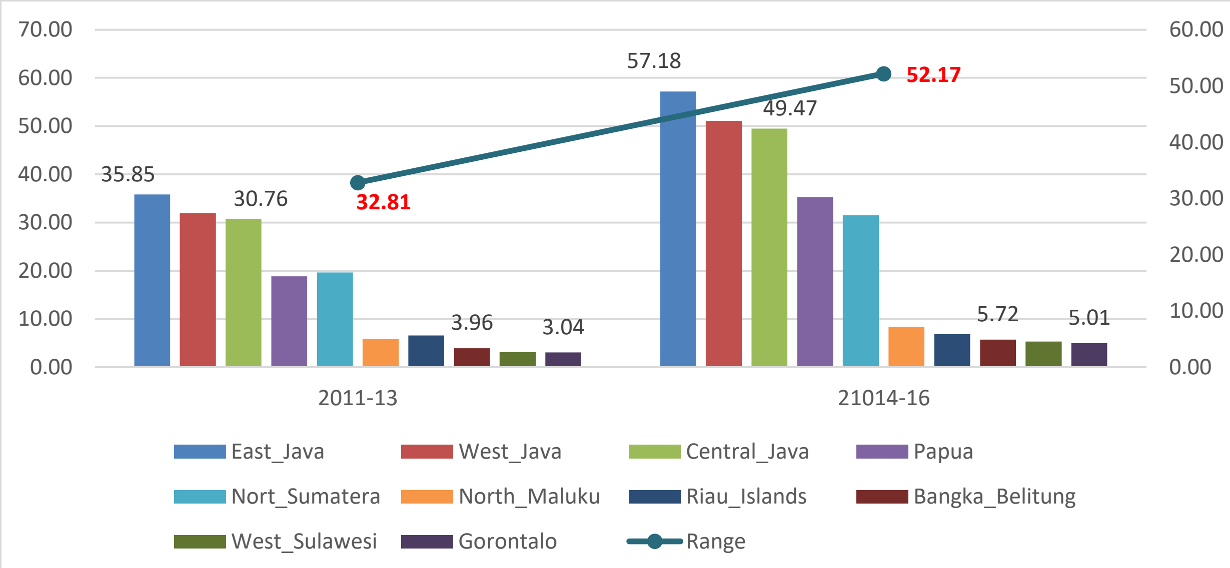
Graph 15: Realization of Funds Transfer to the Accumulated Regional Government of 2017 Province (IDR Trillion)



Source: LKPP, 2017 (May 2018), data edited

Fund transfers to the Regional Government for the majority are in the form of block grants that can be used by each regional government to carry out development in all fields, especially in order to reduce poverty and improve the welfare of their respective people which in turn is for all Indonesian people. Fund transfers to local governments are directed to strengthen funding for regional and rural development in order to accelerate the realization of public welfare, reduce the gap in public services between regions and support the achievement of national priorities. While the 5 largest provinces receiving Funds Transfer to Regional Governments are still dominated by provinces in Java and vice versa, the provinces receiving the smallest balance funds tend to be in Eastern Indonesia as explained by graph 16 below. Is this condition also a factor in the occurrence of disparities between regions.

Graph 16: 10 Provinces with the High est / Lowest Balance Balancing Funds and Range in the Average Period 2011-13 to 2014-16 (IDR T)



Source: LKPP, 2017 (May 2018), data edited

So, actually, the government's efforts to prosper the people through the APBN expenditure allocation policy are already quite optimal because in addition to the realization of direct expenditure from the Central Government there are also some expenditure allocations which are Fund Transfers to Local Governments in the scheme of fiscal decentralization and regional autonomy. According to Sasana (2009), the implementation of fiscal decentralization has been carried out since January 1, 2001. Through regional autonomy and fiscal decentralization, local governments have the authority to explore revenues and carry out the role of allocation independently in establishing development priorities. Autonomy and fiscal decentralization can better equalize development in accordance with the wishes of the regions to develop regions according to their respective potential. However, in its efforts to resolve the welfare gap through this state expenditure allocation, the Government must also pay attention to its fiscal capacity and sustainability so that the State Budget does not face excessive financing pressure (Nurcholis: 2012 in Aziz: 2013) and fiscal sustainability is also related to efforts to remain maintain the level of fiscal fisability (Haryo Kuncoro, 2011 in Aziz: 2013). Therefore, paying attention to the importance of maintaining capacity, sustainability and fiscal solvency, the government must pay attention to effective, efficient and quality state expenditure, paying attention to the priority expenditure scale so that the government's fiscal policy objectives to reduce the welfare gap between residents and regions can be achieved well and The State Budget remains in good health.

5. Conclusion and Recommendations

There are various indicators that develop in Indonesia to measure the level of inequality in Indonesia such as the Poverty Depth Index, Poverty Depth Index, and Gini Coefficient Index. And there are also indicators used to measure development and the level of welfare in Indonesia, namely the HDI. Fiscal policy through the allocation of spending on the National Budget (both managed directly by the Central Government and through the Fund Transfer mechanism to the Regional Government) is expected to be one solution in solving the welfare gap between residents and regions that occur in Indonesia. So, the government actually has made an effort to solve the gap problem through the allocation of state expenditures that are quite large and tend to always increase. Other efforts are also made through the creation of development programs and activities that are expected to solve the gap. However, in its efforts to resolve the welfare gap through this state expenditure allocation, the Government continues to pay attention to its fiscal capacity, sustainability and solvency so that the APBN remains in good health.

Recommendations

- The government is expected to be able to determine the most accurate indicators of the welfare gap between residents and regions in the future so that it can describe the actual inequality conditions with a high level of precision so that the policy to be taken is expected to be appropriate;
- The decision to allocate expenditure on the state budget in order to alleviate the welfare gap must pay attention to state spending that is more effective, efficient, quality and prioritizes the priority scale so that it can solve the problem.
- The fiscal decentralization policy and the allocation of Funds Transfer to Regional Governments are expected to be more equal in development in accordance with the conditions, potential, and choices, the development model of each region.
- The central government should pay more attention to the allocation of Fund Transfers to Regional Governments located in Eastern Indonesia because besides those regions having weak resource potential, they usually do not have sufficient regional fiscal capacity, especially to implement development oriented programs / activities. reduction of the welfare gap.
- In its efforts to reduce the welfare gap, the Government must also pay attention to its fiscal capacity, sustainability and solvability so that the APBN does not face excessive financing pressure and the APBN remains in good health.

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The Contribution of Foreign Direct Investment (FDI) To Domestic Employment Levels in South Africa: A Vector Autoregressive Approach

Bongumusa Prince Makhoba, Irrshad Kaseeram
University of Zululand, KwaDlangezwa Campus, Faculty of Commerce, South Africa
makhobabp@gmail.com, kaseerami@unizulu

Abstract: Several empirical works have yielded mixed and controversial results with regard to the effects of FDI on employment and economic growth. The primary focus of this study is to investigate the contribution of FDI to domestic employment levels in the context of the South African economy. The analyses of the study were carried out using the annual time series data from 1980 to 2015. The macroeconomic variables employed in the empirical investigation include employment, FDI, GDP, inflation, trade openness and unit labour costs. The study used secondary data from the South African Reserve Bank and Statistics South Africa database. The study estimated a Vector Autoregressive/ Vector Error Correction Mechanism (VAR/VECM) approach to conduct empirical analysis. However, the study also employed single equation estimation techniques, including the Ordinary Least Squares (OLS), Fully Modified Ordinary Least Squares (FMOLS), Dynamic Ordinary Least Squares (DOLS) and Canonical Cointegrating Regression (CCR) models as supporting tools to verify the VAR/VECM results. This study provides strong evidence of a significant negative relationship between FDI and employment levels in the South African economy. Empirical analysis of the study suggests that the effect of economic growth on employment is highly positive and significant in South Africa's economy. The study recommends that policymakers ought to invest more in productive sectors that aim to promote economic growth and development to boost employment opportunities in South Africa.

Keywords: *Foreign Direct Investment, Employment, and Economic growth.*

1. Introduction

Over the years, foreign direct investment (FDI), flowing to developing nations from the rest of the world has been widely recognised as a significant, positive contributor to economic growth and development through job opportunities and technological transfer. The present study is aimed at extending and deepening analysis on the contribution of FDI towards domestic employment levels in the South African economy. Several studies indicate that FDI has played a very important role in promoting South Africa's economic growth and job creation. FDI serves as the source of expansion for business opportunities, provide employment opportunities and also increases the level of income for local citizens in the host country. FDI is the flow of capital from an investor's country to an enterprise operating outside of the investor's country (Huang and Ren, 2013 and Tshepo, 2014). Foreign investors are keen to invest in South Africa due to favorable economic conditions, which include many facets that are very attractive to FDI. These include access to natural resources, quality infrastructure, well-developed financial markets, trade openness, and economic and political stability. The general economic argument of FDI states that inward FDI promotes growth and enhances employment levels.

Most studies, which include Mpanju, (2012); Carp, (2012); Huang and Ren, (2013) and Tshepo, (2014) reveal that FDI effect on employment and economic growth has been favorable in most developing nations. In contrast to this, some researchers, such as Jenkins (2006), Bailey and Driffield (2007), Pinn et al. (2011), Wei (2013) and Onimisi (2014), among others, found an inverse relationship between FDI and employment levels. Some researchers, Inekwe, (2013), Wei, (2013) and Okoro and Johnson (2014), suggested that the FDI impact on growth and employment differs across different economic sectors. According to a report published by the Department of Trade and Industry (DTI) (2015), Foreign Direct Investment (FDI) from the developing world predominantly goes to South Africa, North Africa, and oil-exporting countries. The report further stated that a total of 1 344 FDI projects were recorded from January 2003 to July 2015 in the South African economy. These FDI projects saw the South African economy recording a total capital investment of US$71.2 billion during this period. A total of 189 724 jobs were created as a result of these FDI projects. The main FDI sources for South Africa include, among others, the United Kingdom (UK), United States of America (USA), Germany, Australia, and India. Conversely, South African FDI outflows mainly go to the following top five destination countries: United Kingdom, Nigeria, Ghana, Zambia and the United States of America.

The top five sectors targeted by foreign investors were metals and coal, oil and natural gas, food and tobacco, consumer products and communication services. South Africa has consistently been able to maintain its position as both the top FDI destination in Africa and a prolific FDI investor in the African continent (Department of Trade and Industry, 2015). However, FDI may also have detrimental effects on the economy of the host nation. Pinn et al. (2011) asserted that FDI can affect employment levels in three different scenarios. Firstly, inward FDI creates job opportunities directly through the establishment of new businesses. Secondly, FDI can maintain employment level by acquiring existing firms. Lastly, FDI can decrease employment levels by withdrawing investments and shutting down local firms through intense competition (Pinn et al., 2011). Jenkins (2006) suggested that in cases where FDI involves the acquisition of domestic firms instead of establishing new enterprises, domestic employment levels will stay the same, and if the foreign investor rationalises the firm, employment levels are even more likely to decrease. Furthermore, the employment opportunities that created by FDI tends to favor relatively skilled labour in capital-intensive industries, rather than labour-intensive firms with unskilled labour, which is oversupplied in the South African labour market (Jenkins, 2006, also cited by Makino and Tsang, 2011).

The primary purpose of the study is to probe the subject matter by using econometric analyses to further investigate the contribution of FDI to employment in South Africa from the period 1980-2015 by drawing on data from employment, FDI, Gross Domestic Product (GDP), inflation, trade openness, and unit labour costs. The study attempts to discover this nexus using a VAR/VECM model framework with the annual time series data extracted from the South African Reserve Bank (SARB) and Statistics South Africa (StatsSA) database. The organisation of this paper consists of five sections. Section 1 introduces the paper with a clear background. Section 2 discusses both theoretical and empirical literature on the link between FDI, employment and economic growth. Section 3 gives the discussion of the methodological framework and estimation procedures applicable to conducting an empirical investigation. Section 4 deals with the presentation and discussion of the empirical findings. Finally, section 5 concludes the paper with some policy prescriptions.

2. Theoretical and Empirical Perspectives

Theoretical Literature: The FDI-led growth hypothesis is based on endogenous growth theory (Romer, 1994) which stipulates that FDI is strongly associated with human capital, exports, technological and knowledge transfer, and capital flows. These factors significantly stimulate economic growth through FDI inflows (Sunde, 2017). In such instances, the economy is more likely to enjoy the spill-over-effects of knowledge and technology provided by foreign firms (Shakar and Aslam, 2015). These spill-over-effects will bring about improvement and progress in the level of productivity, which will eventually lead to an increase in economic growth. The theory of the capital market is the oldest theory of FDI developed in the 1960s. The capital market theory claims that FDI is mainly determined by the interest rates of the country (Das, 2007). Basically, this theory alludes to three different positions by which FDI is attracted in developing countries. The first one is that undervalued exchange rate ensures that host countries operate under lower production costs. Secondly, long-term investment in developing countries depends more on FDI than the purchase of securities in the stock market.

Since there are no organised securities in existence in the majority of developing countries the third and last position is that FDI allows control of a host country's assets where there is limited information about securities in that nation (Das, 2007). Ricardo (1821) formulated a jobless growth theory which states that there is a negative relationship between investment, output expansion and job creation because capital investment is a perfect substitute for labour in the economy. Vernon (1966) proposed the production cycle theory in order to explain FDI flows from the USA to Western Europe companies in the manufacturing industry. This theory asserts that there are four stages in the product cycle: innovation, growth, maturity, and decline (Denisia, 2010). The life cycle theory may be used to analyse the relationship between the life cycle of a product and potential FDI flows. In the innovation stage, foreign firms produce new, unique products for the domestic market and export the surplus in the foreign markets. This theory asserts that FDI flows are mostly observed in the maturity and declining stage (Denisia, 2010). The findings reveal that there is a negative and insignificant effect of FDI on employment creation in the Chinese economy.

Empirical Literature: This section provides discussions on the body of literature underpinning the link between FDI employment and economic growth in South Africa and from the rest of the word. Numerous empirical studies have systematically evaluated the FDI effect on employment and economic growth from the global context; however very few studies have evaluated this relationship from the South African perspective. The empirical findings of recent studies have shown mixed and sometimes controversial (i.e. the impact of FDI differs across different sectors of the economy) results on this relationship. Hence this paper attempt to fill that gap and provide more empirical evidence from the South African perspective. Huang and Ren (2013) investigated the effect of Chinese investment on employment generation in the South African economy. The study used a survey from 16 Chinese enterprises located in Johannesburg to assess their impact on employment generation in the South African economy. The findings of the study indicate that Chinese firms increase job opportunities for both skilled and unskilled workers in South Africa. They emphasised on the importance of improving the investment enabling environment in order to expand the significant positive impact of Chinese firms on employment and growth of the country's economy.

The findings of the survey also suggest that strict labour laws and influential trade unions are important parties that ensure the employment quality of FOEs meets the legal requirements of the country. Wei, (2013) tested the impact of FDI on employment levels using annual time series data from 1985-2011 in China. The results also indicate that the effect of FDI on employment differs across different economic sectors. The impact of FDI on employment was found positive in the primary sector. The secondary sector of the economy exhibited an insignificant and negative effect of FDI on employment, although GDP had a strong positive impact on employment levels. FDI inflows were found negative and significant to promote employment creation while GDP had a positive impact on employment in the tertiary sector. A study conducted by Tshepo (2014) assessed the FDI impact on growth and employment from 1990 to 2013 in South Africa. The study employed the Johansen Co-integration test to assess the long-run co-integrating relationship among variables. The empirical results indicate a positive long-run relationship between FDI, GDP, and employment in the South African economy. The findings also suggest that FDI is an important aspect that stimulates growth and employment levels in the economy of South Africa.

Furthermore, the study suggested that human capital, return on investment, labour cost, labour disputes, and corruption are important factors that influence inward FDI in the South African economy. The study recommends that the South African government ought to deal with these factors to make the country a conducive, environment for FDI to take place. Onimisi (2014) examine the FDI effect on employment generation in Nigeria from 2002-2012. The results indicate a negative effect of FDI on employment, while GDP and interest rate are positively correlated with the employment levels. However, none of the explanatory variables were found significantly to affect employment levels in Nigeria. The study suggests that a negative effect of FDI on employment levels calls for a critical examination of these variables because FDI are recognised to bring about a significant, positive effect on GDP and therefore it is also expected that FDI will bring a reduction in the rate of unemployment in the country. Khatodia and Dhankar (2016) assess the growth of employment in both public and private sector by foreign capital flows which include FDI, Foreign Portfolio Investment (FPI), External Commercial Borrowings (ECBs), and NRI Deposits in India from 1991-2012.

3. Methodological Framework

This section presents the methodology and estimation procedure that is employed for the empirical investigation to the link between FDI, employment and economic growth in South Africa. The study is using an annual time series data running from the period of 1980-2015 thus giving us 36 observations, with the following variables: employment, FDI, GDP, inflation, trade openness, and labour costs. All variables in monetary values are measured in terms of domestic currency, i.e. South African Rand. The time series data of all variables are extracted from the South African Reserve Bank (SARB) (www.resbank.co.za) and Statistics South Africa (StasSA) database (http://www.statssa.co.za). The study uses eviews 9 statistical software package for the purpose of analysing data, and empirical estimation and analysis. The data series of variables that are in monetary values were transformed into natural logarithms. The unit roots test results reveal that all variables are integrated of order one, however, the results of unit roots tests are not reported due to brevity but available upon request from the authors.

The VAR/VECM Approach: The study adopts a VAR approach proposed by Sims (1980) to assess dynamic relationships between FDI, economic growth and employment in South Africa. The VAR/VECM is able to trace the response of the endogenous variable due to the shocks of other endogenous variables and its own shocks through the impulse response functions (IRF). The VAR/VECM approach can deal with the problem of multi-cointegration through Johansen cointegration test, unlike the single-equation cointegration test. This approach is considered as more advanced estimation technique due to its ability to differentiate the long-run relationships that are consistent with the short-run dynamic adjustments between the variables (Brooks, 2014). The VECM is important to a VAR framework because of its ability to embed an ECM term in the model. The VAR/VECM is only estimated using three variables in the model due to plausible results and consistency with economic theory, however, the six variables of the model specification are only utilised in the estimation of single equation methods, since they produce plausible results in this regard. As previously mentioned, the short-run dynamics between FDI, employment and economic growth in the system will be assessed through the use of the following VAR model:

$$InY_t = \alpha_0 + \sum_{i=1}^{p} \Gamma_i \, InY_{t-i} + \varepsilon_t \qquad (1)$$

The above equation (1) represents a VAR, where $Y_t = EMP_t, FDI_t, GDP_t$ is a (3×1) column vector of three endogenous variables, i.e. employment, FDI and GDP. α_0 Denotes a (3×1) vector of the constants, Γ_i is a (3×3) matrix of autoregressive coefficients regressors, p represents the order of VAR and the ε_t vector comprises composites of random shocks in the system. The cointegrating VAR equation will be converted into a VECM equation in order to apply the Johansen VECM methodology. Therefore, the VECM model is estimated to determine the long-run cointegrating relationship between FDI, economic growth and employment. Brooks (2014) asserts that VECM is an appropriate model that captures the long-run and short-run dynamic relationships among variables in the model. In this particular study, the VECM captures the long-run cointegrating relationship between employment, FDI and GDP, as well as the short-run dynamics that are consistent with the long-run equilibrium. The VECM equation can be presented as follows:

$$\Delta InY_t = \alpha_0 + \Pi InY_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \, \Delta InY_{t-i} + \varepsilon_t \qquad (2)$$

Where, InY_t denote $k \times 1$ vector of I(1) variables, α_0 is the coefficient of intercept, Π represents $k \times k$ long-run multiplier matrix and Γ_i represents $k \times k$ short-run coefficient matrices. The notation of p represents the order of VAR. ε_t Represent innovations in the model. The VECM (Πy_{t-1} term) from the above equation can be expanded as follows:

$$\Pi y_{t-1} = \begin{bmatrix} \alpha_{11} \\ \alpha_{21} \\ \alpha_{31} \end{bmatrix} (\beta_{11} \quad \beta_{12} \quad \beta_{13}) \begin{bmatrix} lemp \\ lfdi \\ lgdp \end{bmatrix}_{t-1} \qquad (3)$$

From the above equation (3), β_{11} represent a normalized equation. β_{12}, is the long-run elasticity coefficient for employment with respect to the effect of FDI on employment levels. β_{13}, is the long-run elasticity of employment with respect to the effect of GDP on employment levels. The short-run adjustment coefficients that will be considered in this particular study can be expressed in the following ECM:

$$\varepsilon = (lemp - \beta_{12} fdi - \beta_{13} gdp)_{t-1} \qquad (4)$$

From the above equation (4), let assume that employment levels increase by more than its cointegrating relationship in the previous period while FDI and GDP remain dictates, in the following period some or both variables will have to adjust in order to restore the long-run equilibrium relationship. The adjustment coefficient is therefore expected that $\alpha_{11} < 0$ since employment must decrease in the current period in order to restore the long-run equilibrium, while FDI and GDP must increase in the following period to adjust this long-run equilibrium relationship, i.e., $\alpha_{21} > 0$ and $\alpha_{31} > 0$.

The Single Equation Methods: This section gives a discussion of single equation models which include OLS, FMOLS, DOLS, and CCR since these models are employed as supporting and confirmatory models of a VAR/VECM approach. As mentioned earlier, all single equation models are estimated using all six variables in the model specification due to plausible results and consistency with the economic literature.

Ordinary Least Squares (OLS) Model Estimation: The Ordinary least squares (OLS) regression is a linear estimation technique that can be employed to test for a single response variable recorded on an interval scale. The natural logarithmic presentation of variables in the OLS model with multiple explanatory variables as of this study can be written in the following form:

$$\Delta InEMP_t = \alpha_0 + \beta_1 InFDI_1 + \beta_2 InGDP_2 + \beta_3 INF_3 + \beta_4 TOP_4 + \beta_5 InLC_5 + \varepsilon_t \quad (5)$$

Where, $\Delta InEMP_t$ is a first differenced dependent variable, followed by stationary explanatory variables which include $InFDI_1, InGDP_2, INF_3, TOP_4, InLC_5$. α_0 is the constant coefficients, and ε_t is the error term. The logarithmic transformation was carried out only on variables with data on monetary values and indexes, i.e. employment, FDI, GDP and unit labour costs. The data of inflation and trade openness was already in percentage form hence they were not transformed into natural logarithm because they can be interpreted as elasticities.

Fully Modified Ordinary Least Squares (FMOLS) Model: The FMOLS model involves adjusting OLS long-run estimates in such a way that we overcome any form of biasness owing to serial correlation and endogeneity problems in OLS residuals (Phillips and Hansen, 1990 and Harris and Sollis, 2003). Consider the following (Y_t, X_t') vector process:

$$Y_t = X_t'\beta + D_t'\gamma_1 + \varepsilon_{1t} \quad (6)$$

From the above equation (6), Y_t represents the dependent I(1) variable. X_t is a stochastic regressor as governed by $X_t = \Gamma_{21}' D_{1t} + \Gamma_{22}' D_{2t} + \varepsilon_{2t}$. Furthermore, $D = D_{1t}', D_{2t}'$ represents the deterministic trend of regressors and ε_{1t} is the error term with a zero mean and covariance (Ω). Therefore, the FMOLS can be presented as follows:

$$\hat{\theta}_{FMOLS} = \begin{bmatrix} \hat{\beta} \\ \hat{\gamma}_1 \end{bmatrix} = \left[\sum_{t=1}^{T} Z_t Z_t'\right]^{-1} \left[\sum_{t=1}^{T} Z_t Y_t^{+} - T\begin{bmatrix} \hat{\lambda}12 \\ 0 \end{bmatrix}\right] \quad (7)$$

Equation (7) $Z_t = (X_t' D_t')'$ *and* $Y_t^{+} = Y_t - \widehat{\omega}_{12}\widehat{\Omega}_{22}^{-1}\hat{\varepsilon}_2$ indicates transformed data. $\hat{\lambda}_{12}^{+} = \widehat{\omega}_{12}\widehat{\Omega}_{22}^{-1}\widehat{\Lambda}_{22}$ represents the estimated bias correction term with the long-run covariance matrices $\widehat{\Omega}$ *and* $\widehat{\Lambda}$ and their respective elements that are computed through the use of $\varepsilon_t = (\hat{\varepsilon}_{1t}', \hat{\varepsilon}_{2t}')'$.

Dynamic Ordinary Least Squares (DOLS) Model: DOLS is a parametric model which clearly estimates the lagged first difference regressors (Saayman, 2010). This model suggests that the added value of lags (q) and leads (q) of ΔX_t reduces the long-run correlation between error terms (ε_{1t} and ε_{2t}) (Belke and Czudaj, 2010). The leads and lags of ΔX_t eliminate asymptotically any possible biasness due to endogeneity or serial correlation. The DOLS presentation can be written as follows:

$$Y_t = X_t'\beta + D_t'\gamma_1 + \sum_{j=-q}^{r} \Delta X_{t+j}'\delta + \varepsilon_{1t} \quad (8)$$

Where the DOLS estimator is given by $\hat{\theta}_{DOLS} = (\hat{\beta}', \hat{\gamma}_1')'$ the number of leads and lags will be selected using the Akaike information criterion (AIC). Stock and Watson (1993) suggest that DOLS is more robust in data series with small observations as compared to other alternative long-run estimators, including models proposed by Engle and Granger (1987), Johansen (1991) and Phillips and Hansen (1990).

Canonical Cointegrating Regressions (CCR) Model: The CCR model transforms variables into a cointegrating regression that removes the second-order bias of the OLS estimator. The transformation of variables has the ability to eliminate endogeneity caused by the long-run correlation of Y_{1t} and Y_{2t} (Montalvo, 1995). From equation (6), the CCR presentation can be written as follows:

$$\hat{\theta}_{CCR} = \begin{bmatrix} \hat{\beta} \\ \hat{\gamma}_1 \end{bmatrix} = \left[\sum_{t=1}^{T} Z_t^{*} Z_t^{*\prime}\right]^{-1} \sum_{t=1}^{T} Z_t^{*} Y_t^{*} \quad (9)$$

From equation (9), $Z_t^{*} = \left(X_t^{*\prime}, D_t'\right)'$, $X_t^{t} = X_t - (\widehat{\Sigma}^{-1}\widehat{\Lambda}_2)'\hat{\varepsilon}_t$ and $Y_t^{*} = Y_t - \left[\widehat{\Sigma}^{-1}\widehat{\Lambda}_2\tilde{\beta} + \begin{bmatrix} 0 \\ \widehat{\Omega}_{22}^{-1}\,\widehat{\omega}_{21} \end{bmatrix}\right]'\varepsilon_t$ represents the transformed data. The coefficient of $\tilde{\beta}$ represents the estimates of the cointegrating equation that uses static OLS $\widehat{\Lambda}_2$ is the second column of $\widehat{\Lambda}$ and $\widehat{\Sigma}$ is the estimated contemporaneous covariance matrix of error terms. Montalvo (1995) asserted that CCR is similar to the FMOLS estimator, except that FMOLS only transforms the endogenous variable and corrects the OLS estimates in the regression of the modified Y_{1t}.

4. Empirical Results and Analysis

The study utilises two unit root tests to determine if variables are stationary or not and analyse the integration properties of data through the Augmented Dickey-Fuller and Phillips Perron Tests. The graphical analysis of the data series in level form revealed that data series of almost every variable is non-stationary, however, after converting these variables into the first difference, the series became stationary, i.e., I(1). The unit root results are not presented in this paper but available upon request from the author(s). Asterio and Hall (2016) assert that determining the order of integration is extremely important as one proceeds to estimate cointegration test.

Table 1: Summary of Cointegrating Test Assumptions

Date: 02/08/17 Time: 21:00
Sample: 1980 2015
Included observations: 34
Series: LEMP LFDI LGDP
Lags interval: 1 to 1

Selected (0.05 level*) Number of Cointegrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Trace	1	1	0	0	0
Max-Eig	1	1	0	0	0

*Critical values based on MacKinnon-Haug-Michelis (1999)

Source: Researcher's own estimations.

Table 1, shows five different assumptions that can be chosen with regard to the possible cointegration among the variables. The results show that cases 1 and 2 indicate that only one cointegrating relationship exists among the variables. However, in practice cases 1 and 5 are not plausible for macroeconomic time series data analysis. While case 3, 4 and 5 indicates no sign of cointegration. Therefore, case 2 provides stronger support for cointegration since both the trace and maximum statistics confirm one cointegrating relationship. Hence, the study proceeds to estimate a cointegration based on case 2.

Table 2: Cointegration Results

Date: 02/08/17 Time: 21:01
Sample (adjusted): 1982 2015
Included observations: 34 after adjustments
Trend assumption: No deterministic trend (restricted constant)
Series: LEMP LFDI LGDP
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.490514	39.97842	35.19275	0.0141
At most 1	0.266829	17.05046	20.26184	0.1306
At most 2	0.173956	6.497663	9.164546	0.1556

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.490514	22.92797	22.29962	0.0408
At most 1	0.266829	10.55279	15.89210	0.2866
At most 2	0.173956	6.497663	9.164546	0.1556

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Researcher's own results.

In the light of the model selection criterion, the FPE and AIC were employed when selecting a lag order within a second order VAR model since the data set is relatively small for this particular study. This procedure led to the selection of order (p) = 2 through the use of FPE and AIC. Table 2 indicates that the null hypothesis of zero cointegrating vectors ($r = 0$) is rejected by both the trace (39.98 > 35.19) and the maximum eigenvalue (22.93 > 22.30) tests, at the 0.05% significance level. The null hypothesis of almost one cointegrating vector ($r = 1$) cannot be rejected by these two tests since the trace statistic (17.05 < 20.26) and the maximum eigenvalue (10.55 < 15.90). The relationship of one cointegration vector is then estimated and reported in equation 9, in the same pattern as β_{12} and β_{13} cointegration equation in equation 4.

The VECM Long-Run Relationship and Short-Run Adjustment Coefficients: The estimated VECM short and long-run equation is presented as follows:

$$\Delta LEMP_t = \mathbf{-0.02(62.6} + LEMP_{t-1} + \mathbf{0.64} LFDI_{t-1} - \mathbf{5.2} LGDP_{t-1}) + \mathbf{0.38} \Delta LEMP_{t-1} - \mathbf{0.13} \Delta LFDI_{t-1} + 0.18 \Delta LGDP_{t-1} \quad (10)$$

Cointegration results confirmed that variables are cointegrated and there is only one cointegrating vector in the system. The theory suggests that long-run coefficients of the VECM ought to be interpreted as an opposite sign due to the negative signs in the ECM equation. The long-run coefficient (β_{12}) suggests that a 1% rise in FDI will cause employment to decrease by 0.64% per annum, statistically significant at 1%. On the other hand, the elasticity of employment to GDP, β_{13} (5.23) is of the correct positive sign and statistically significant at 5%. This is plausible because a rise in GDP ought to lead to a significant increase in employment. These results support the "Jobless Growth" theory proposed by Ricardo (1821), which states that there is a negative relationship between investment, output expansion and job creation because capital investment is a perfect substitute for labour in the economy. The empirical evidence of a negative impact of FDI on employment levels has been reported by a number of global researchers, such as Pinn et al. (2011); Wei (2013) and Onimisi (2014).

Some of the possible reasons for FDI to have a negative effect on employment levels are that FDI may displace domestic investment in such a way that the net effect on employment is less than the number of people employed directly by FOEs. Pinn et al. (2011) suggested that when FDI involves the acquisition of domestic firms instead of establishing new enterprises, the domestic employment level will stay the same, and if the foreign investor rationalises the firm, employment levels are even more likely to decrease in the domestic labour market. Fedderke and Romm (2006) asserted that the nature of FDI is more capital-intensive than labor-intensive and capital investment favors the employment of a few skilled workers. Hence, employment opportunities that are created may be for relatively skilled labour, rather than the unskilled labour that is in excess supply in the South African labour market. According to Pinn et al. (2011), FDI can decrease employment levels by withdrawing investments and shutting down local firms by imposing intense competition in the domestic market. Some of the worrying factors for South Africa include rigid labour market policies, militant labour unions and excessive unskilled labour, which makes it difficult for foreign investors to invest in labor-intensive industries that will promote employment for unskilled labour market segment.

The Short-run Adjustments Coefficients: The VECM results reported -0.024 speed of adjustment, which means that employment is moving by 0.024% in the current year in order to adjust the long-run disequilibrium as a result of employment deviating from this equilibrium by 1% in the previous year. This error correction term makes economic sense because it indicates that there is no strong pressure on employment to restore long-run equilibrium whenever there is a disturbance in the system. The low speed of adjustment for employment may suggest that there are some other important factors that affect employment in South Africa, apart from FDI, which could be the level of education, labour costs, inflation and trade union rigidity, among others. The error correction term for LFDI is significant but possesses the incorrect sign, i.e., LFDI falls by 0.15% in this period as a result of LEMP overstepping its equilibrium in the previous period. Theoretically, it ought to adjust to equilibrium by increasing since it shares a negative long-run relationship with the dependent variable. However, the adjustment coefficient is very low and not destabilising to the long-run equilibrium relationship. The short-run adjustment of LGDP to a previous period overshooting of LEMP, relative to its long-run co-integrating relationship, has the correct negative sign and the magnitude of 0.017% is plausible. The Granger causality tests show that employment has a bi-directional causal relationship with FDI significant at 5% significance level.

Single Equation Models: Single equations methods produced plausible results when employing all six variables in the model specification, whereas VAR/VECM produced plausible results when estimating the model using three main variables which include employment, FDI and GDP.

The Ordinary Least Squares (OLS) Model Results: The OLS method seeks to examine the interaction between FDI, GDP, inflation rate, trade openness and labour cost on employment. The estimated OLS model results are as follows:

$$LEMP = \mathbf{-6.70} - \mathbf{0.13}LFDI + \mathbf{0.65}LGDP + 0.5INF - 0.2TOP + \mathbf{0.13}LLC \qquad (11)$$
$$[-4.44] \quad [-4.31] \qquad [4.92] \qquad [1.62] \quad [-1.01] \quad [2.78]$$

A negative elasticity coefficient of FDI suggests that if FDI increases by 1%, employment levels would decrease by 0.13% in the long-run. The results also suggest that employment responds positively due to an increase in GDP and inflation rates as suggested by economic theory. However, inflation and trade openness are both statistically insignificant to affect employment in the long-run. According to estimated results, labour cost also positively impact employment levels with 0.13%, implying that if labour cost increases by 1%, employment would rise by 0.13%. On the other hand, trade openness has an inverse relationship with employment levels in the South African economy, implying that a 1% increase in trade openness would result to employment contracting by 0.2% in the long-run.

Fully Modified Ordinary Least Squares (FMOLS) Model: The FMOLS results are estimated with the non-prewhitened Barlett kernel, Newey-West fixed bandwidth = 40.000 model. The estimated equation of the FMOLS is reported as follows:

$$LEMP = \mathbf{-18.66} - \mathbf{0.16}LFDI + \mathbf{1.72}LGDP + \mathbf{1.0}INF - \mathbf{1.0}TOP + 0.12LLC \qquad (12)$$
$$[-9.10] \quad [-3.45] \qquad [11.01] \qquad [2.15] \quad [-2.91] \quad [1.55]$$

The results of a FMOLS model indicate that there is a significant negative long-run relationship between FDI and employment levels. The results suggest that a 1% rise in FDI causes employment to decrease by 0.16% in the long-run. A positive coefficient of GDP implies that a unitary increase in GDP leads to a 1.72% rise in employment levels, *ceteris paribus*. These elasticity coefficients are both statistically significant at 1% level of significance. As expected, inflation positively impacts on employment with the elasticity coefficient of 1.0. A negative coefficient of -1.0% for trade openness suggests that a 1% rise in trade openness would result in a 1.0% decrease in employment. A positive coefficient of labour cost suggests that a 1% rise in labour cost would result in a 0.12% increase in employment levels.

However, the coefficient elasticity of trade openness is not theoretically plausible in the conventional sense because the more the country becomes open to trade, the more employment and growth transpires in the country. The major reason for this deviation from conventional theoretical perspectives concerning the negative impact of trade openness on employment could be as a result of cheap imports that are imported from countries with low economies of scale and cheap labour costs, which could result to a negative effect on domestic output levels, and thus employment. The coefficient result of labour cost is also not theoretically plausible, since it is expected that a rise in the cost of labour will correlate with a decrease in employment levels, and vice versa. The main reason could be that it is the cost of labour for skilled worker that is increasing, rather than unskilled labour, which is in excess supply in the South African labour market.

The Dynamic Ordinary Least Squares (DOLS) Model: The long-run equilibrium equation of the DOLS model is reported as follows:

$$LEMP = \mathbf{-16.98} - \mathbf{0.24}LFDI + \mathbf{1.61}LGDP + \mathbf{2.0}INF - \mathbf{1.0}TOP + \mathbf{0.28}LLC \qquad (13)$$
$$[-5.29] \quad [-5.21] \qquad [6.68] \qquad [3.03] \quad [-2.05] \quad [3.06]$$

The results produced by the DOLS complement the results estimated by the FMOLS, and hence the VECM long-run estimates. The above equation (13) suggests that 1% rise in FDI causes employment to decrease by 0.24%, *ceteris paribus*. The long-run positive coefficients for GDP, inflation and labour costs indicate that a 1% change in these variable would lead to a 1.61%, 2.0%, and 0.28% increase in employment, respectively and all statistically insignificant at 1% level of significance. On the other hand, a negative coefficient of trade openness reveals that if trade openness increase by 1%, employment would contract by 1.0%. Moreover, there is a unidirectional causal relationship running from FDI to GDP at 5% level of significance. There was no causal link observed between employment and GDP, which implies that these two variables are strongly exogenous to explain the movements in employment.

The Canonical Cointegration Regression (CCR) Model: The estimated CCR regression equation is reported as follow:

$$LEMP = \mathbf{-18.25 - 0.16}LFDI + \mathbf{1.68}LGDP + \mathbf{1.0}INF - \mathbf{1.0}TOP + 0.13LLC \quad (14)$$
$$[-8.98] \quad [-2.93] \quad [11.46] \quad [1.75] \quad [-2.80] \quad [1.30]$$

The CCR results suggest that increasing FDI inflows by 1% would result in a 0.16% decrease in employment in the long-run at 1% level of significance, *ceteris paribus*. In contrast, a 1% increase in GDP, inflation and labour cost causes employment levels to rise by 1.68%, 1.0% and 0.13% at 1%, 10%, and labour cost is insignificant to affect employment, respectively. Moreover, a negative coefficient of trade openness indicates that a 1% rise in trade openness would lead to employment to contract by 1.0%. These results validate the results obtained from the VECM, OLS, FMOLS and DOLS.

Summary of the Empirical Results: This section gives the summary of the overall empirical results estimated by both multiple and single equation methods. Table 3 below presents the summarised results of both short and long-run coefficients for each variable affecting employment (LEMP) for the purpose of simplicity when discussing and comparing the empirical findings.

Table 3: Summary of Long-Run and Short-Run Relationships

Sample Size 1985 to 2015 (Annual Data, i.e., 36 Observations)						
Variables	**VECM**		**OLS**	**FMOLS**	**DOLS**	**CCR**
	SR	**LR**				
LEMP	0.38**	-	-	-	-	-
	[2.55]					
LFDI	-0.13***	-0.64***	-0.13***	-0.16***	-0.24***	-0.16***
	[-3.26]	[2.18]	[-4.31]	[-3.50]	[-5.21]	[-2.93]
LGDP	0.18	5.21**	0.65***	1.72***	1.61***	1.68***
	[0.56]	[-2.88]	[4.92]	[11.01]	[6.68]	[11.46]
INF	-	-	0.5	1.0**	2.0**	1.0*
			[1.62]	[2.15]	[3.03]	[1.75]
TOP	-	-	-0.2	-1.0***	-1.0*	-1.0***
			[-1.01]	[-2.91]	[-2.05]	[-2.80]
LLC	-	-	0.13***	0.12	0.28***	0.13
			[2.78]	[1.55]	[3.06]	[1.30]

Notes: SR and LR denote short-run and long-run, respectively. T-statistics are shown in parenthesis [ ]. ***, **and * indicate statistical significance level at 1%, 5% and 10% respectively.

The summary of results for VECM, FMOLS, DOLS and CCR methods provide evidence of a long-run cointegrating relationship between employed variables in both single and systems of equations. These empirical findings clearly demonstrate that the effect of FDI on employment levels in the South African economy is negative and highly significant at 1% significance level in both short and long-run relationship in all models under consideration. The results for both system and single equation models generate a negative short and long-run coefficient capturing the impact of FDI on employment. The short-run coefficients of FDI estimated by the VECM and OLS model are -0.13% for both models significant at 1% level of significance. The empirical findings of this study are plausible and make economic sense because all models that were estimated produced coefficients that point in the same direction in the long-run. In the long-run, multiple and single equation methods complement one another, suggesting that the FDI negatively and significantly affect employment and its long-run coefficients range across the following spectrum under VECM, FMOLS, DOLS and CCR respectively: -0.64%, -0.16%, -0.24% and -16%. These are all significant at 1% level of significance. The OLS model shows that if FDI increases by 1%, employment will fall by 0.13%, significant at 1% level of significance in the long-run. Hence, all models that test for a long-run co-integrating relationship suggest that FDI has a negative and statistically significant impact on employment levels in the long-run in the economy of South Africa. The VECM results reveal that if FDI increases by 1%, then employment levels would contract by 0.64% in the long-run.

The FMOLS, DOLS and CCR results suggest that a 1% rise in FDI would lead to a 0.16%, 0.24%, and 0.16% fall in employment level in the long-run, respectively. These findings are consistent with the empirical literature conducted in the same subject area as shown in the work of Jenkins, (2006), Wei (2013) and Onimisi, (2014), among others. The long-run coefficient elasticity of LGDP indicates that GDP plays a very important role in increasing employment levels in South Africa's economy. The estimated results of the VECM, FMOLS, DOLS and CCR suggest that if GDP rises by 1%, employment levels will increase by 5.21%, 1.72%, 1.61%, and 1.68%, at 5% and 1% level of significance, respectively. This finding is in line with economic theory and empirical evidence presented by prior studies on the same subject. Two of the six variables inflation and labour costs also have a positive impact on employment in the long-run, as only suggested by single co-integrating regression equations, i.e. FMOLS, DOLS, and CCR model, since the VECM only estimates the interaction between employment, FDI and GDP. The elasticity magnitude of inflation ranges from 1.0%, 2.0% and 1.0% significant at 5% for FMOLS and DOLS, and significant at 10% for CCR, respectively. The coefficients for labour costs are 0.12%, 0.28% and 0.13% under FMOLS, DOLS, and CCR respectively, and only DOLS coefficient is significant. On the other hand, co-integrating regression equations found that trade openness was negative and statistically insignificant to affect employment levels in the long-run.

The coefficients' magnitudes of trade openness are -1.0% for all three single co-integrating regression equation (FMOLS, DOLS, and CCR) at 1%, 10% and 1% level of significance, respectively. This implies that a 1% increase in trade openness would lead to a 1.0% decline in employment. The OLS coefficient for trade openness was also found to be negative but statistically insignificant in its influence on employment. OLS results suggest that a 1% rise in trade openness would lead to a 0.2% decrease in employment. This finding also conflicts with the findings of prior studies. However, the economic reasoning behind this relationship could be that our major trading partners are providing cheap imports, which could lead to a negative impact on domestic output levels and thus employment. The single-equation model (OLS, FMOLS, DOLS, and CCR) provides results that are consistent with those of the VECM method in all cases, with respect to both short and long-run coefficients of employment, FDI and GDP. The magnitudes of the coefficients of variables tend to vary closely between the VECM multi-equation approach and the single equation models. The implication of negative short and long-run coefficient estimates is that FDI cannot be used to promote employment levels in the economy, but they could be good for growth and other development objectives of the country. These empirical findings suggest that FDI inflows lead to a jobless growth in the South African economy, as suggested by Ricardo (1821) in the "Jobless growth" theory.

5. Conclusion

The empirical results from both systems (VAR/VECM) and single (OLS, FMOLS, DOLS, and CCR) equations models reveal that FDI inflows result to contraction of employment levels in both short and long-run outlook of the South African economy. Studies carried out by Wei (2013) and Onimisi (2014) also came to the same conclusion that FDI has a negative effect on employment. The findings are also in line with the "Jobless Growth" theory formulated by Ricardo (1821) which states that there is a negative relationship between investment, output expansion, and job creation because capital investment is a perfect substitute for labour in the economy. The results are also supported by scientific literature which suggests that FDI are more capital-intensive and therefore tend to sacrifice labor-intensive employment opportunities. The study recommends that it is imperative for South Africa to continue to promote policies that aim to attract FDI for the purpose of improving other macroeconomic developmental objectives that will create job opportunities to help reduce a high unemployment rate, and also to develop a social compact with trade unions to accept lower wages for the unskilled labor market segment, so that appropriate FDI targeting labor-intensive industries becomes viable. This could be done through special economic zones that make it particularly attractive for low-wage, highly labor-intensive investment projects to flourish in South Africa.

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Appendix: The VECM Results for Cointegrating Vectors

Vector Error Correction Estimates
Date: 02/08/17 Time: 21:03
Sample (adjusted): 1982 2015
Included observations: 34 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1		
LEMP(-1)	1.000000		
LFDI(-1)	0.638470		
	(0.29246)		
	[2.18314]		
LGDP(-1)	-5.217160		
	(1.81103)		
	[-2.88077]		
C	62.63943		
	(22.9595)		
	[2.72826]		
Error Correction:	**D(LEMP)**	**D(LFDI)**	**D(LGDP)**
CointEq1	-0.024308	-0.149597	-0.016949
	(0.00921)	(0.03812)	(0.00554)
	[-2.63933]	[-3.92415]	[-3.06127]
D(LEMP(-1))	0.381655	-0.187462	-0.001161
	(0.14981)	(0.62008)	(0.09006)
	[2.54766]	[-0.30232]	[-0.01289]
D(LFDI(-1))	-0.134343	0.154786	-0.041877
	(0.04117)	(0.17040)	(0.02475)
	[-3.26326]	[0.90835]	[-1.69206]
D(LGDP(-1))	0.181374	-1.276555	0.281131
	(0.32212)	(1.33332)	(0.19365)
	[0.56306]	[-0.95742]	[1.45177]
R-squared	0.490297	0.162308	0.124363
Adj. R-squared	0.439327	0.078539	0.036799
Sum sq. resids	0.037295	0.638984	0.013479
S.E. equation	0.035259	0.145943	0.021196
F-statistic	9.619287	1.937567	1.420254
Log likelihood	67.61525	19.31811	84.91735
Akaike AIC	-3.742074	-0.901065	-4.759844
Schwarz SC	-3.562502	-0.721494	-4.580272
Mean dependent	0.015992	0.177272	0.021313
S.D. dependent	0.047088	0.152036	0.021597
Determinant resid covariance (dof adj.)		1.07E-08	
Determinant resid covariance		7.35E-09	
Log likelihood		173.6580	
Akaike information criterion		-9.274000	
Schwarz criterion		-8.555713	

Income and Subjective Financial Well-Being as Determining Factors of Life Satisfaction

Dickason (Koekemoer), Z. Munyai, L. S. Ferreira, S. J.
North West University, South Africa
Zandri.Dickason@nwu.ac.za, lsmunyai@gmail.com, 23261048@nwu.ac.za

Abstract: The purpose of the investment is to improve the current level of life satisfaction by achieving investment goals. Investors tend to attain high levels of life satisfaction when their investment goals are achieved and lower levels of life satisfaction when goals are far from achievement. The idiosyncratic characteristics of an individual may often hamper the achievement of investment goals and ultimately influence the level of life satisfaction. These characteristics can either contribute towards low life satisfaction or high life satisfaction. Income and the subjective financial well-being play a determining role in whether an investor has a positive or negative life satisfaction. Hence, the aim of this study was to determine whether income and subjective financial well-being have an influence on the life satisfaction of investors. The results of this study reveal that a strong relationship exists between income, financial well-being, and life satisfaction. Investors who perceived themselves, to have high financial well-being were more likely to have high life satisfaction. On the contrary, investors with low perceived financial well-being were more likely to have low life satisfaction. Similar results were observed for income and life satisfaction since a positive relationship was also found.

Keywords: *Life satisfaction, income, subjective financial well-being, investors, South Africa*

1. Introduction

A good life arguably appears to be something most individuals in the world strive to achieve. Thus, the ultimate goals sought out by human beings are happiness. Merkle, Egan, and Davies (2015) maintain that the happiness of investors is often perceived only as a consequence of spending opportunities that originate from the returns of investing. What constitutes a good quality of life, satisfaction with life as well as financial well-being remains to be variant in a wide range of research studies. According to Boyce, Brown, and Moore (2010) happiness and money are understood to be interrelated, therefore ultimate happiness should be derived from higher income. In contrast, the study by Ericson and Vinson (2012) indicated that the high correlation between income and life satisfaction exist. Cohn, Fredrickson, Brown, Mikels, and Conway (2009) stated that findings have disputed the life satisfaction and positive emotions relation, implying that individuals become happy because they have acquired living resources, rather than feeling better.

A question related to a good quality of life has always existed for decades. Unique approaches had been used to construct it in the past. There are various measures utilised to determine the level of life satisfaction of individuals. According to Diener and Ryan (2009) measures such as self-report had been widely used to evaluate life satisfaction of individuals which is subjective. During the last decade, new developments have emerged in the field of human well-being. Numerous studies have attempted to explain life satisfaction and found that it is mostly formulated by affect and cognitive factors. Pavot and Diener (2008), support that satisfaction with life involves judgement which can be evaluated. Levels of life satisfaction do change due to a change in information sources utilized when creating judgements of life satisfaction (Schimmack, Diener, & Oishi, 2002). Other research studies have found that satisfaction with life is influenced by other life domains such as marriage (Bernard, 1972), race-related stress and income (Utsey, Payne, Jackson, & Jones, 2002).

Life domains such as job satisfaction, housing satisfaction and financial satisfaction represent an individual`s life judgement about satisfaction with their lives. Tang, Chen, Zhang, and Tang (2018) defined financial well-being as investors' adoption of behaviour in regards with money to formulate fundamental concerns and decide on strategies that will accomplish great happiness and financial goals. An assumption exists that happiness comes from having money. Kahneman and Deaton (2010) argue that it only life evaluation that can be improved by high income, whereas emotional well-being cannot. As identified by the regret theory, a good investment decision that yields good returns or meets an investors expectation brings a sense of happiness. However, a number of studies show that significant differences do exist, albeit findings are somewhat contradictory. The income hypothesis theory also suggested that people are only concerned about income comparison with others in a social economy in an attempt to compare their satisfaction with life (Boyce et al., 2010).

It can be argued that extensive research with regard to investors' life satisfaction is needed, thus of importance in order to inform potential investors and those individuals planning to venture into the world of investing in the future (Zhang & Howell, 2011). In South Africa, there is limited research that has been conducted regarding investors' life satisfaction and their financial well-being. Dickason, Nel, and Ferreira (2017) and Ferreira, (2018) noted that South African male investors have high satisfaction with life compared to female counterparts. The knowledge of income, satisfaction with life and financial well-being of investors is important in order to understand their investment decisions. Moreover, satisfaction with life serves as a crucial factor for the good quality of human lives, thus contributing towards the methods of improving the lives of people (Diener & Ryan, 2009). In recent years, there has been an increasing interest in satisfaction with life data analysis. Krueger and Schkade (2008) maintain that between the year 2000 and 2006, many books and over 157 studies have been released about life satisfaction data. Despite numerous theories, a relation between research and theory is still required for an improvement in the field of well-being (Diener & Ryan, 2009). However, for the purpose of this research paper emphasise the influence of income and subjective well-being on satisfaction with life. Therefore, this paper aims to investigate how personal income levels and subjective financial well-being may influence the life satisfaction of investors.

2. Literature Review

The state of being wealthy, healthy and happy is mostly derived from the Aristotelian view, which follows a notion that every human being strives towards achieving the goal of eudemonia which is commonly used as well-being (Dodge, Daly, Huyton, & Sanders, 2012). Defining subjective well-being requires one to consider that it consists of dimensions which formulate it. Earlier studies such as Cantril (1965) attempted to define well-being through a psychological approach, whereby pleasant emotions should surpass unpleasant ones in order to feel satisfied with life. A considerable amount of literature has been published on well-being. Most of these studies seem to agree that well-being is composed of three classifications or categories. Firstly, Kruger (2011) argued that well-being originates from individual experiences, thus naturally becomes subjective. Secondly, it involves positive factors not merely negative aspects. Finally, it is not limited to a single domain of life, but also includes other different domains of life. In contrast, Diener, Kahneman, and Helliwell (2010) believe that subjective well-being consists of satisfaction with life, absence of unpleasant and presence of pleasant effect. Whereby, affect represent emotions and moods, whereas satisfaction with life brings up the cognitive aspect. Rath and Harter (2010) findings from many previous studies led to a discovery of emerged five distinguishable statistical components of well-being, which are interrelated and universal in nature. These components are as follow according to Rath and Harter (2010):

- Career Well-being: Being fond of your daily activities and use of time.
- Financial Well-being: Enhancing your financial security and reducing stress by effective management of your economic life.
- Social Well-being: Having love as well as relationships that are strong in your life.
- Physical Well-being: Maintaining sufficient energy and excellent health in order to be productive each day.
- Community Well-being: Being able to participate and contribute towards making the community you live in a better place.

The above-listed components are dimensions of well-being and are the ultimate goals of individuals in life. A myriad of attempts has been made to measure well-being to determine the various levels. The measures vary in terms of use but have the same goal of achieving certain findings. Some of the measures include that of Pavot and Diener (2008). The life satisfaction scale, which, Krueger and Schkade (2008) provided five items are related (Cantril, 1965). Although these measures are important and widely used in the well-being study field, Diener and Ryan (2009) have observed some shortcomings of biasedness in terms of self-report measures indicating that a variance setback with the method may be encountered in the results. Thus, many researchers made use of other alternative self-report approaches that include but not limited to facial measures.

More recent research by Xiao (2014), provided that subjective well-being involves three components such as life satisfaction, negative and positive effect. It is believed that life satisfaction is the broad concept that comprise of judgmental factors about an individual`s life. In terms of investor life satisfaction, Merkle et al. (2015) found that investors tend to be happy when they have achieved success in trading through the active decision making rather than passive decision making. In addition, Merkle et al. (2015) contends that investor life satisfaction can be derived from relative comparison amongst investors. Thus, generated overspending, but closely applied to the performance of the investment. A vast number of theories in the field of well-being have been developed. Diener and Ryan (2009) provided that based on social comparison theory, an individual compares oneself with another to determine whether their lives are valuable. Furthermore, social comparison theory used to be a most commonly used estimator of life satisfaction in various domains of life. According to an investigation by Diener and Ryan (2009) Telic theories exist as well, whereby life satisfaction is achieved when an individual reach a specific goal. A significant relationship between the traits of an individual (age, education and income) and financial well-being was found positive, while, a negative relationship with debts and a number of children was found in past research studies.

Yin-Fah, Masud, Hamid, and Paim (2010) believe that this explains that an individual is fully aware of their resources and how they can utilize these resources in the present and future. Kruger (2011) defines financial well-being as being able to spend on others not just on oneself, thus making a major difference in life as a whole. Furthermore, this researcher goes on to say that when this has been done, there is a link explained between well-being and money since those individuals with high level of social and career well-being often prosper when it comes to their overall well-being. In contrast, the study by Goldsmith (2005) indicated that financial well-being is the ability to protect oneself and family against risks of bankruptcy, illnesses, unemployment and also having adequate finance. According to Taft, Hosein, and Mehrizi (2013) researchers have different views about the definitions of financial well-being due to varying attitudes. Kruger (2011) maintains that having high-income levels enable individuals to buy pleasant experiences repeatedly not only for oneself but for others as well which stimulates happiness, thus this explains the link between financial well-being, income and satisfaction with life. In addition, the investigation concerning financial well-being has been conducted in the past since it has been regarded as a crucial quality of life factor (Taft et al., 2013).

3. Methodology

The following sections within the methodology represent the research approach and instrument used, the sample size, formulated hypothesis and statistical analysis.

Research Instrument: A quantitative research approach was utilised for this study, making use of a questionnaire which comprised of two sections. The focus of the first section was a collection of investors` information in terms of their incomes ranging from (<R200 000, R200 000 – R400 000, R401 000 – R600 000, R601 000 – R800 000, >R800 000) by which investors regardless of gender was used for the study. Diener, Inglehart, and Tay (2013), maintains that measurement scales are generally assumed to be reliable; thus, when conducted using same condition similar scores are attained. The focus of the second section was utilisation of satisfaction with life scale measure to determine investors` life satisfaction as well as subjective financial well-being (well-being as perceived by investors). According to Pavot and Diener (2008) the main intent of satisfaction with life scale is to evaluate the level of life satisfaction based on an individual`s self-report. A Likert scale with seven maximum points obtained from Pavot and Diener (2008) study was utilized for investor responses, whereby one point is strongly disagree, and seven points strongly agree.

Research Sample Selection: South African investors are the main population target for this study since it is a vital group for research. Permission was granted by the investment company in South Africa for data collection using the client base of the company. Simple random sampling was used as means for sample selection since a complete list of population members could be drawn at random, whereby each investor had an equal opportunity to be chosen. A sample of 600 participants (n=600) participated out of their own free will in an online questionnaire. The sample size is similar to previous studies of Taft et al. (2013) who used 300 participants. Zhang and Howell (2011) also made use of over 600 participants. The sample of this study was satisfactory based on the requirements for the statistical analysis. It is recommended that investment companies incorporate satisfaction with life and financial well-being scales into their risk profiles and these will have an effect on investors' investment choices.

Hypothesis: Based on this study background, prior scholars had found that higher income increases happiness, therefore, higher satisfaction with life; on the other hand, other scholars found contrasting evidence. The hypothesis was contrived in accordance with this study`s primary objective:

$\boldsymbol{H_0}$: *There is no relationship between financial well-being and satisfaction with life*
$\boldsymbol{H_{a1}}$: *There is a relationship between financial well-being and satisfaction with life*
$\boldsymbol{H_0}$: *There is no relationship between income and satisfaction with life*
$\boldsymbol{H_{a2}}$: *There is a relationship between income and satisfaction with life*

Statistical Analysis: Cross-tabulations and logistic binary regression were used for descriptive statistics of this study to test how income and financial well-being influence the satisfaction with life of South African investors. The estimated logistic regression is represented by the following equation:

$$\boldsymbol{SWL_i = \alpha_0 + \alpha_1 FWB + \alpha_2 INC + \mu_1} \quad (1)$$

The satisfaction with life (SWL) scale was used to create the dependent variable, whereby $\boldsymbol{SWL_i}$ presents dichotomous dependent variable – South African investors` satisfaction with life (1 is for positive satisfaction with life whereas 0 is for negative satisfaction with life). Past researchers have discovered that income and financial well-being have an influence on satisfaction with life, hence the use of satisfaction with life as the dependent variable (Pavot & Diener, 2013). The variable $\boldsymbol{\alpha_0}$ represent the constant, the coefficients are represented by $\boldsymbol{\alpha_1}$ and $\boldsymbol{\alpha_2}$, while the error term is given by $\boldsymbol{\mu_1}$. Two independent variables were created, whereby $\boldsymbol{\alpha_1 FWB}$ is given as the financial well-being of investors and $\boldsymbol{\alpha_2 INC}$ represent annual income level (0 = <R200 000, 1 = R200 000 - R400 000, 2 = R401 000 - R600 000, 3 = R601 000 - R800 000, 4 = >R800 00).

4. Empirical Results and Discussion

Descriptive Statistics and Correlation Analysis: Table 1 indicates the descriptive statistics of investors' life satisfaction whereas Table 2 illustrates the correlation analysis between income, financial well-being and life satisfaction.

Table 1: Satisfaction with Life Descriptive Statistics

Construct	No of questions	Average inter-term correlation	Standard Deviation	Skewness	Kurtosis	Cronbach`s Alpha
Satisfaction with life	5	0.611	1.427	-0.373	-0.683	0.887

Table 1 represents the Cronbach alpha above 0.8, which explains that the satisfaction with life scale is valid (Dickason et al., 2017). Diener et al. (2013) provided that 0.8 and above Cronbach alpha indicates the reliability and validity of the scale.

Table 2: Correlation between Income, Financial Well-Being and Life Satisfaction

Non-Parametric Correlation		Satisfaction with life	Financial well-being
Financial well-being	Pearson Correlation	0.588	
	Sig. (2-tailed)	0.000*	
Income	Pearson Correlation	0.272	0.359
	Sig. (2-tailed)	0.000*	0.000*

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

A significant relationship was found between financial well-being and satisfaction with life (r = 0.588, p < 0.001). As a result, the null hypothesis is rejected and the alternative hypothesis concluded with a strong strength relationship indicating practical significance. From Table 2 it can be concluded that a significant relationship exists between income and satisfaction with life (r = 0.272, $p < 0.001$). As a result, the alternative hypothesis is concluded with a small strength relationship. A significant relationship was also found between income and financial well-being (r = 0.359, $p < 0.001$). A medium strength relationship is identified between income and financial well-being where the null hypothesis is rejected and alternative hypothesis concluded. These results are in line with that of Ericson and Vinson (2012) whereby they concluded that high correlation exists between income and satisfaction with life, however, potentially differs from country to country. This study concluded that a relationship exists between income, satisfaction with life and financial well-being, however, satisfaction with life and financial well-being indicated a stronger relationship compared to income and satisfaction with life.

Investors' Life Satisfaction According to Income Categories: Table 3 indicates the cross-tabulation of the investors' life satisfaction based on investors' income categories according to financial well-being.

Table 3: Annual Income, Financial Well-Being and Life Satisfaction Cross Tabulation

Annual Income	Financial well-being	Satisfaction with life Low	High	Pearson Chi-Square
	Low	83.3%	16.7%	
R0-R200 000	Average	41.3%	58.7%	0.000***
	High	30.0%	70.0%	
	Low	85.7%	13.4%	
R200 001-R400 000	Average	51.2%	48.8%	0.000***
	High	11.8%	88.2%	
	Low	71.0%	29.0%	
R400 001-R600 000	Average	55.0%	45.0%	0.000***
	High	17.2%	82.8%	
	Low	58.5%	41.2%	
R600 001-R800 000	Average	40.7%	59.3%	0.338
	High	33.3%	66.7%	
	Low	83.3%	16.7%	
More than R800 001	Average	43.5%	56.5%	0.000***
	High	10.0%	90.0%	

*p<0.10; **p < 0.05; *** p <0.01

Table 3 categorises investors' life satisfaction into low life satisfaction and high life satisfaction in terms of their annual income and financial well-being. In the income category R0-R200 000 per annum, 83.3 percent of investors with low financial well-being also indicated low life satisfaction. Whereas, 70.0 percent of investors in this income category that indicated high financial well-being correlates with high life satisfaction. A statistical difference was found ($p < 0.01$) for this income category. In the income category R0-R200 000 per annum, 83.3 percent of investors with low financial well-being also indicated low life satisfaction. Whereas, 70.0 percent of investors in this income category that indicated high financial well-being correlates with high life satisfaction. For all other annual income groups, R200 000- R800 000, a lower perceived financial well-being was associated with lower life satisfaction, and a higher perceived financial well-being was associated with a higher satisfaction with life. A statistical difference was found ($p < 0.01$) for the income category of more than R800 001. Majority (83.3%) of the investors that indicated they have a low life satisfaction also indicated low financial well-being whereas 90.0 percent of the investors with a high life satisfaction also indicated high financial well-being. These results are similar to that of Boyce et al. (2010) that stated income is interrelated with happiness, thus higher income increases satisfaction with life.

Binary Logistic Regression: Table 4 indicates the results found for the binary logistic regression in terms of the influence of income categories and financial well-being on investors' life satisfaction.

Table 4: Binary Logistic Regression Results

Variable	B	S.E.	Wald	DF	Sig.	Exp(B)
Financial well-being (low)			103.793	2	0.000*	
Financial well-being (average)	2.903	0.297	95.601	1	0.000*	0.055
Financial well-being (high)	1.390	0.273	25.927	1	0.000*	0.249
R0 – R200 000			2.879	4	0.578	
R200 001 – R400 000	0.343	0.366	0.880	1	0.348	0.709
R400 001 – R600 000	-0.440	0.356	1.523	1	0.217	0.644
R600 001 – R800 000	-0.290	0.388	0.558	1	0.455	0.748
More than R800 001	0.028	0.437	0.004	1	0.950	0.028
Constant	1.794	0.355	25.489	1	0.000*	6.012

For this binary regression model, the Omnibus test for model coefficients was significant at 1 percent with a Chi-Square value of 153.877. Moreover, the Naglkerke R-squared test indicated that model coefficients explain 30.2 percent of the variation in investors' life satisfaction. The negative beta value (-0.180) for the equation suggests that an inverse relationship exists between the dependent and independent variables considering financial well-being, investors with average financial well-being are more likely to be satisfied with their lives than investors with low financial well-being. The p-value was significant at the 1 percent level and it can be concluded that investors with average financial well-being are 94.5 percent more likely to be satisfied with their lives compared to investors with low financial well-being. Moreover, investors with high financial well-being levels are more 75.1 percent more likely to be satisfied with their lives compared to low financial well-being investors.

These results confirm the research conducted by Kruger (2011) and Taft et al. (2013) who established a theoretical link between income, financial well-being and satisfaction with life. From the second independent variable, annual income, it can be seen in Table 4 that investors earning an annual income between R200 001-R400 000 are more likely to be satisfied with their lives than investors earning an annual income of less than R200 000. Moreover, investors earning an annual income of more than R800 001 are 97.2 percent more likely to be satisfied with their lives compared to investors earning less than R200 000 per annum. These results are therefore in line with the assumption that higher income leads to enhanced satisfaction with life as seen in the study of Ferreira (2018). Studies conducted by Boyce et al. (2010) also found a relationship between, therefore ultimate happiness should be derived from higher income.

5. Conclusion

Life satisfaction is the utmost goal of any individual. Despite the risks incorporated in investment, financial stability can be created through investment. Thus, high income can expand the investors` life choices leading to satisfaction with life. There are other life domains and demographic factors that influence satisfaction with life of investor; nonetheless they do not form a pivotal part of this study. The primary objective of the study was to analyse the relationship between income, satisfaction with life and financial well-being in the context of South African investors. The finding from this study was similar to previous research. This explains the inter-linkage between satisfaction with life and financial well-being of investors. In terms of income and life satisfaction of investors, a distinct trend of a relationship has been found, whereby an increase in the level of income prompts a strong positive life satisfaction. Moreover, it can also be concluded that high-income investors tend to have high financial well-being levels that correlate with high life satisfaction levels. Investors with high-income levels and high financial well-being levels tend to be more satisfied with their lives which can result in investors making more optimistic investment decisions.

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Fiscal Policy and External Shocks in Nigeria

Patrick Ologbenla
Federal Inland Revenue Services, Abuja, Nigeria
ologbenlapatrick@gmail.com

Abstract: The study assessed the effects of external shocks on fiscal policy in Nigeria. Vector auto-regression VAR estimating technique is adopted to achieve the set objectives of the study. The VAR model comprises of the following variables GDP, oil output, oil price, government revenue, government expenditure, external reserve, exchange rate, fiscal balance, and non-oil export. These variables represent the external shocks, the growth variables, fiscal variables and some other macroeconomic variables. The VAR results show that oil price and non-oil export are the most important external shocks affecting fiscal policy in Nigeria. It was also discovered that public debt shock has no significant impact on government expenditure. In addition, external reserve and exchange rate shocks also have a significant impact on fiscal policy. Finally, government expenditure shock failed to have a significant impact on the GDP. The implication of these results is that the effectiveness of fiscal policy in achieving macroeconomic objectives in Nigeria depends on these identified shocks.

Keyword: *External Shocks, Fiscal Policy, Government expenditure.*

1. Introduction

Over the years the fiscal policy has been a major policy used side by side monetary policy to maintain economic stability, increase output and promote the overall economic development of a country. However, attention of researchers in recent times have been more driven towards fiscal policy and one of the reasons for this is the general consensus that monetary policy only has a transitory effect on output (Tobins 1965, Sidrauski 2003, Papademous 2008). In other words, fiscal policy has been identified as a policy that tends to have long-run relationship with growth. However, there is a general belief that such policy will be highly susceptible to external influences which might mitigate it's having a sustainable effect on output over the long run period horizon it is designed for (Olasunkanmi, 2013). Two major variables of fiscal policy that is, the government revenue and expenditure have been identified to be highly prone to external influence especially in a country that is naturally endowed and heavily dependent on imported goods (World Bank, 2012). The nature of fiscal policy practiced in Nigeria for the past two decades has been in the form of deficit. That is, a major feature of fiscal policy in Nigeria over the years has been fiscal deficits.

Although the democratically elected government in 1999 adopted policies to restore fiscal discipline, the rapid monetization of foreign exchange earnings between 2000 and 2004, another era of oil windfall, resulted in large increases in government spending. In 2005 alone, government spending increased to 19 percent of GDP from 14 percent in 2000. Extra-budgetary outlays not initially included in the budget increased. Worst till, most of this spending is not directed towards capital and socio-economic sectors (CBN, 2009). As a Corollary, primary deficit worsened from an average of 2.6 percent of GDP in 1980s to 6.2 percent in 1990s. In 2002 alone, primary deficit increased to 5 percent of GDP from 2 percent in 2000. This increase in deficits results in a mounting stock of debt, ranging from 88 percent of GDP in 1980s to 96 percent of GDP in 1990s. More recently in 2010 alone, the stock of debt increases to 91 per cent of GDP from 45 per cent in 2009. According to Obinyeluaku (2009), for the past two decades, Nigeria has witnessed a considerable increase in government indebtedness beyond the issue of poor quality of public expenditure.

The ability to save windfalls from excess crude oil proceeds by the government remains critical in ensuring that government expenditure is maintained at a sustainable level that is consistent with the absorptive capacity of the economy. According to him, there has been a substantial increase in government spending, primary deficit and debt in Nigeria between 1996 and 2009. However, it has been observed that despite the huge fiscal deficit that characterize fiscal policy administration in Nigeria, the overall economy appears not to have fared very well during these periods and this has constituted a major concern to the policy makers (Olasunkanmi, 2013). Because around the period when the government was witnessing an upsurge in government expenditure which resulted in a fiscal deficit, the real GDP growth rate fell from -3.1% in 2007 to -7.6% in 2009 (World Bank 2012). The implication of this is that the accumulated fiscal deficit has not reflected in growth of Nigeria during these periods.

Furthermore, the vulnerability of many resource-endowed countries to external cyclical influence has been identified as a major cog in the wheel of progress of these countries in that; it inhibits positive synergy between policies and economic development. Consequently, World Bank Economic Reports on Nigeria in 2013, precisely in the appraisal of Nigeria economic overview and performance among others have clearly stated that there is the need to identify external factors that affect domestic policies as well as an examination of the behaviours of such policies to these external influences. This is believed will lead to the evolvement of the framework that will create enabling environment for these domestic policies to begin to yield positive impacts on economic development (see Capistran and Cuadra, 2011; Ball, 2000; Clements, Flores and Leigh, 2009). For instance, Nigeria which is an oil-rich country has her fiscal revenues to be largely coincided with oil revenue. Oil revenue accounts for nearly 80 percent of government revenues, which implies that the economy is highly exposed to price fluctuations in the world oil markets. Naturally, oil revenue is very volatile due to world oscillation in oil prices and to unpredictable changes in OPEC assigned oil quota − of which Nigeria has been a member since 1958 (Obinyeluaku 2009).

However, apart from oil-related variables, some other factors which are mostly macroeconomic variables also constitute shocks to fiscal policy. Many of these variables which vary from country to country have been identified by quite a number of researchers as external factors that might likely cause perturbation of fiscal policy variables and which can limit its influence on the economic development of a particular country (Kinnunen, Sulla and Merotto, 2013; Gosse and Guillamin, 2012). Based, on the foregoing, it appears that making the effect of fiscal policy felt positively on Nigerian economic development can be facilitated through identification of these external factors as well as studying the behavior of fiscal policy variables to them. This, according to the World Bank and other researchers identified above, will lead to restructuring in both formulation and implementation of fiscal policy so as to improve its contributions to the economic development of Nigeria (Obinyeluaku and Viegi, 2012). Consequently, the main objective of this study is to investigate the effects of external shocks on fiscal policy in Nigeria. The rest of the paper is as follows; the methodology, results and discussion, conclusions and recommendations.

2. Methodology

The model's specification, definition of variables, method of analysis and sources of data are discussed under this section

The Model: Barro and Sala-i-Martin (1992, 1995) have developed a series of models, in which investment in infrastructure affects output through the production function, as a factor along with capital and labour, in order to study the influence of the supply of public goods on growth rates. Clearly, the rate of output growth can be positively related to the share of government purchases, in the form of public services, while examining various policy implications under alternative schemes of the production function. Consequently, government expenditure in the form of public investment plays a decisive role in the performance of the economy through its influence on gross national output. Several empirical studies have also established a strong positive link between investment and output growth rates; Aschauer (1989), Baxter and King (1993), Easterly and Rebelo (1993), Dollar and Svensson (2000), and Bekaert et al. (2005).

According to Barro (1992) and Lucas (1988) in an economy that embraces a large number of competitive firms without loss of generality and aggregating across firms, the production function may be given in the following expression;

$$Y = AK^{a}(hL)^{1-a} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

Where: Y denotes output, K is capital, and L stands for labour, with αand 1-αbeing the shares of capital and labour, respectively. Parameter A reflects the constant technology level, with A>0. According to Lucas (1988) the assumption of constant returns becomes more plausible whenever, as in our case, capital is broadly viewed to encompass both human and physical capital. Indeed, parameter h represents human capital and is considered to be a function of the existing total (private and public) capital of the economy, denoted by K and G respectively, so that;

$h = \psi \frac{K^{\beta} G^{1-\beta}}{L}$……………………………………………………………………………(2)

Where: ψ>0 stands for an efficiency parameter that captures the degree of the economy's efficiently used total capital. G represents the aspect of supply of capital through government expenditure. Substituting equation 2 into 1 we have:

$Y = AK^{\alpha} \left(\psi \frac{K^{\beta} G^{1-\beta}}{L} \right)$ ……………………………………………………………………….(3)

Note that both α and β are the same being elasticities of the respective inputs. Through factorization we can rewrite equation 3 as follows;

$Y = AK^{\alpha} \left(\psi \frac{G^{1-\alpha}}{L} \right)$ …………………………………………………………………………….(4)

Where $\frac{G^{1-\alpha}}{L}$ denotes governments expenditure adjusted to the workforce population.

Re-arranging equation 4 we have the following;

$Y = A\psi K^{\alpha} \left(\frac{G^{1-\alpha}}{L} \right)$ …………………………………………………………………………….(5)

Since both A and ψ are efficiency parameters we denote the product by σ giving rise to;

$Y = \sigma K^{\alpha} \left(\frac{G^{1-\alpha}}{L} \right)$ ……………………………………………………………………………(6)

Equation 6 can be re-arranged as;

$Y = \sigma K^{\alpha} \left(\frac{1}{L} G^{1-\alpha} \right)$…………………………………………………………………………(7)

Linearising equation 7 through log we have;

$logY = log\sigma + \alpha logK + (1-\alpha) log \frac{1}{L} G$…………………………………………………(8)

Equation 8 is adopted in this study to examine fiscal policy impact on the output of Nigeria. The components of the equation are GDP which is Y, K is the gross capital formation and the fiscal component is represented with G i.e. government expenditure. However, since government expenditure is strongly linked with Fiscal deficit/surplus, G is proxy by Fd/Fs that is a fiscal balance.

Vector–Auto Regression (VAR) Model: Econometrics literature has identified VAR as a veritable means of studying the effect of shocks on an economic variable in both short and medium terms (Elbourne, 2007; Adebiyi, 2010). Formulation of the VAR model is strongly dependent on shocks identification in the VAR model and this often depends on the objectives of the researcher as well as literature. In this study, we are interested in studying shocks effects on fiscal policy and the resultant implication on the output of Nigeria. In other words, we are looking at how fiscal policy is acting as the transmission mechanism of the external shocks affecting it to the output growth of Nigeria. From literature oil price, oil output, external reserve, national debt, non-oil export volume and exchange rate have been identified by Capistran and Cuadra, (2011); Ball, (2000); Clememnts, Flores and Leigh, (2009) among others as external factors that can influence fiscal policy in Nigeria which is an oil-rich country. Fiscal variables used as transmission mechanism are government revenue, government expenditure, Fiscal deficit /surplus. And the output variable is the GDP. VAR models are seen as independent large scale macro-econometric model that do not rely on unrealistic assumptions (Elbourne, 2007). The most theoretical framework of VAR analysis as proposed by Sims (1980) used Cholesky decomposition to get impulse responses.

The construction of our VAR model follows the conventional method where the initial model is specified thus:

$y_t = A_1 y_{t-1} + A_2 y_{t-2} +, \dots \dots \dots . + A_p y_{t-p} + \mu_t$ …………………………………………(9)

Where:

y_t Represents an (nx1) vector containing n endogenous variables,

A_i *(i=1, 2,….p)* are (n x n) matrices coefficients,

And μ_t is an (n x 1) vector containing error terms.

Though the error is $\mu_t \sim iid\ N(0, \Omega)$but errors do possess tendency of correlating contemporaneously in all the equations.

There exist pn^2 Parameters in the A matrices. Equation 3.9 can be written in other form with the usage of the lag operator L which is selected through $L^k x_t = x_{t-k}$. the equation becomes:

$A(L)y_t = \mu_t$……………………………………………………………………….(10)

Where:

$A(L) = A_0L^0 - A_1L^1 - A_2L^2 - \cdots \dots \dots - A_pL^p$.

A_0= I (identity matrix) it is required that $A(L)$ lies outside the unit circle for stationarity to be ensured.

The VAR model estimated for the purpose of this study is as follows;

$GDP_t = [oilpr_t, oilout_t, extr_t, exr_t, debt_t nexp_t, govrev_t, govexp_t, fs/fd_t]$.............(11)

From the model, the shocks or the exogenous variables are; $oilpr_t$ isoil price at period t, $oilout_t$ is oil output at period t,$extr_t$ is Nigeria external reserve at period t, exr_t is Exchange rate at period t, $debt_t$ is Public debt at period t, $nexp_t$ is Non oil export volume at period t. The fiscal policy variables that act as transmission mechanism are; $govrev_t$ is Government revenue at period t, $govexp_t$ is Government revenue at period t, fs/fd_t is Fiscal balance at period t. The output variable is GDP_t is the GDP gross domestic product of Nigeria at period t. Both the impulse response function and the variance decomposition analysis is done to thoroughly examine the response of the fiscal variables to the identified shocks and also to assess the resultant effect on output growth of Nigeria.

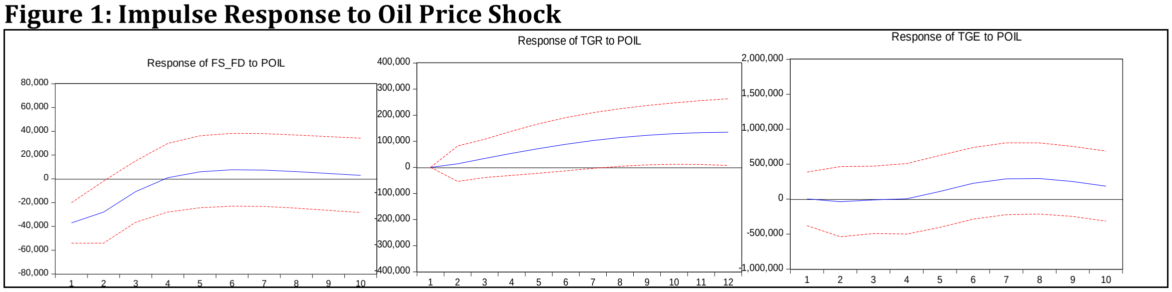
Sources of Data: Data on the fiscal variables and the output variable from 1980-2015 are sourced from the Central Bank statistical bulletin (2016). While data on the variables relating to oil especially oil price and oil output will be sourced from the OPEC database.

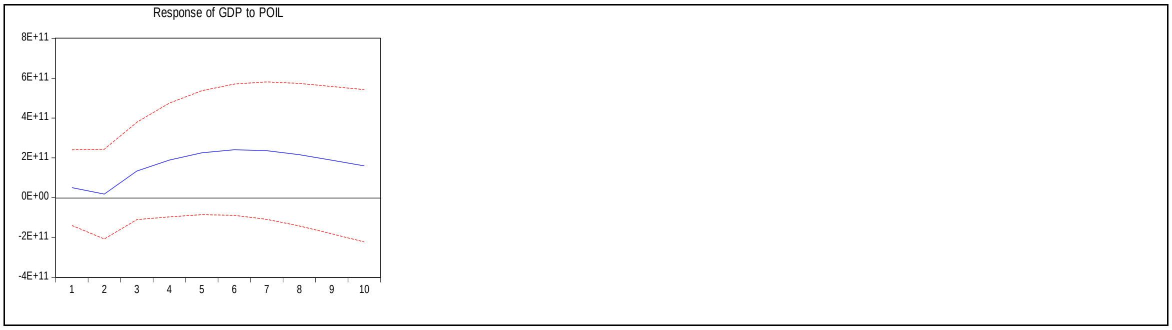
3. Results and Discussion

Non Stationarity: This study follows the work of (See Uhlig, 2005; Peersman and Smets, 2005; Vonnak, 2005; Clements & Hendry, 1995; Fève and Guay, 2006; Ibrahim and Amin, 2005) among others where levels VAR are used. The authors argued that this will prevent loss of some vital information about the data sets which might occur in the course of differencing. However, it has also been argued that the inclusion of lagged lengths of the variables in the VAR will enable the residual to be stationary even with a non stationary series that is$I(1)$ (see Beckelmans, 2005). Many study in recent times have also followed the same procedure (see Ngalawa and Viegi, 2011; Elboure, 2008; Mordi and Adebiyi, 2010; Mahmud, 2009) among others.

Impulse Response Results: The impulse response analysis of the relationship between external shocks and fiscal policy in Nigeria is based on the five identified external shocks namely; oil price, debt, non-oil export, external reserve and exchange rate. First, we consider the reactions of the variables to shock from each of the identified external shocks, in other words, the spiral effects of the shocks emanating from oil price, debt, non-oil export, external reserve and exchange rate is examined as it affects fiscal policy variables and the GDP. Secondly, in the same perspective, we also assess the responses the GDP which proxy for Nigeria economic growth to the shock emanating from the fiscal variables namely; total government revenue, total government expenditure and fiscal balance.

Figure 1: Impulse Response to Oil Price Shock





The response of the fiscal variables to one standard deviation shock in oil price is shown in figure 1. One standard deviation shock depicts a sudden rise. The response of the government revenue TGR appears to be most positive in all the responses. In other words, total government revenue exhibit a positive and significant response to the shock from oil price though it was not all that significant at the beginning of the period but as the period progresses specifically at the fourth period, positive response becomes more pronounced and significant. However, the responses from the remaining fiscal policy variables namely; government expenditure and fiscal balance is also positive but not all that significant. The same behavior is also noticed in the response of the GDP to the oil price shock. The implication is that despite the significant and positive impact that the oil price shock has on the government revenue it appears that the effect is not transmitted significantly to both government expenditure and the GDP.

Figure 2: Impulse Response to Debt Shock

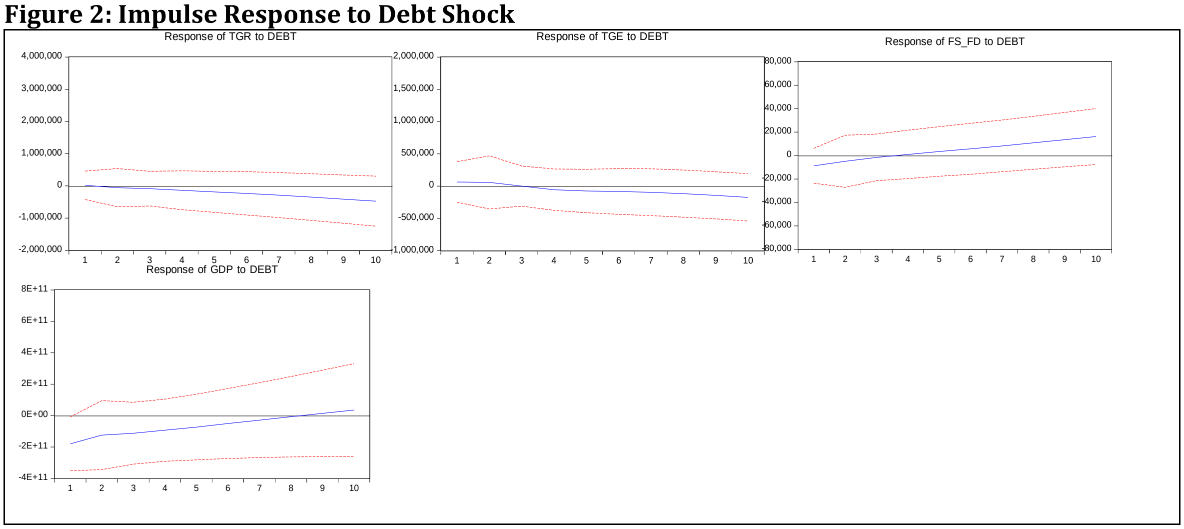
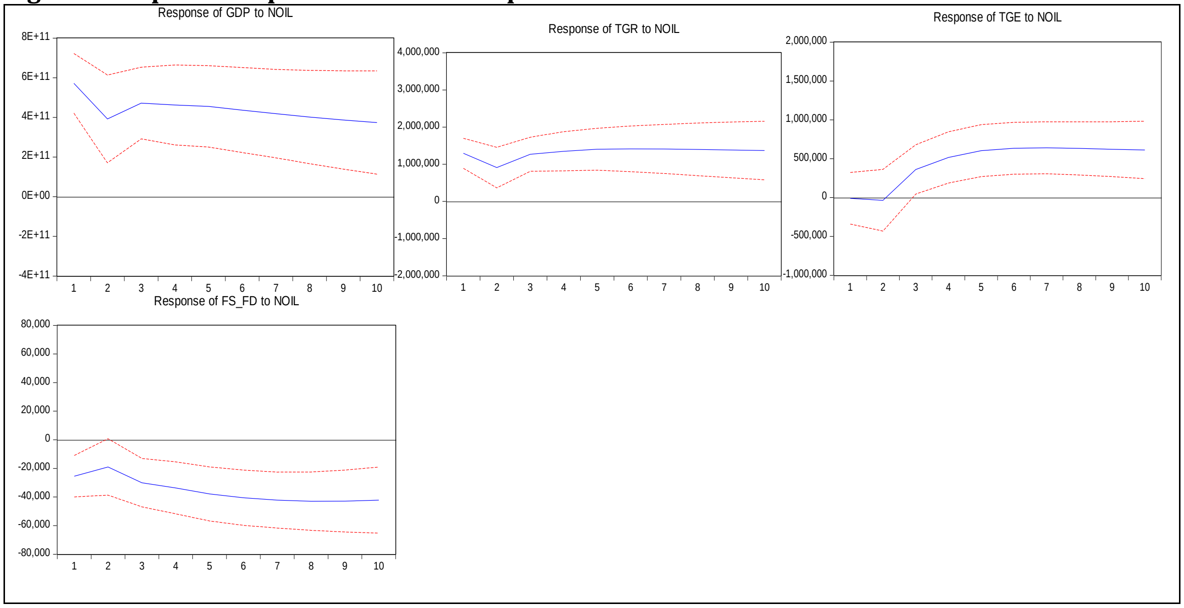


Figure 2 indicates that both government revenue and government expenditure display a downward response to a shock from debt. It is very apparent from the figure that whenever there is a shock (a sudden rise) in the national debt of Nigeria, it will have a falling impact on government revenue though the effect is not significant. In the same vein government expenditure also follows that same reaction to shock from debt. This is contrary to apriori expectation. It is believed that debt should increase the expenditure of the government in s away that it will promote output. Though the debt shock does have a positive impact on the fiscal balance and the GDP they are also not significant. The overall implication is that despite the sudden rise in debt, the effect is not significant on the GDP of Nigeria. Figure 3 explains the responses of the fiscal variables to one standard deviation in non-oil export. The result indicates that government revenue firstly showed a falling reaction before picking up in the 2nd period. This rise is sustained through the remaining periods. It should also be noted that the response is also significant.

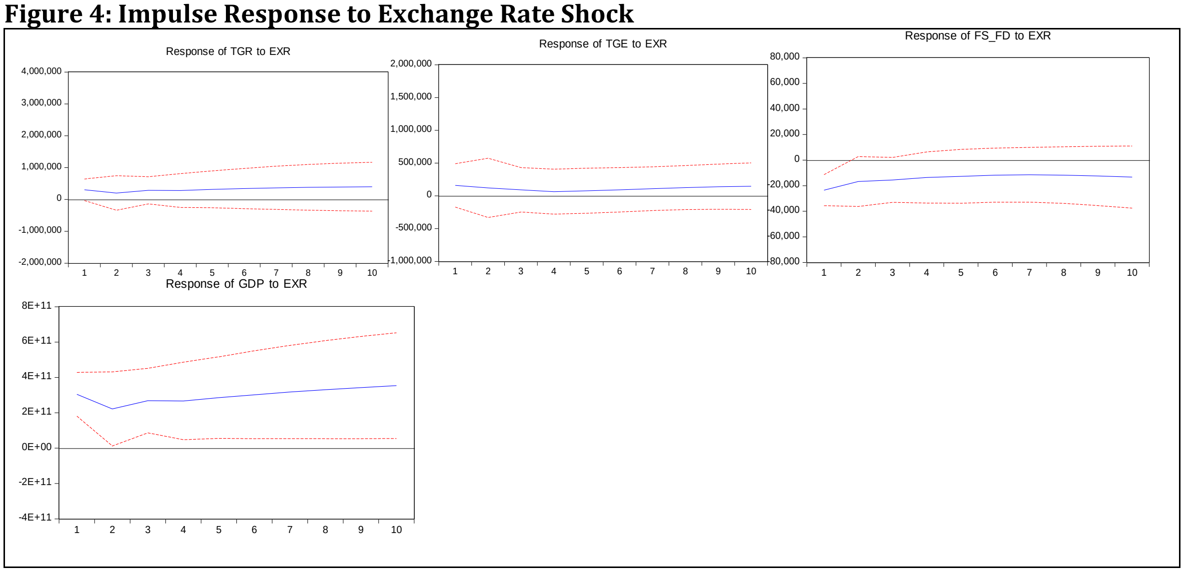
Figure 3: Impulse Response to Non-Oil Export Shock



In the same vein, the response of government expenditure is also significantly positive. The same response is exhibited by the GDP in response to the chains of reaction from government revenue and expenditure. All of these responses are significant. However, the fiscal balance still ends up in significant deficit despite the positive effects the shock has on government revenue.

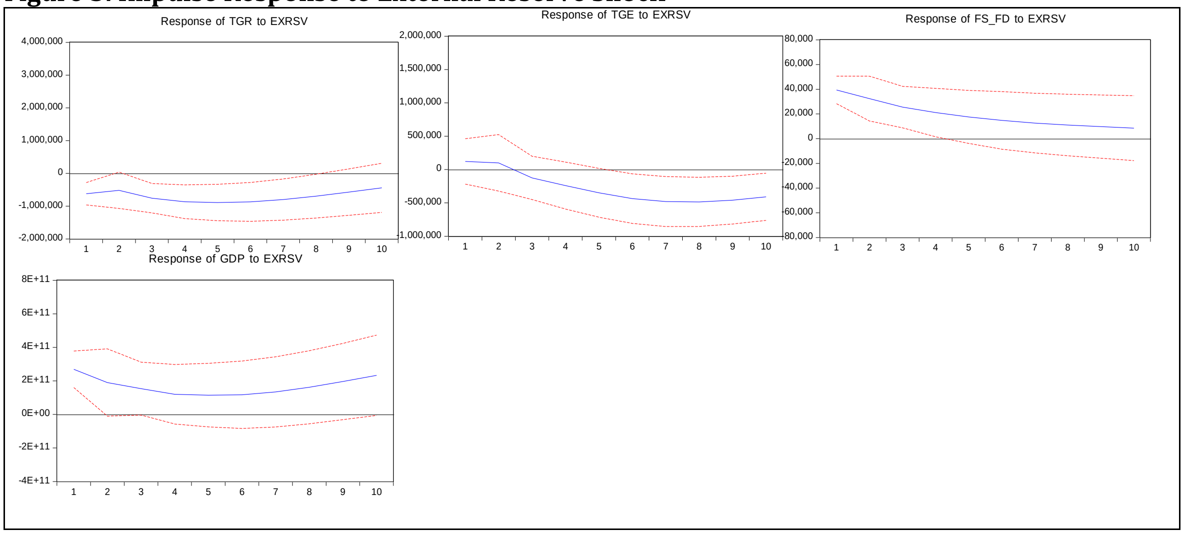
Variance Decomposition: Variance decomposition explains the percentage or unit response of each variable in our model to the different structural shocks. In other words, we try to explain the contribution of various structural shocks on government revenue, government expenditure, fiscal balance and gross domestic product GDP.

Figure 4: Impulse Response to Exchange Rate Shock



The responses of the variables to one standard deviation in the exchange rate are shown in figure 4. The result shows that the shock has a positive impact on both the fiscal variables and the GDP. But the response of the GDP is significant. This shows that currency appreciation is inimical to the growth of Nigeria. The results have contributed to the growing literature that discourages over-valuation of currency especially in a resource-endowed country like Nigeria. In addition, the shock also has a positive implication on all the fiscal variables. Though, the effect might not be as significant as its impact on the GDP which is the proxy for economic growth. Figure 5 indicates the responses of the variable to one standard deviation in the external reserve.

Figure 5: Impulse Response to External Reserve Shock



The shock emanating from the external reserve appears not to have a positive effect on the fiscal variables. It is noted from the diagram that the shock makes both government revenue and expenditure to fall significantly. Though at the 6th period they appear to be picking up but yet they are still below the zero line margins. Fiscal balance also falls entering deficit gradually. It has a decreasing effect on the GDP very briefly and initially but picks up at the fourth period and no longer significant.

Table 1: Variance Decomposition of Total Government Revenue

Period	Poil	Debt	noil	exr	Exrsv
3	15.35997	0.088590	34.01672	1.781659	10.12381
6	16.33588	0.517571	43.66666	2.260647	15.54031
9	15.36709	1.494098	48.30123	2.891313	15.21828
12	14.21673	3.247708	51.27826	3.474700	12.81877

Table 1 shows the contributions of each structural shock to the behaviour of government revenue in Nigeria. The result shows that the price of oil and non-oil exports appear to be the largest shocks that affect the behaviour of government revenue. They both contribute the largest percentage of shock to the total shock received by government revenue in Nigeria. Exchange rate and debt appear to be the least contributors of shock to government revenue. This underscores the significance of oil price and non-oil export in determination of government revenue in Nigeria.

Table 2: Variance Decomposition of Total Government Expenditure

Period	Poil	Debt	noil	exr	Exrsv
3	0.024660	0.118103	2.118075	0.781862	0.652104
6	0.730369	0.259634	13.12963	0.758009	4.631243
9	2.629646	0.582932	20.75238	1.006402	9.567669
12	2.575933	1.458512	25.59125	1.334544	10.72387

From table 2 external reserves joins non-oil export as two important shocks that influences government expenditure. Though oil price is the next, comparatively non-oil export and external reserve affect government expenditure more than oil price.

Table 3: Variance Decomposition of Fiscal Balance

Period	Poil	Debt	noil	exr	Exrsv
3	15.23042	0.691176	12.77599	7.186850	21.82580
6	9.720577	0.612193	25.10277	6.389256	17.37220
9	7.415504	1.552374	34.63209	5.920514	13.78315
12	5.967948	3.748731	39.80784	6.179501	11.41201

The dominance of oil prices external reserve and non-oil export continues as important shocks that affect fiscal policy variables. While oil price and external reserve have the highest impact in the first quarter there, impact starts falling and non-oil export shock contributions start rising from the second quarter. The implication of these results is that the behaviour of fiscal policy variables is highly influenced by the three.

Table 4: Variance Decomposition of GDP

Period	Poil	debt	Noil	Exr	Exrsv	Tgr	Tge
3	1.261686	3.667494	42.76191	13.00275	8.025662	24.06511	0.805798
6	5.668131	2.635668	45.10649	15.69570	5.948408	14.56438	1.573792
9	7.227572	1.860222	42.99664	18.73924	6.113010	10.19785	1.221826
12	6.544059	1.610279	39.91907	21.52687	8.659550	7.793295	0.963117

The GDP is a proxy for economic growth and table 4 shows its behaviours to both the fiscal policy shocks and the identified external shocks. The result indicates that exchange rate which appeared to be inactive in the previous discussions on variance decomposition appears to be an important shock to economic growth. The situation corroborates the reaction of the GDP to the shock from exchange rate as explained in the impulse response analysis. It was shown under the impulse response result that over-valuation of naira will definitely have a significant adverse effect on the output GDP. The variance decomposition of the GDP is following the same results. Exchange rate, non-oil export is the most important shock dictating the behaviour of the GDP. Among the fiscal policy variables, government revenue contributes the highest shock to the behaviour of the GDP.

4. Conclusion and Recommendations

Findings from the study have shown that government revenue among the fiscal variables is mostly affected by external shocks. This is followed by government expenditure and fiscal balance in that order. Oil price shock and non-oil export shock are the most important shocks affecting government revenue. Notwithstanding, positive and significant influence of oil price shock on government revenue appears not to have reflected on the GDP because the shock fails to produce any significant impact on the GDP. In support of this, variance decomposition result shows that government revenue does not have a sustainable, significant influence on the GDP. This is similar to the findings of Usenobong and Johnson (2015) who concluded that several funds released by the Nigerian government for investment purposes have failed to have an impact on the economy.

Again, the non-oil export shock is the most important shock affecting government expenditure. Other shocks that affect government expenditure immensely is the external reserve. The power of the government to spend appears to be affected whenever there is a rise in external reserve. The result also shows that debt shock has not significantly increased government expenditure. The implication is that government borrowings appear not to have reflected in the government expenditure in Nigeria. This is an indication that the debt incurred by the Nigerian government might not have been used for productive expenditures. Moreover, non-oil export is the only shock that might positively influence the expenditure of the government. Fiscal balance is mostly affected by external reserve shock and non-oil export shocks. External reserve shock is likely going to lead to a fiscal deficit. This is noted from the Nigerian economy were for most of the past two decades the external reserve has been rising and yet deficit budgeting still take preeminence in the country’s fiscal policy practice.

The reverse of this action is produced by the non-oil export shocks. The GDP is also mostly influenced by the non-oil export shock and exchange rate shock. The government revenues shock fails to produce a sustainable effect on the GDP. While government expenditure shock has very little effect on the GDP. Importantly, the findings from the study have supported the growing literature on the adverse effect of over-valuation of currency on the growth of a country. The study has shown that if Nigeria Naira is over-valued, it will have adverse implications on the GDP. In other words, it will affect local production especially from the tradable sector/real sector of the economy and by implication, it will affect the growth of the economy. Finally, the dominance of the non-oil export shock can be explained within the framework of VAR. Vector auto-regression impulse response analysis and the variance decomposition explains the effect of one standard deviation of a shock on a variable.

The implication here is that a sudden upsurge in the non-oil export is capable of improving government revenue, government expenditure and the gross output (GDP) significantly. The findings from the study are also supporting the growing literature advocating diversification of economy as a panacea for the economic woes of resource-endowed country like Nigeria. For instance, among 65 countries that can be classified as natural resources–rich, only Botswana had long term investment exceeding 25% of its GDP between 1970 and 1998 and also recorded GNP per-capita growth exceeding 4% in a year(see Olomola, 2006; Gylfason, 2001). The major reason for the success of this economy was its ability to effectively diversify through accelerated growth in the domestic output which was made possible through a vibrant non-oil sector (Olomola, 2006).

Policy Recommendations: Following the findings and the conclusions from the study, some course of actions might be necessary for Nigeria. This course of actions will definitely improve the economic gains of Nigeria from fiscal policy practice even in the realities of the external shocks.

- Diversification of the economy: Several studies in the past have advocated economic diversification as a good solution to the lopsidedness in the growth of the oil-rich countries and other resource-endowed countries. Nigeria which also belongs to this group of countries can benefit more from her fiscal practice if the economy is diversified.
- Funding of the non-oil sector: Findings from the study have shown what non-oil export is capable of doing. The real sector of the economy should be funded by the oil proceeds; these include the industrial sector especially the manufacturing and the agricultural sectors. This sector is capable of preventing the fiscal variables from been adversely affected by the external shocks.
- Encouraging fiscal prudence: Government revenues shocks fail to produce a sustainable positive influence on the GDP. This shows that government revenue has not been efficiently utilized to promote the economic growth of Nigeria. This is where corruption, embezzlement, fund diversion among others are evident.
- Encouraging competitive exchange rate: Pegging of exchange rate should be discouraged. Excessive valuation of currency or appreciation of currency might adversely affect gross output. The real sector of the economy might not be able to cope with such an exchange rate and this might lead to a decline in domestic output.
- Limit in debt accumulation: Excessive public debt might be inimical to the growth of Nigeria. The study has shown that none of the variables responds positively and significantly to debt shock. This includes the GDP. Therefore effort must be made to reduce public debt as much as possible since it has not significantly influenced the gross output of Nigeria.

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Enhancing the Theory of Planned Behaviour by Incorporating Social Marketing Behavioural Enhancers: A First VS Second Order Confirmatory Factor Analysis Approach

Ayikwa, Lutete Christian, De Jager, Johan W., Van Zyl, Dion
Tshwane University of Technology, Pretoria West, South Africa
chrisayikw@yahoo.fr, DeJagerJW@tut.ac.za, dionvanzyl@gmail.com

Abstract: This study investigated the need to extend the TPB model to SMBE variables as suggested by Ayikwa and De Jager (2017) in the quest to better understand sexual behavioural patterns using the Confirmatory Factor Analysis (CFA) approach. The main research question to be answered: "how the TPB and SMBE variables should be structured into a validated CFA model?" Data were carefully collected in South Africa's Gauteng Province using a disproportionate multi-stage stratified random sampling method to retain 607 respondents. The survey questionnaires distributed consisted of revisited pre-existing instruments. The data were then analysed by CFA model that followed Exploratory Factor Analysis (EFA) to determine the suitability of the sample size. Assessment of the second order extended TPB model confirmed that it is worthwhile to integrate SMBE variables while extending the TPB model in the context of HIV/AIDS related behaviours.

Keywords: *Theory of Planned Behaviour, Social marketing, Health Behaviour change, Confirmatory Factor Analysis, Exploratory Factor Analysis and HIV/AIDS*

1. Introduction

The Theory of Planned Behaviour (TPB), which is widely applied in numerous fields devoted to behavioural change, has been found the best in predicting both behaviour and intention of performing that behaviour when extended to additional variables through theoretical and empirical evidence (Conner & Armitage, 1998). According to behavioural theory, the TPB itself is not less than an extension of the Theory of Reasoned Action (TRA) that identifies intentions as being the most immediate antecedents of any voluntarily performed behaviour (Kiriakidis, 2015). The original TRA comported two variables assuming to capture behavioural predictors that are attitudes (ATT) and subjective norms (SN), which later were added to perceived behavioural control (PBC). This refers to the acquired experience from the past regarding the performance of a behaviour and obstacles preventing its occurrence to form the TPB (Tao & Fan, 2017). Thus, the extension of pre-existing models to one or more new components is common in the attempt to better understand social phenomena and behaviour occurring within a society under specific conditions in order to effect behavioural change. This study tested the theoretical framework proposed by Ayikwa and De Jager (2017) who proposed incorporating the SMBE alongside the traditional TPB components. The investigation consisted of assessing if the theoretical extended TPB model has a good fit with the empirically manifested structural model in order to validate the inclusion of the SMBE. A comparison between a first and second order Confirmatory Factor Analysis (CFA) approaches is made to identify the best approach to be used in a quest for a valid model.

2. Literature Review

The TPB offers a parsimonious framework that helps in determining the direct antecedents of a behaviour establishing the cause-effect relationships between predictors and behaviour as well as the intention to perform that behaviour (Ajzen & Fishbein, 1980). It also enables detailed and in-depth analysis of the specific beliefs that act as a lever of behaviour and intention to perform that behaviour (Godin & Kok, 1996). The TPB variables widely applied in behavioural fields to understand the prediction of specific individuals' behaviour towards an object, group of objects and situation are often related to the issue of attitude's unidimensionality (Kiriakidis, 2015). Attitude is defined by Fishbein (1967, p. 389) as "a learned predisposition to respond to an object or class of objects in a consistently favourable or unfavourable way." This newly developed perspective in the conceptualisation and definition of attitude stressed the view that the overall propensity to adhere to a specific sexual behaviour, or not to, is the same among individuals, while such individuals may express a different degree of acceptance and rejection towards adhesion to that sexual behaviour (Fishbein, 1967).

This unidimensionality has been indexed as the main problem for the failure to accurately predict individuals' sexual behaviour. Furthermore, PBC, which is assumed to predict behaviour both directly and indirectly through intention, is often influenced by internal and external factors that enable the occurrence of sexual behaviour under complete volitional control (Ajzen, 1985). Importantly, Tao and Fan (2017) argue that the relationships between the TPB's ATT, SN and PBC are not necessarily significant, and are affected by uncontrollable factors such as human behavioural beliefs. Thus, the inclusion of additional components as suggested in the context of this study find justification in the quest for designing a comprehensible framework of what may explain individuals' sexual behaviours with regard to the struggle against the spreading of the HIV virus. The human immunodeficiency virus (HIV) that has its roots in the DR Congo's Central Africa (Khonde, 2006) has since spread worldwide, burdening most the continent it originates from, and plaguing almost all the sectors of life (Luboobi & Mugisha, 2005). In the absence of a cure for acquired immunodeficiency syndrome (AIDS), researchers have pointed out the need to promote the well-known "ABC" behaviours to slow the propagation of the virus (Ayikwa L. C., 2013). It is therefore believed that abstinence from sex, being faithful to one partner and condom use are key sexual behaviours in tackling the epidemic to achieve an HIV/AIDS free generation.

In order to change individual's sexual behaviour towards the socially marketed "ABC" favourably, tailored campaigns are engineered to equip individuals with adequate knowledge regarding the meaning of HIV/AIDS, modes of acquisition of the virus and methods of prevention against getting infected (Agarwal & De Araujo, 2012). Indeed, the raising of HIV/AIDS awareness among the population addresses the numerous misconceptions, beliefs and customs inked within societies and communities which pave ways for risky sexual behaviour as well as discrimination and stigmatisation of persons living with HIV/AIDS (Ayikwa & De Jager, 2015). Hence, the efficient use of communication channels and strategies often employed by marketers is crucial in propagating the much-needed HIV/AIDS information as well as the implementation of effective distribution strategies to make condoms available for everyone. These efforts to increase individuals' HIV/AIDS level of knowledge, exposure to HIV/AIDS information and accessibility to condoms, made borrowing commercial marketing principles, techniques and strategies constitute what this study named Social Marketing Behavioural Enhancers (SMBE). The SMBE are therefore believed to contribute substantially alongside the TPB traditional components to affect individuals' sexual behaviours and intention to perform these behaviours.

Figure 1: **First Order Latent Variables Extended TPB Model**

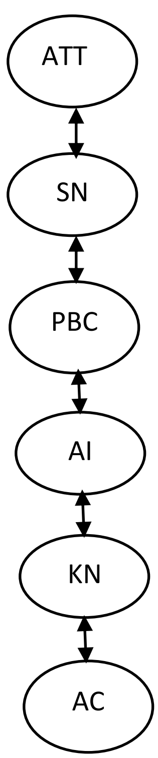
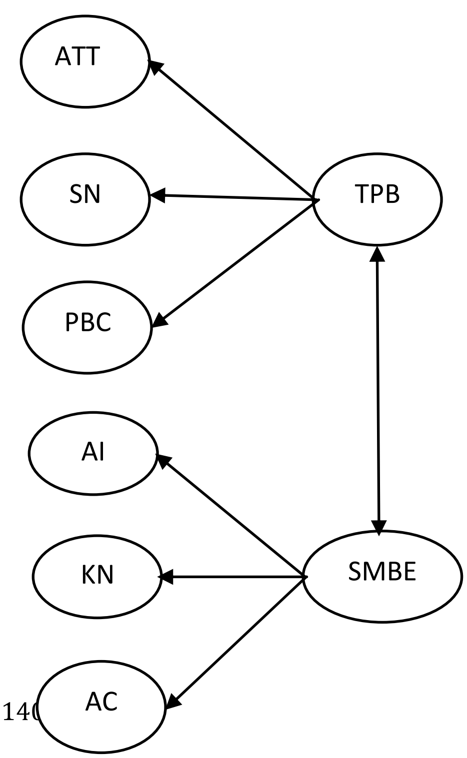


Figure 2: **Second Order Latent Variables Extended TPB Model**



As noted in the Introduction, the aim of the study was to see if the extension of TPB to SMBE variables could best fit the data to support their inclusion using a CFA. Two approaches have been adopted, with the first considering both TPB and SMBE variables as first-order latent variables of their underlying dimensions. The second used a second-order latent variables approach, making the TPB and SMBE latent variables of their respective underlying first-order latent variable dimensions. Figures 1 and 2 above illustrate both approaches.

3. Research Method

Instrumentation: This study adopted a questionnaire instrument comprising three sections to collect data from a randomly selected sample of Gauteng's inhabitants. It was developed on the basis of the framework proposed on the procedures for measuring complex multidimensional research variables (Lin, 2013). Questions and scales used in several other studies devoted to the HIV/AIDS epidemic, with particular emphasis on those conducted in Sub-Saharan Africa, and more specifically the Southern Africa region such as Sacolo et al. (2013), Ugwu (2012), Mathews et al. (2009), Mayhew et al. (2009), Tameru et al. (2012), Imaledo (2012) and Selikow (2004), were considered to influence this study's instrument. The first section captured basic information describing the respondents' profile such as gender, age, level of education, occupation, marital and socioeconomic status. The second section consisted of a set of TPB-related questions measuring attitude (ATT), subjective norms (SN) and perceived behavioural control (PBC) constructs by five-point Likert-type scale from 1 indicating "strongly disagree" to 5 indicating "strongly agree." ATT was measured through 42 questions, SN 38 questions and PBC were measured by 16 questions. All three traditional TPB constructs were measured with regards to the promoted "ABC" behaviours. The third section of the instrument was related to the SMBE constructs.

The responses to the questions regarding accessibility to HIV/AIDS information (AI) and HIV/AIDS knowledge (KN) constructs consisted of a categorical yes/no response. The AI construct was measured by 17 questions enumerating the media that have provided respondents with HIV/AIDS information or advertisement as they recalled. HIV/AIDS knowledge related to the general meaning, signs and symptoms of the disease, and mode of transmission. Methods to prevent the acquisition of HIV virus were assessed by asking 44 questions. On the contrary, the accessibility to condoms (AC) construct which measured the easiness for respondents to get condoms through formal and/or informal outlets consisted of a three-point Likert-type scale from 1 indicating "not easy" to 3 indicating "very easy." Respondents' easiness to get condoms was measured by 6 questions. The overall validity and reliability analysis of the questionnaire demonstrate that items used in this study contributed meaningfully to their respective scales with, an average item-total correlations > .2 indicating a good internal consistency which turned out to be reliable (Cronbach alpha > .60) as shown in Table 1.

Table 1: Validity and Reliability Analysis on Constructed Scales of the Questionnaire

Construct	Number of items	Average item-total correlations	Cronbach Alpha
ATT	42	.46	.93
SN	28	.40	.86
PBC	12	.56	.87
AI	17	.42	.82
AC	6	.45	.72
KN	44	.22	.75

ATT = Attitude; SN = Subjective norms; PBC = Perceived behavioural control; AI = Accessibility to HIV/AIDS information; AC = Accessibility to condoms; KN = HIV/AIDS level of knowledge.

Sampling and Data Collection: The questionnaire of the study was administered by trained research assistants involved in data collection. They were requested to approach respondents at random, preferably in their area of residence. The criteria of eligibility included being a South African citizen, living in one of the Gauteng Province's cities, and aged eighteen years and above. Only, participants that consented to answer the study questionnaire were invited to participate anonymously and confidentially. The present study used a disproportionate multi-stage stratified random sampling method to retain 607 respondents out of an estimated 13.5 million Gauteng Province's inhabitants (Statistics South Africa).

The sampling procedures consisted, first, in dividing the Gauteng Province into metropolitan and district municipalities. Secondly, the metropolitan and district municipalities were divided respectively by three and two in reflection of the administrative distribution of the province. The three metropolitan municipalities are Ekurhuleni/East Rand-Germiston, Johannesburg and Tshwane-Pretoria. The two district municipalities include Sedibeng and West Rand. Thirdly, the list of cities and towns within each municipality served as a sampling frame from which cities and towns that constituted the study's research fields were randomly selected. Although the numbers of cities and/or towns were determined according to each municipality's population in the province's population distribution, participants, who are the study's unit of analysis, were chosen randomly. However, the researcher tried to determining selected municipalities' sample sizes to reflect on their respective population distribution's weight to obtain a realistic representative distribution of the Gauteng Province's population. Thus, Alexandra, Boksburg, Centurion, KwaThema, Mamelodi, Randburg, Sandton, Sebokeng, Soshanguve, Soweto, Tembisa and Wedela were the selected cities and/or towns.

4. Empirical Analysis and Results

Descriptive Statistics: The demographic profile of the 607 respondents as summarised in Table 2 indicates that the sample mostly comprised female participants (51.1%), and young adults aged 25-34 (44.3%) were the major age group. Educationally, most of the respondents achieved standard 10/grade 12 (38.4%). Respondents are in majority full-time employees (39.4%). The commonly reported marital status by respondents was "single" (62.8%), and most of them are classified as impoverished with regards to their socioeconomic status (25.5%).

Table 2: The Demographic Profile of the Respondents (N = 607)

	Frequency	Percentage (%)
Gender		
Female	310	51.1
Male	297	48.9
Age		
≥18-24	152	25.0
25-34	269	44.3
35+	186	30.6
Level of education		
No schooling	1	.2
Postgraduate degree	33	5.4
Some Primary schooling	2	.3
Standard 10/Grade 12	233	38.4
Standard 5/Grade 7	2	.3
Standard 7/Grade 9	6	1.0
Standard 8/Grade 10	19	3.1
Standard 9/Grade 11	33	5.4
Tertiary certificate	122	20.1
Tertiary diploma	102	16.8
Undergraduate degree	54	8.9
Occupation		
Do piece jobs for money	48	7.9
Employed full time	239	39.4
Employed part time	91	15.0
Full-time student/learner	68	11.2
Other	27	4.4
Unemployed	134	22.1

Marital status		
Divorced/Widow[er]	17	2.8
Living together	62	10.2
Married	143	23.6
Other	4	.7
Single	381	62.8
Socioeconomic status		
Impoverished	155	25.5
Almost impoverished	100	16.5
Medium	120	19.8
Almost wealthy	139	22.9
Wealthy	93	15.3

Exploratory Factor Analysis: The data collected from the research ground by means of participants' response to the questionnaire were subjected to SPSS version 23.0 as the first stage of analysis to identify the items component loading with exploratory factor analysis (EFA). The reason behind running an EFA was to identify the variables structure of the questions explaining the specified underlying dimensions of each construct considered in the present study (Belkin, 2009). Principle Component Analysis extraction method and varimax rotation were employed to generate the uncorrelated extracted component with an eigenvalue greater than 1.0 with the application of SPSS version 23.0. The standardized factor loading and Cronbach's alpha were used under the EFA to determine the underlying questions for the extracted component structure of each variable. According to Hair, Babin, Black and Anderson (2010) the accepted threshold valued of standardized factor loading is .5, but this study employed a .3 cut-off as in Shyu, Li and Tang (2013). Although it depends on what is being measured, Nunnally and Bernstein (2010) suggest that a value greater than .7 is regarded as a satisfactory level of internal consistency reliability while Cohen, Manion and Morrison (2011) point out a value of .5 as acceptable for broad group measures like the present study.

Remarkably, the Cronbach alpha of all the constructs were adequate scoring each a value above .6. Furthermore, the data suitability for factor analysis and the sample adequacy were determined through Kaiser-Meyer-Olkin (KMO) and Bartlett's Test for Sphericity. The KMO coefficients for all constructs were higher than the acceptable level of .5 and their Bartlett's Test for Sphericity values was significant at $p < .001$ providing evidence that the study's sample size (607) was appropriate for carrying out EFA. Following the EFA that demonstrated convergent validity and reliability of the study's instrument, constructs have been reorganised with regard to their new underlying components (grouped questions). ATT was best explained by six new components, as was SN. PBC was best explained by three new components, as was AI. AC, on the other hand, was best explained by two new components, while KN was explained by 10 new components. This study used Amos software tools version 23.0 to test the adequacy of the study's extended TPB measurement models for both first and second order latent variables approaches by means of the Maximum likelihood (ML) estimation method.

Confirmatory Factor Analysis: The purpose of conducting a CFA is to determine the consistency of the various composites parameters such as factor loadings, factor variances, covariance, indicator error variances and error covariance with an observed set of data (Kline, 2010). ML provides this study with the goodness-of-fit indices such as the chi-square (CMIN), degree of freedom (DF), Bentler-Bonett normed fit index (NFI), relative fit index (RFI), non-normed fit index (TLI), comparative fit index (CFI), root-mean-square error of approximation (RMSEA) and the standardised root-mean-square residual (SRMR) to assess the models under investigation. The fit statistics threshold for CFA is shown in Table 3. On the other hand, convergent validity and internal consistency were measured by means of Average Variance Extracted (AVE) and Composite Reliability (CR). A threshold is often set at ≥ .5 for the AVE as well as the standard factor loading for convergent validity but lesser values are acceptable to proceed with the overall model fit test if offending estimate does not occur (Huang, 2007). Offending estimate is manifested by negative error covariance and/or standardized regression coefficient close to 1 (Shyu, Li, & Tang, 2013). Although a ≥ .7 benchmark is generally used to consider the adequacy of the CR, a renowned researcher in 1978, Nunally, suggested a lesser value of ≥ .5 as acceptable to ascertain reliability (Shyu, Li, & Tang, 2013).

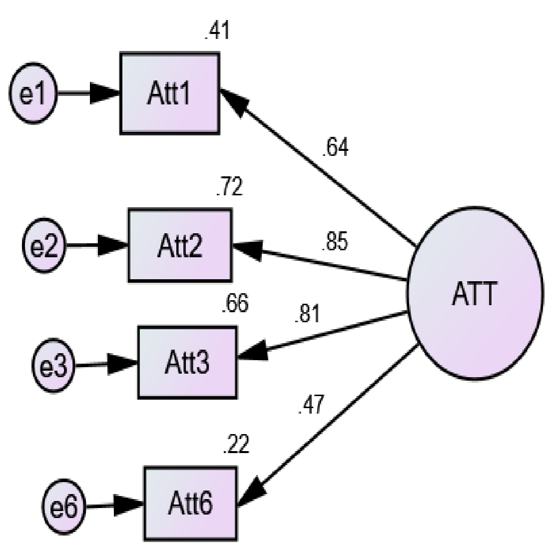
Table 3: Reported Fit Statistics for CFA and SEM

Measure	Name	Cut-off for good fit
CMIN/DF	Chi square/Degree of freedom	≤ 5.0 to 2.0
NFI	Bentler-Bonett normed fit index	≥ .9 to 1
RFI	Relative fit index	> .9
TLI	Non-normed fit index	> .9 (sometimes > .8)
CFI	Comparative fit index	≥ .9 to 1
RMSEA	Root-mean-square error of approximation	≤ .8
SRMR	Standardised root-mean-square residual	≤ .8

As per the required procedures, each construct's measurement model was firstly assessed individually (MacKenzie, Podsakoff, & Podsakoff, 2011). Estimation of the TPB-related constructs demonstrated that the six component variable model of ATT and SN dimension suggested a poor fitting model in the initial estimate. The CMIN/DF, RMSEA and SRMR were above the permissible level while GFI, NFI, CFI, TLI, AVE and CR were below the acceptable level. Hence, the component that showed factor loading < .4 was removed for being the major cause of poor fitting. The resulting model was found to be a good fitting model with recommended indices as illustrated in Figures 3 and 4. On the contrary, the three component variable model of PBC dimension suggested a perfect fitting model in the initial estimate as illustrated in Figure 5. All the paths shown in the final models of TPB-related constructs were significant as critical ratios were above 1.96.

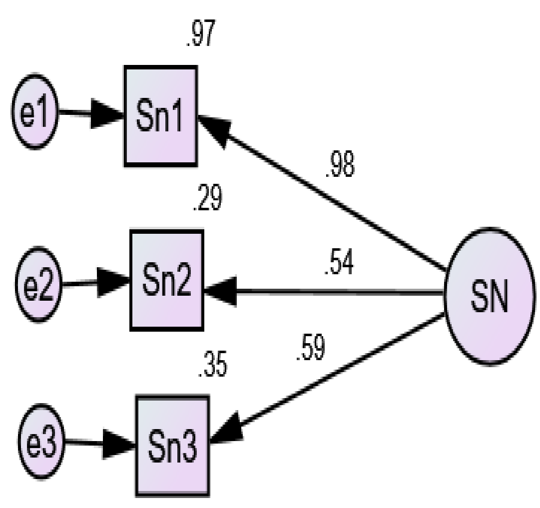
Estimation of the SMBE-related constructs showed that the three component variable model of AI dimension and the two-component variable model of AC dimension suggested a perfect fitting model in the initial estimate as illustrated in Figure 6 and **7**. However, an attempt was made to remove channels 3 which showed a factor loading < .4 from AI measurement model but it led the model to be unidentified. Thus, the decision was made to keep the component channels 3 in the model as offending estimate did not occur. On the contrary, the 10 component variable model of KN dimension suggested a poor fitting model in the initial estimate. The CMIN/DF, RMSEA and SRMR were above the permissible level while GFI, NFI, CFI, TLI, AVE and CR were below the acceptable level. Hence, the component that showed factor loading < .4 was removed for being the major cause of poor fitting. The resulting model was found to be a good fitting model with recommended indices as illustrated in Figures 8. All the paths shown in the final models of SMBE-related constructs were significant as critical ratios were above 1.96.

Figure 3: Attitude Measurement Model



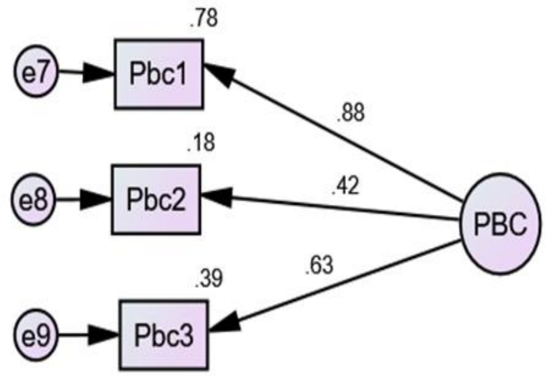
CMIN = 9.98; DF = 2; CMIN/DF = 4.99; p = .01; GFI = .99; NFI = .99; CFI = .99; TLI = .97; RMSEA = .08; SRMR = .02; AVE = .502; CR = .794

Figure 4: Subjective Norms Measurement Model



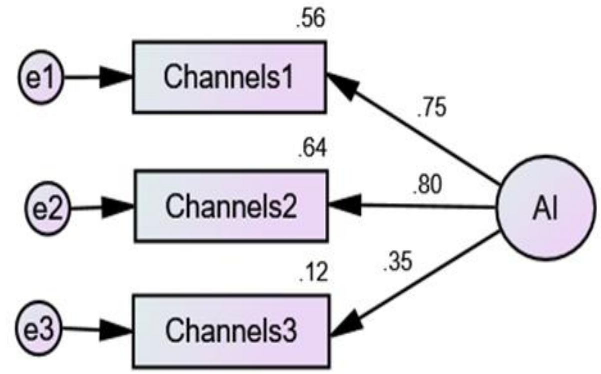
CMIN = .00; DF = 0; CMIN/DF = -; p = -; GFI = 1.00; NFI = 1.00; CFI = 1.00; TLI = -; RMSEA = -; SRMR = .00; AVE = .533; CR = .761

Figure 5: Perceived Behavioural Control Measurement Model



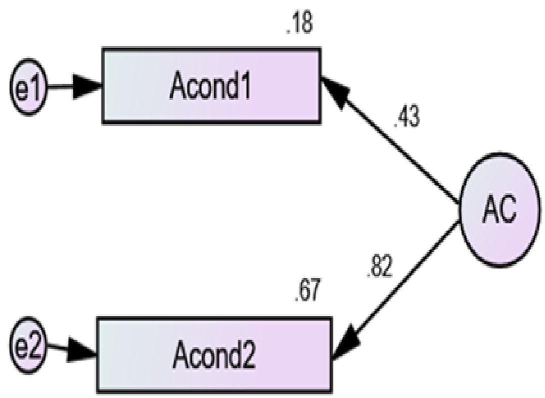
CMIN =.00; DF = 0; CMIN/DF = -; p = -; GFI = 1.00; NFI = 1.00; CFI = 1.00; TLI = -; RMSEA = -; SRMR = .00; AVE = .449; CR = .693

Figure 6: Accessibility to HIV/AIDS Information Measurement Model



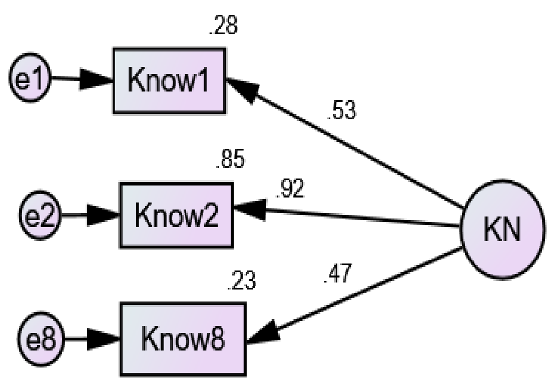
CMIN = .00; DF = .00; CMIN/DF = -; p = -; GFI = 1.00; NFI = 1.00; CFI = 1.00; TLI = -; RMSEA = -; SRMR = .00; AVE = .442; CR = .683

Figure 7: Accessibility to Condoms Measurement Model



CMIN = .00; DF = .00; CMIN/DF = -; p = -; GFI = 1.00; NFI = 1.00; CFI = 1.00; TLI = -; RMSEA = -; SRMR = .00; AVE = .429; CR = .578

Figure 8: HIV/AIDS knowledge Measurement Model



CMIN = .00; DF = 0; CMIN/DF = -; p = -; GFI = 1.00; NFI = 1.00; CFI = 1.00; TLI = -; RMSEA = -; SRMR = .00; AVE = .449; CR = .691

Extended TPB Measurement Model: First Order Latent Variables Approach: The first approach adopted by this study consisted in merging all the construct's measurement models to see if the new model fits the data to confirm the utility, and justify the extension of the traditional TPB components by the SMBE variables. The initial estimate suggested a poor fitting model with the CMIN/DF, RMSEA and SRMR indexes above the permissible level while GFI, NFI, CFI and TLI were below the acceptable level. On the contrary, both the AVE and CR met the required level. Investigation based on the modification indices resulted in allowing some measurement errors to correlate as illustrated in Figure 10, enabling the study to achieve good fitting indices. The practice of correlating errors has raised concern in the scientific community as it may lead the researcher to omit relevant variables while achieving good fit statistics, obtain significant correlation due to sampling errors and/or bias the parameter estimates of both measurement and structural model (Hermida, 2015). However, consideration of the practice of allowing errors to correlate is justifiable when driven by theory rather than by the empirical purposes to fit the data, which was the case in this study as it can be assumed that those errors share some variance due to the narrowness of the link between these variables from the common sense of respondents' understanding. All the paths shown in the final model are significant as critical ratios were above 1.96.

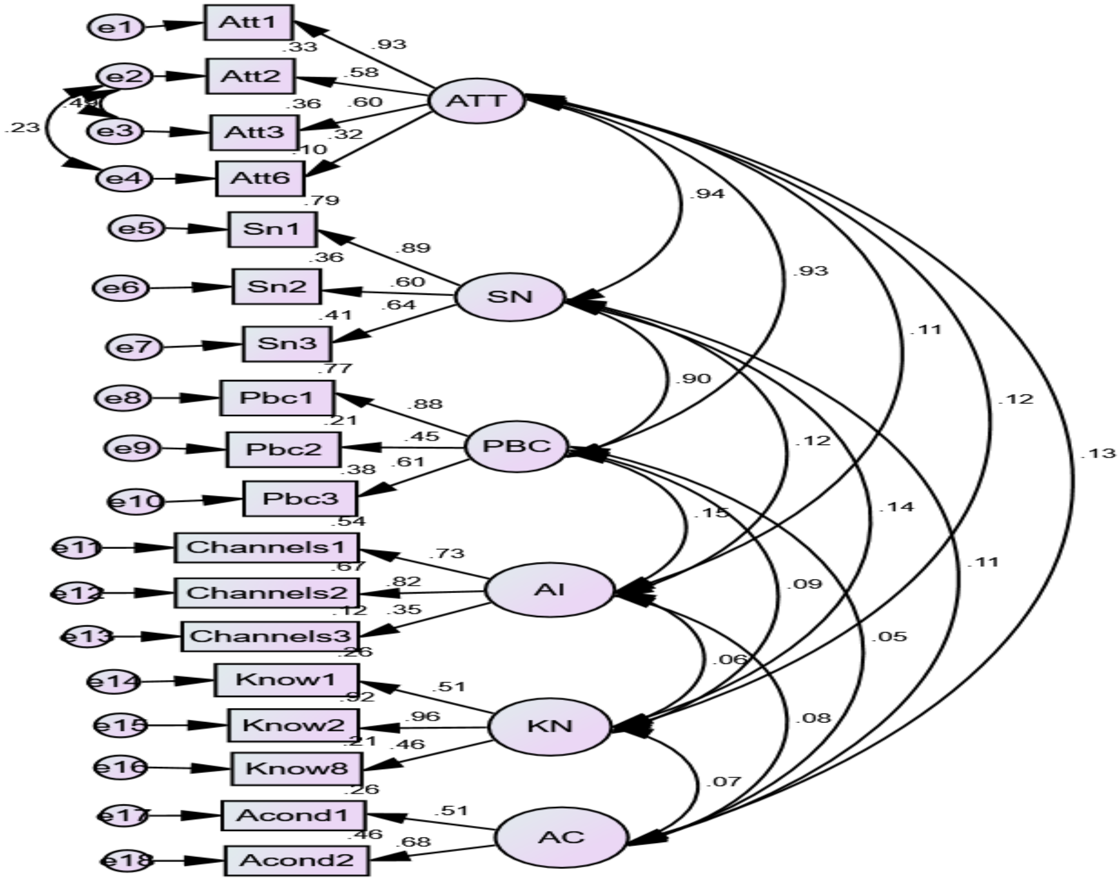
Although the CFA results obtained from the first order latent variables approach was the best fit of the data, high correlations between TPB constructs (above the .85 permissible level) indicated that they are not statistically distinguishable or they meant, in essence, the same thing to the respondents. Therefore, it was ascertained that the TPB constructs did not show discriminant validity following the Fornell and Larcker criterion (Ab Hamid, Sami, & Mohamed Sidek, 2017) with their squared-root of AVE being below their respective correlations as illustrated in Table 4. In this case, the researcher was left with two options consisting in either retaining only one construct or combining them. Choosing one construct over the others would mean that the retained construct is more useful, which contradicts the TPB theory; hence, the second option was adopted.

Table 4: Constructs Correlation Matrix, AVE and √AVE for First-Order Factor

	AVE	ATT	SN	PBC	AI	AC	KN
ATT	.502	**.709**					
SN	.533	.764**	**.730**				
PBC	.449	.786**	.740**	**.670**			
AI	.442	.035	.062	.096*	**.665**		
AC	.429	.078	.077	.039	.023	**.655**	
KN	.449	.123*	.115**	.110*	.086*	.083*	**.670**

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed); Square-root of AVE is in bold on the diagonal

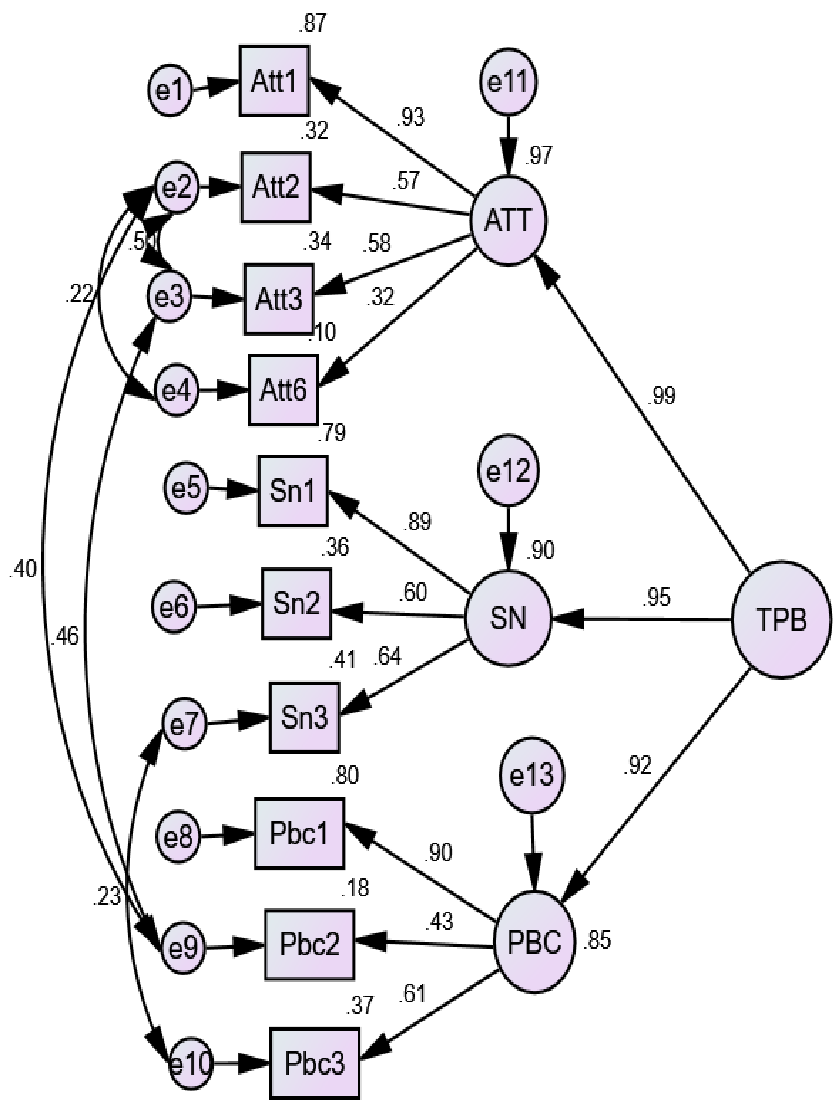
Figure 9: Confirmatory Model for Extended TPB Dimension/ 1st Order Latent Variable Approach



CMIN = 433.59; DF = 118; CMIN/DF = 3.67; p = .00; GFI = .93; NFI = .92; CFI = .90; TLI = .90; RMSEA = .07; SRMR = .052; AVE = .445; CR = .930

Extended TPB Measurement Model: Second Order Latent Variables Approach: On second thought, this study intended to examine whether the proposed extended TPB model could fit the data without transgressing constructs' convergent and discriminant validity if the first order latent variables represented by ATT, SN, PBC, AI, AC and KN were reflective latent variables of the TPB and SMBE second-order latent variables respectively. First, the three measurement models of the underlying dimensions of the traditional TPB have been integrated together in order to assess the measurement model of "TPB" dimension. The initial estimate suggested a poor fitting model with the CMIN/DF, RMSEA and SRMR indexes above the permissible level while GFI, NFI, CFI and TLI were below the acceptable level. On the contrary, both the AVE and CR met the required level. Investigation based on the modification indices resulted in allowing some measurement errors to correlate as illustrated in Figure 10, enabling the study to achieve good fitting indices. Furthermore, errors are allowed to correlate only for observed variables within the same construct and in the case of the present study, ATT, SN and PBC were considered as being within the same second-order TPB construct. All the paths shown in the final model are significant as critical ratios were above 1.96.

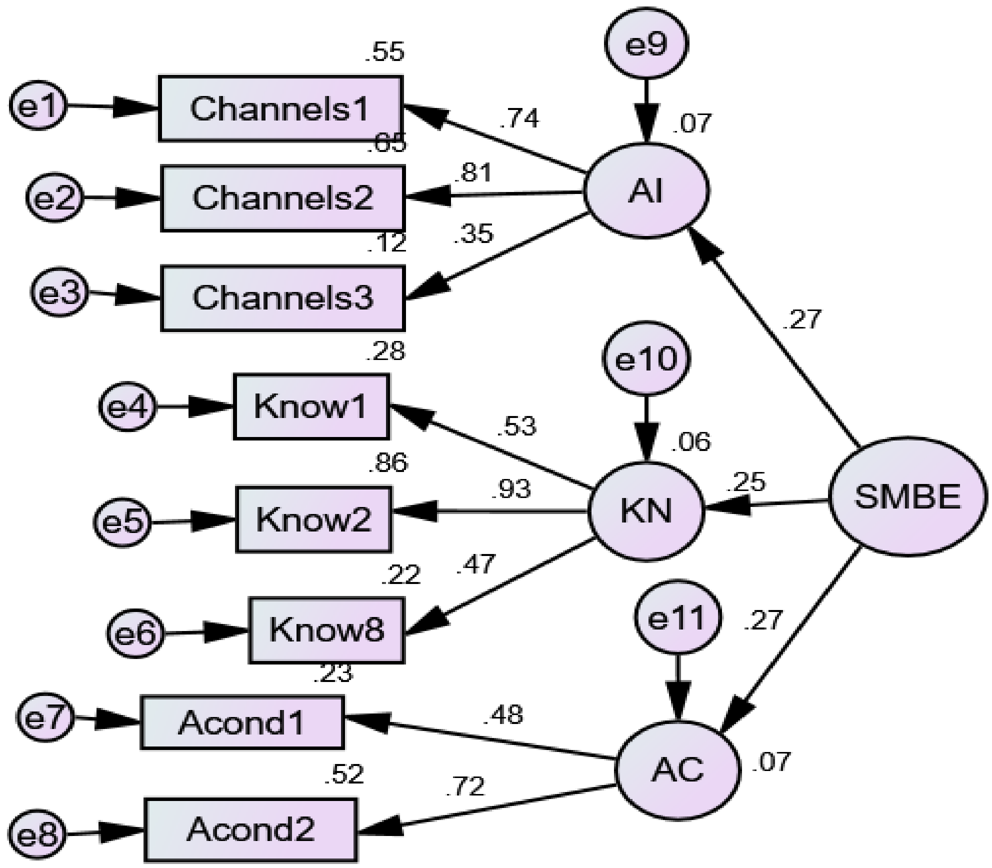
Figure 10: Measurement Model for TPB Dimension



CMIN = 133.83; DF = 27; CMIN/DF = 4.96; *p* = .00; GFI = .96; NFI = .96; CFI = .97; TLI = .94; RMSEA = .08; SRMR = .04; AVE = .910; CR = .968

Secondly, the three measurement models of the underlying dimensions of the SMBE have been integrated together in order to assess the measurement model of "SMBE" dimension. The initial estimate suggested a good fitting model as illustrated in Figure 11 with all the parameters meeting the required level. However, AVE and CR as shown in Figure 11 showed a lack of convergent validity for SMBE as a second-order latent variable but no offending of estimate occurred. As suggested by Kline (2010) and Schumacker and Lomax (2012), the only combination of factor loadings ≤ .5 and non-significant paths are inadmissible even when creating a second-order latent variable. Although factor loadings are poor, all the paths shown in the final model are significant as critical ratios were above 1.96. Therefore, for the purpose of processing with the second-order extended TPB model, the SMBE measurement model was accepted as such.

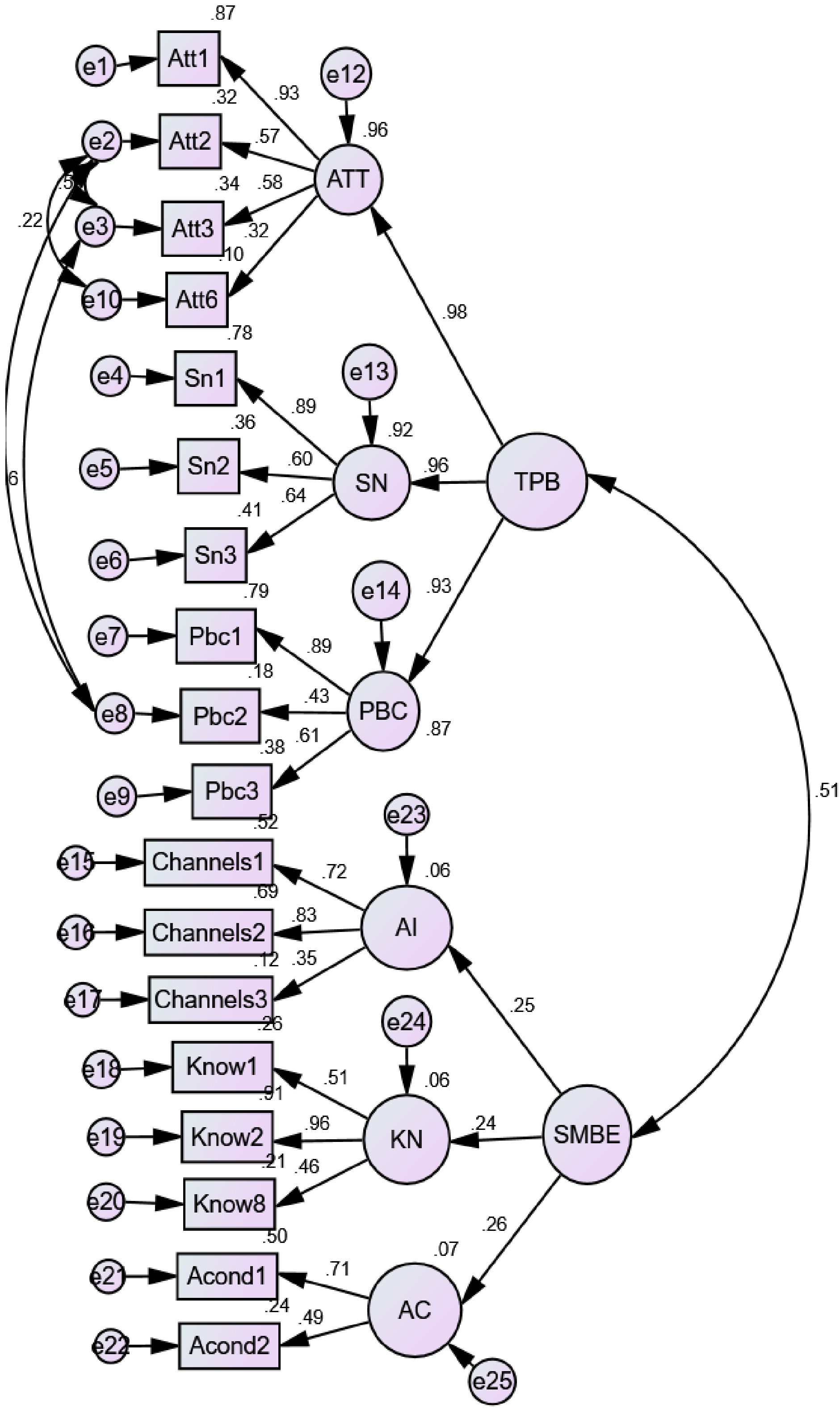
Figure 11: Measurement Model for SMBE Dimension



CMIN = 21.49; DF = 18; CMIN/DF = 1.19; p = .26; GFI = .99; NFI = .97; CFI = .995; TLI = .99; RMSEA = .02; SRMR = .03; AVE = .058; CR = .155

Following the assessments of both TPB and SMBE measurement models, the TPB measurement model was integrated with the SMBE measurement model to obtain the measurement model of "extended TPB" dimension in the perspective of a second-order latent variable approach. The initial estimate suggested a good fitting model as illustrated in Figure 12 with all the parameters meeting the required level. Despite the CR showing the reliability of "extended TPB" measurement model, the AVE suggested a lack of convergent validity on the one hand. On the other hand, discriminant validity was ascertained as square-root of AVE (.699) was well above the TPB-SMBE correlation (.512). Hence, an overall assessment of the model led to the acceptance of the model considering that AVE value slightly below the required ≥ .5 can be accepted as long as offending estimates does not occur. All the paths shown in the initial model are significant as critical ratios were above 1.96. Therefore, the second order latent variables approach for the "extended TPB" dimension is the appropriate measurement model that supports the inclusion of SMBE variables both in a theoretical and statistical point of view.

Figure 12: Confirmatory Model for Extended TPB Dimension/ 2nd Order Latent Variable Approach



CMIN =248.54; DF = 121; CMIN/DF = 2.05; p = .00; GFI = .96; NFI = .94; CFI = .97; TLI = .96; RMSEA = .04; SRMR = .04; AVE = .489; CR = .810

5. Conclusion and Recommendations

The extension of the TPB model to SMBE variables as proposed by Ayikwa and De Jager (2017) was verified through, first and second order CFA. Prior to proceeding with CFA, an EFA was conducted and helped the study to reduce and identify factors that best explained each construct considered in the present study. ML method was applied to assess the models providing fit indices, while AVE and CR were used to determine convergent validity of the constructs and internal consistency following the CFA procedures with regard to the two approaches investigated as suggested by MacKenzie et al. (2011). The individual's assessment of the measurement models of the constructs permitted the elimination of factor components that loaded below a value of .4 rule of thumb applied except for some factors whose removal led the model to be unidentified, considering that no violation of offending estimates occurred. Both the reliability and convergent validity were accepted for all models, while rejected only for the "SMBE" dimension model. However, the first order latent variables "extended TPB" model did not show discriminant validity and therefore could not be validated paving the way for justification to explore the second-order latent variables approach. The later integrated the SMBE dimension despite the AVE and CR values being below their threshold in order to allow further processing of the study's model of interest.

The data collected were quite fit with the second order latent variables "extended TPB" model supporting the inclusion of the SMBE variables (AI, AC and KN) alongside the traditional TPB components (ATT, SN and PBC). Thus, researchers in the various behavioural fields in general, addressing the HIV/AIDS epidemic in particular, may adopt this model extending the TPB model to SMBE variables in investigating the prediction of specific sexual behaviour and their related intentions. Although this study did not validate the first order latent variables "extended TPB" model, this will not be the case all the time or in contexts other than South Africa's Gauteng Province. Therefore, the recommendation is made for further researching in different environments and the same as in this study but at a later point of time. Thus, the difficulty experienced to statistically distinguish TPB constructs from one another given their high correlations, which is not always the case, could find appropriate answers in determining if the issue lies in the wording of the items or something else. Indeed, a deeper investigation of the implied correlations of the component factors considered in the analysis revealed no value above .75. The same is also true for the poor discriminant validity and reliability showed by the measurement model for the SMBE dimension.

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Efficiency in BRICS Currency Markets Using Long-Spans of Data: Evidence from Model-Free Tests of Directional Predictability*

[1]Rangan Gupta, Professor, [2]Vasilios Plakandaras
[1]Department of Economics, University of Pretoria, Pretoria, South Africa
[2]Department of Economics, Democritus University of Thrace, University Campus, Komotini, Greece
Rangan.Gupta@up.ac.za, vplakand@econ.duth.gr

Abstract: We analyze the directional predictability in foreign exchange markets of Brazil, Russia, India, China and South Africa (BRICS) using the quantilogram, based on long-spans of monthly historical data, at times covering over a century. We find that the efficient market hypothesis (EMH) holds at the extreme phases of the currency markets (and around the median for India and South Africa). Since predictability holds at certain parts of the unconditional distribution of exchange rate returns, we find support for the Adaptive Market Hypothesis (AMH). AMH, based on the idea of bounded rationality, suggests that currency return predictability will be intermittent, due to changing market conditions and institutional factors.

Keywords: *Correlogram, dependence, quantiles, efficiency, currency markets, BRICS.*

1. Introduction

The efficient market hypothesis (EMH) states that asset prices fully and instantaneously reflect all available and relevant information (as discussed in Plakandaras et al., (forthcoming), based on the seminal works of Samuelson, (1965) and Fama (1965)), hence, returns cannot be predicted. As a result, prices in an efficient market follow a random walk. Under the weak-form efficiency where the information set consists of past returns, future returns are purely unpredictable based on past price information. Hence, return predictability can be related to the weak-form of market efficiency. In this regard, the associated literature that tests the EMH in financial markets is huge (see, Aye et al., (2017a, b), Charfeddine et al., (2018), and Tiwari et al., (forthcoming) for detailed literature reviews in this regard). The foreign exchange rate market in the most popular and capitalized market with an average daily turnover in 2016 of 5.1 trillion U.S. dollars, as reported in the Triennial Survey of the Bank of International Settlements.

In light of the importance of currency markets, efficiency of the same has been examined extensively, since the seminal work of Meese and Rogoff, (1983), with the widespread acceptance that it is difficult to beat the random walk model in predicting the conditional mean dynamics of foreign exchange rate changes (see for example, Chung and Hong, (2007), Charles et al., (2012), Plakandaras et al., (2013, 2015a, b), Balcilar et al., (2016), Papadimitriou et al., (2016), Almail and Almudhaf (2017), and Christou et al., (forthcoming) for detailed reviews of this literature). However, the majority of these studies are based on the tests of some forecast models or forecast rules, i.e., these works examine the efficiency of models rather than data, and as a result, the conclusions are dependent on the model used. In this regard, Taylor (1995), and more recently Plakandaras et al. (forthcoming), points out that model-driven tests of foreign exchange market efficiency are likely to be elusive in the presence of risk premium and expectation errors. Understandably, it is desirable to evaluate the efficiency of currency markets using an econometric procedure that is independent of a model.

The objective of this paper, is to analyze the directional predictability in foreign exchange markets of Brazil, Russia, India, China and South Africa (i.e., the BRICS) using the correlogram of quantile hits (i.e., quantilogram) as proposed by Linton and Whang (2007), which in turn, is a model-free econometric procedure involving a simple diagnostic statistic based on a sample correlation. Our analysis uses the longest possible available monthly data set covering the periods of 1812M01-2018M05, 1814M01-2018M05, 1822M07-2018M05, 1948M08-2018M05, and 1844M01-2018M05, respectively for the dollar-based exchange rates of the BRICS countries. For the sake of comparison, we also look at the behavior of the British pound over 1791M01 to 2018M05, i.e., a developed market currency. Note that, while other tests of model-

* We would like to thank two anonymous referees for many helpful comments. However, any remaining errors are solely ours.

free directional predictability are available, we prefer the Linton and Whang, (2007) approach due to its advantages from a conceptual perspective, since using the quantile in connection with counts is preferable. From a different stance, using a fixed threshold (as in Hong and Chung (2006)) raise concerns over the proper determination of the threshold, is time-dependent and asymptotically correct. At this stage two questions arise: First, why look at the BRICS countries? In this regard, note that the decision to look at these five emerging market currencies is motivated by the emergence of the BRICS as a powerful economic force. In 2010, about 25 percent of global output emanated from the BRICS (Government of India, 2012). Also, the contribution to global output from this bloc is expected to surpass that of the G7 countries by 2050 (Wilson & Purushothaman, 2003; Cakan & Gupta, 2017; Plakandaras et al., forthcoming). In addition, trade by these economies with the rest of the world has been growing at a fast rate, with the strong economic performance of these countries linked to the high level of foreign direct investment in the private sector (Ruzima & Boachie, 2017). Naturally, unpredictable exchange rate movements are likely to affect the growth potential of these economies, and with them that of the world economy.

Hence, an investigation of predictability of exchange rates of the BRICS countries is highly warranted, which in turn, we aim to achieve, by looking at the longest possible spans of data available on the exchange rates of these economies to try and capture the entire historical evolution of the exchange rate dynamics. The second question deals with why we look at directional predictability instead of the conditional mean of the foreign exchange rate changes? The reasons behind this, as outlined in Chung and Hong (2007), and also in Plakandaras et al. (2013, 2015a, b), are: (a) From the perspective of a statistician, it is relatively easier to predict the direction of changes than the predictions of the conditional mean, as directional predictability depends on all conditional moments; (b) From an economist's point of view, the directional predictability of foreign exchange rate returns is more relevant as it is better able to capture a utility-based measure of predictability performance (such as economic profits). In addition, note that market timing (a form of active asset allocation management) is essentially the prediction of turning points in currency markets; (c) Direction of changes provide important insights to market practitioners and policymakers, Since technical trading rules widely used by foreign exchange dealers are heavily based on predictions of direction of changes, and central banks.

Under pegged exchange rate systems often intervene in the foreign exchange market when the domestic currency is expected either to appreciate or depreciate beyond a certain threshold; (d) Given the theory of the uncovered interest rate parity, the direction of changes can be an alternative instrument for the link between foreign exchange rates and interest rates, and; (e) Predicting the direction of large currency changes are likely to have information about possible future currency crises and also the likelihood of market contagion. The above five reasons thus make it more important to analyze directional predictability than just changes in the conditional mean of the dollar-based exchange rates of the BRICS. Two related studies dealing with efficiency in the BRICS dollar-based exchange rates are that of Kumar and Kamaiah, (2016) and Bhattacharya et al. (2018). While the former rejected the weak-form of efficient market hypothesis for nominal effective exchange rates of all the five countries, the latter indicated that dollar-based exchange rates of these economies all follow random-walk processes. Interestingly, Kumar and Kamaiah, (2016) found an underlying chaotic structure for all the five markets, but Bhattacharya et al. (2018) showed that the same holds true for Brazil, Russia, India, and China, but not South Africa. Combining the results on efficiency and chaotic dynamics, one can, in general, conclude that exchange rate returns are unpredictable in the BRICS using conditional mean-based model-dependent approaches adopted by these authors.

However, given the mixed evidence of weak-form of market efficiency, the scope of this paper is to answer whether BRICS exchange rates can be predicted, using the longest spans of data available, and hence, minimizing the likelihood of sample-specific results. Given that the model-free approach of quantilogram used in this paper is based on unconditional quantiles capturing the various phases of the currency market, the correlogram of quantile hits is inherently a time-varying approach detailing the market-situation under which directional predictability hold or does not hold. This in turn implies that the ability of the central banker aiming to stabilize currency market fluctuations could be limited to only certain parts of the unconditional distribution of exchange rate returns for which predictability holds, and might not always lead to the results the policymakers are striving for via the control of the exchange rate market, especially when exchange rates follow random-walk. To the best of our knowledge, this is the first paper to analyze model-free predictability in the BRICS (and the UK) dollar-based exchange rates using data, that in some cases spans more than two centuries. The remainder of the paper is organized as follows: Section 2 introduces the econometric methodology, while Section 3 presents the data and results, with Section 4 concluding the paper.

2. Methodology

Suppose that $y_1, y_2, \ldots$ are random variables from a process without unit-roots with marginal distribution μ_α for $0 < \alpha < 1$ in quantiles. We test the null hypothesis that some conditional quantiles are time invariant, which can be written more formally as:

For some α:

$E[\psi_\alpha(y_t - \mu_\alpha)|\mathcal{F}_{t-1}] = 0\ a.s., where\ \psi_\alpha(x) = 1(x < 0) - \alpha$ (1),

denote the check function, while $\mathcal{F}_{t-1} = \sigma(y_{t-1}, y_{t-2}, \ldots)$. Under this null hypothesis, if we exceed the unconditional α-quantile today, there is small la ikelihood that we will exceed this threshold α in the ext observation. This hypothesis can be further extended from a particular quantile to a set of quantiles and to the entire sample.

If we compare (1) with the usual weak form EMH that for some μ,

$E[y_t - \mu|\mathcal{F}_{t-1}] = 0$ (2),

We could infer that the median of the population is time-varying and the mean is invariant and vice versa. Under symmetry, there is a one to one relationship between (2) and (1), with $\alpha = 1/2$. Linton and Whang, (2007) suggest a formal procedure to examine the null hypothesis (1) by first estimating $\mu_\alpha$using quantile estimator $\hat{\mu}_\alpha$which is defined by:

$$\hat{\mu}_\alpha = arg\ \min_{\mu \in \mathbb{R}} \sum_{t=1}^{T} \rho_\alpha(y_t - \mu), where\ \rho_\alpha(x) = x[\alpha - 1(x < 0)]$$

Then letting:

$$\hat{\rho}_{\alpha k} = \frac{\frac{1}{T-k}\sum_{t=1}^{T-k} \psi_\alpha(y_t - \hat{\mu}_\alpha)\psi_\alpha(y_{t+k} - \hat{\mu}_\alpha)}{\sqrt{\frac{1}{T}\sum_{t=1}^{T} \psi_\alpha^2(y_t - \hat{\mu}_\alpha)}\sqrt{\frac{1}{T-k}\sum_{t=1}^{T-k} \psi_\alpha^2(y_{t+k} - \hat{\mu}_\alpha)}}, k = 1,2, \ldots,$$

for any $\alpha \in [0,1]$. Note that $-1 \le \hat{\rho}_{\alpha k} \le 1$ for any α, and$k$, given that this refers to the sample correlation on $\psi_\alpha(y_t - \hat{\mu}_\alpha)$. Under the null hypothesis (1) the population quantity is:

$E[\psi_\alpha(y_t - \mu_\alpha)\psi_\alpha(y_{t+k} - \mu_\alpha)] = E[\psi_\alpha(y_t - \mu_\alpha)E[\psi_\alpha(y_{t+k} - \mu_\alpha)|\mathcal{F}_{t+k-1}] = 0$ for all k. Thus, $\hat{\rho}_{\alpha k}$ should approximate zero.

3. Data and Empirical Results

We compile nominal exchange rates for the BRICS and the UK expressed as local currency to U.S. dollar obtained from the Global Financial Database, and work with log-returns in percentage, i.e., the first difference of the natural logarithm of the exchange rates times 100, as required by the model-free quantilogram-approach of predictability. The effective sample of monthly data thus covered for the BRICS and the UK is: 1812M02-2018M05, 1814M02-2018M05, 1822M08-2018M05, 1948M09-2018M05, and 1844M02-2018M05, and 1791M02- 2018M05 respectively, with us losing the first observation due to the computation of log-returns. The start- and end-points of our analysis are driven by data availability at the time of writing this paper. Recall the objective was to cover the longest possible samples of data, so that our test does not suffer from sample selection bias like other studies, since we are able to capture the complete evolution of the BRICS' dollar-based exchange rate across history. The descriptive statistics are reported in Table A1 of the Appendix, while, Figure A1 in the Appendix plots the data used. As can be seen from the Jarque-Bera test of normality in Table A1, the null is overwhelmingly rejected in all cases.

Due to positive skewness and excess kurtosis and in the process suggests heavy-tails in all the exchange rate returns. In Figures 1(a), 2(a), 3(a), 4(a), 5(a) and 6(a), we present the quantilogram for quantiles in the range 0.01 – 0.99 (specifically, α = 0.01, 0.05, 0.10, 0.25, 0.50, 0.75, 0.90, 0.95, and 0.99) and out to 100 lags for the BRICS and the UK respectively. We also show the 95% confidence intervals (centred at 0) based on the lower and upper bound. There is evidence of predictability, but it depends on the quantiles we are looking at and the confidence interval (conservative or liberal) we use. The portmanteau tests reported in Figures 1(b), 2(b), 3(b), 4(b), 5(b) and 6(b), for the BRICS and the UK respectively, gives a clearer picture of the evidence of predictability. For Brazil and Russia, there is no evidence of predictability at α = 0.01, 0.05, and 0.99. When we look at China, besides α = 0.01, 0.05, 0.95 and 0.99, predictability holds for the remaining quantiles. In case of India, predictability is generally weak and just restricted to α = 0.25 and 0.75. For South Africa, predictability is restricted at α = 0.10, 0.25, 0.75, and 0.90 primarily, and around 40 lags quite strongly for α = 0.05, and weakly for α = 0.50.

Finally, for the UK, predictability is very pronounced at all the quantiles except for the most extreme ones (i.e., α = 0.01 and 0.99).[8] In other words, barring the extreme phases (appreciation and depreciation) of the currency market, and around the median for India and South Africa, we do find evidence of directional predictability, i.e., the EMH is rejected except for these quantiles.[9] In this regard, there is also comparability with the currency of a developed market, i.e., the UK pound relative to the dollar. Lack of predictability at the extremes is possibly due to herding by the agents participating in the market, whereby information from lags of returns does not necessarily matter (Balcilar et al., 2016). The fact that predictability holds at certain parts of the unconditional distribution of exchange rate returns, capturing stages of the currency markets, our results tend to support the so-called adaptive market hypothesis (AMH) of Lo (2004, 2005). Note that the AMH, based on the notion of bounded rationality, suggests that return predictability may arise from time to time, due to changing market conditions and institutional factors.[10]

[INSERT FIGURES 1 THROUGH 6]

4. Conclusion

In this paper, we analyze the directional predictability in foreign exchange markets of Brazil, Russia, India, China and South Africa (i.e., the BRICS) using the quantilogram, which in turn, is a model-free econometric procedure involving a simple diagnostic statistic based on a sample correlation. Our analysis uses the longest possible available monthly data set covering the periods of 1812M01-2018M05, 1814M01-2018M05, 1822M07-2018M05, 1948M08-2018M05, and 1844M01-2018M05, respectively for the dollar-based exchange rates of the BRICS countries. For the sake of comparison, we also look at the behavior of the British pound over 1791M01 to 2018M05, i.e., a developed market currency. We find that barring the extreme phases of the currency markets, and around the median for India and South Africa, we do observe directional predictability, i.e., the EMH is only accepted in these quantiles. In this regard, there is also a similarity with the results obtained for the UK pound. The fact that predictability holds at certain parts of the unconditional distribution of exchange rate returns, capturing stages of the currency market, tend to support the AMH, which suggests that return predictability may arise time to time.

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[8] Given that the results could be susceptible to data-frequency (Linton and Whang, 2007), we use daily data on the pound-dollar exchange rate, which is available (from the Global Financial Database) for a long-span of 3rd January, 1900 to 31st, May 2018, and repeated our analysis. The results for the quantilogram and the portmanteau test are reported in Figures A2(a) and A2(b) respectively. As can be seen, when compared to Figures 6(a) and 6(b), our results continue to be qualitatively similar to the monthly data, except now that lack of predictability is also observed for α = 0.05 and 0.95.

[9] We also estimated the Hurst (1951) exponent (H) for long-range dependence using the detrended fluctuation analysis (DFA) as proposed by Peng et al. (1994). In all cases the, the value of H>0.50 (), highlighting the predictability of the exchange rate returns series, especially for Brazil (H =0.96), Russia (H =0.93), and China (H=0.97), and to some extent South Africa (H=0.60). For India (H=0.56) and the UK (H 0.51), the predictability was relatively weak. A rolling-window analysis however showed increased persistence in the post-Bretton Woods era. While, we cannot draw one-to-one correspondence with our directional predictability results based on the quantilogram, there is indeed some evidence of predictability also provided by the Hurst exponent. Complete details of these results are available upon request from the authors.

[10] The AMH hypothesis for the British pound in short and long-spans of data has also been confirmed by Charles et al. (2012) and Almail and Almudhaf, (2017) respectively.

Our results imply that, practitioners would need to devise state-specific trading strategies aiming to exploit temporary inefficiencies in the currency markets. Similarly, policy makers must realize that their possible attempts to control exchange rate fluctuations and reduce the vulnerability of the domestic economy, would also be contingent on market phases. Finally, given that exchange rate returns of the BRICS countries tend to be unpredictable at the extreme ends of their respective distributions, implies that the global economy, given the dominance of the BRICS bloc, is most vulnerable to exchange rate risks in the face of massive appreciations and depreciation of these currencies. Naturally, these episodes of possible bubbles in the currency market resulting in massive appreciation and depreciation, is what the policymakers in countries that have close trading links need to be aware of and design appropriate monetary and fiscal, as well as foreign trade policies, to ensure that their domestic economy does not get into a recession. As part of future research, given that in-sample predictability does not guarantee the same over an out-of-sample period (Christou et al., 2018), one can conduct a forecasting exercise to see if our results continue to hold.

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Figure 1(a): Values of $\hat{\rho}_{\alpha k}$Along With Liberal and Conservative 95% Confidence Intervals for the Returns on Brazilian Real Relative to the US Dollar

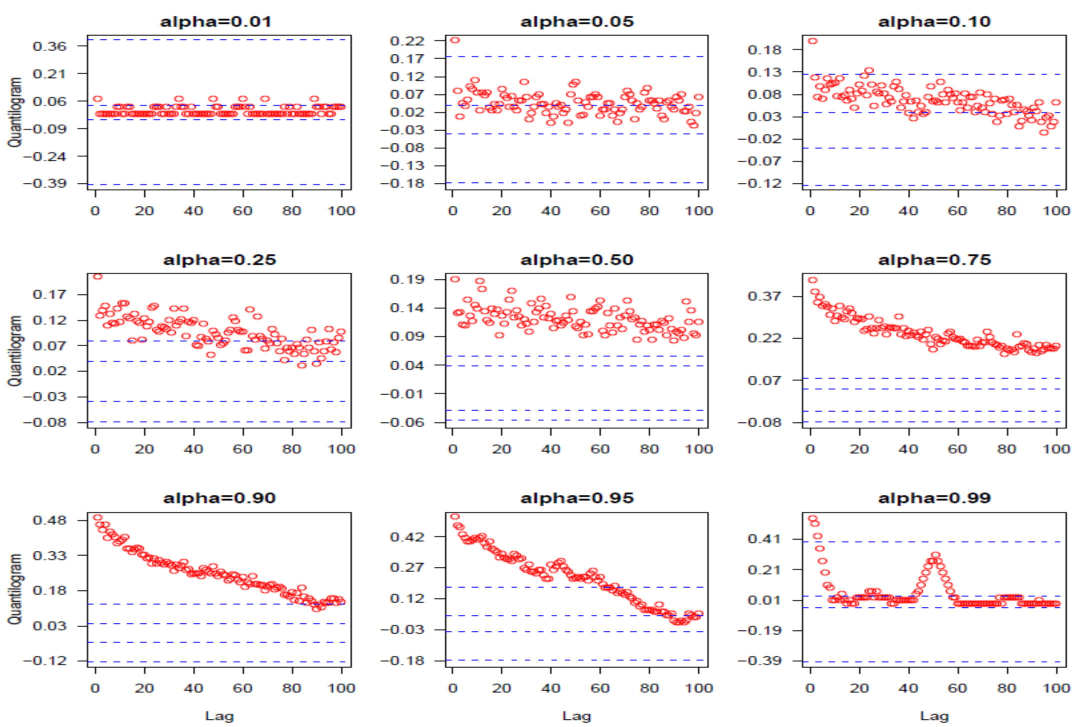


Figure 1(b): Portmanteau Test With 95% Critical Values for the Returns on Brazilian Real Relative to the Us Dollar

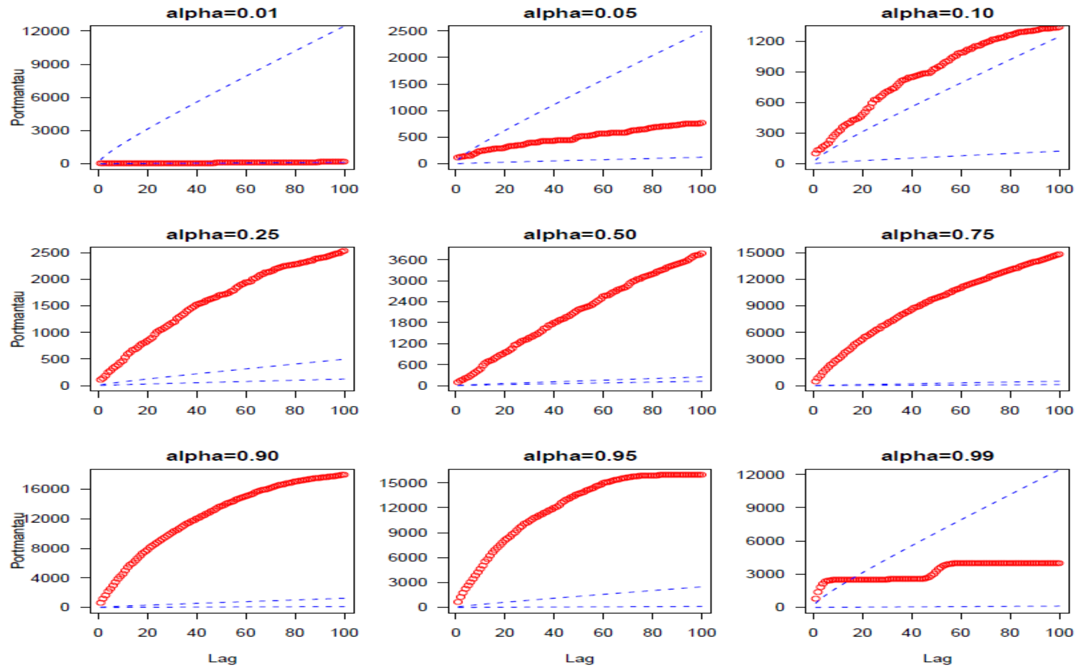


Figure 2(a): Values of $\widehat{\rho}_{\alpha k}$Along With Liberal and Conservative 95% Confidence Intervals for the Returns on Russia Real Relative to the US Dollar

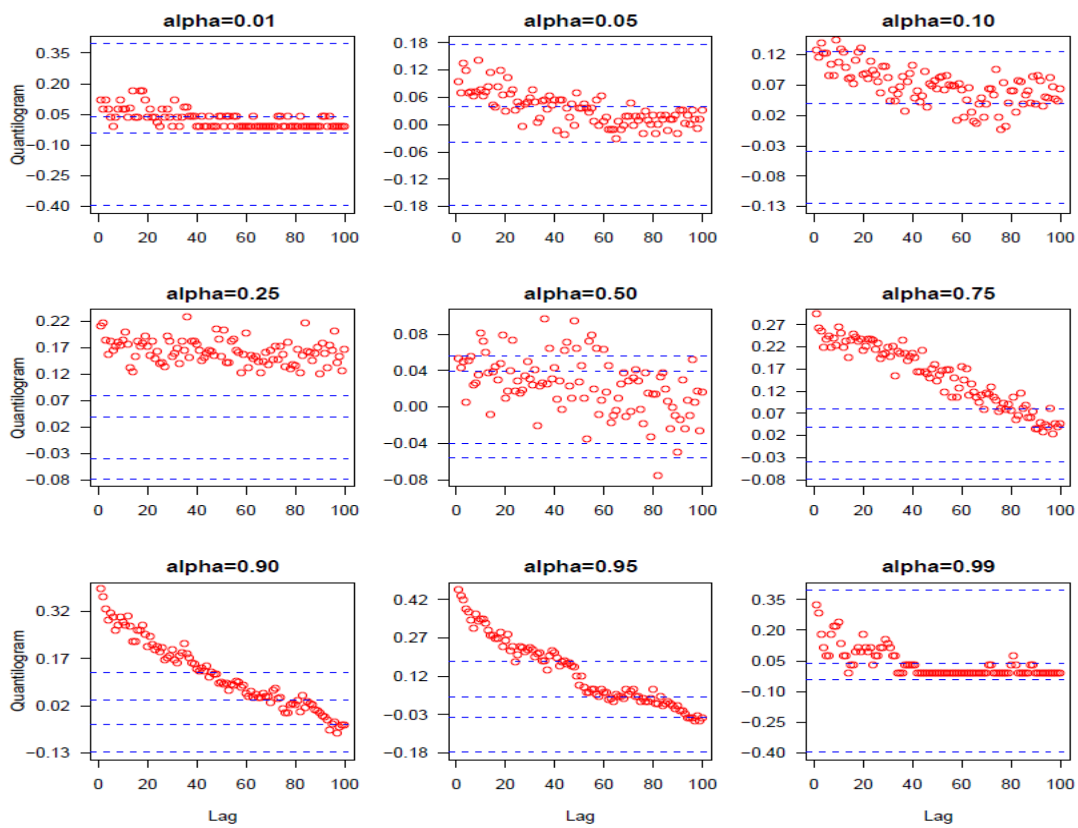


Figure 2(b): Portmanteau Test With 95% Critical Values for the Returns on Russian Ruble Relative to the Us Dollar

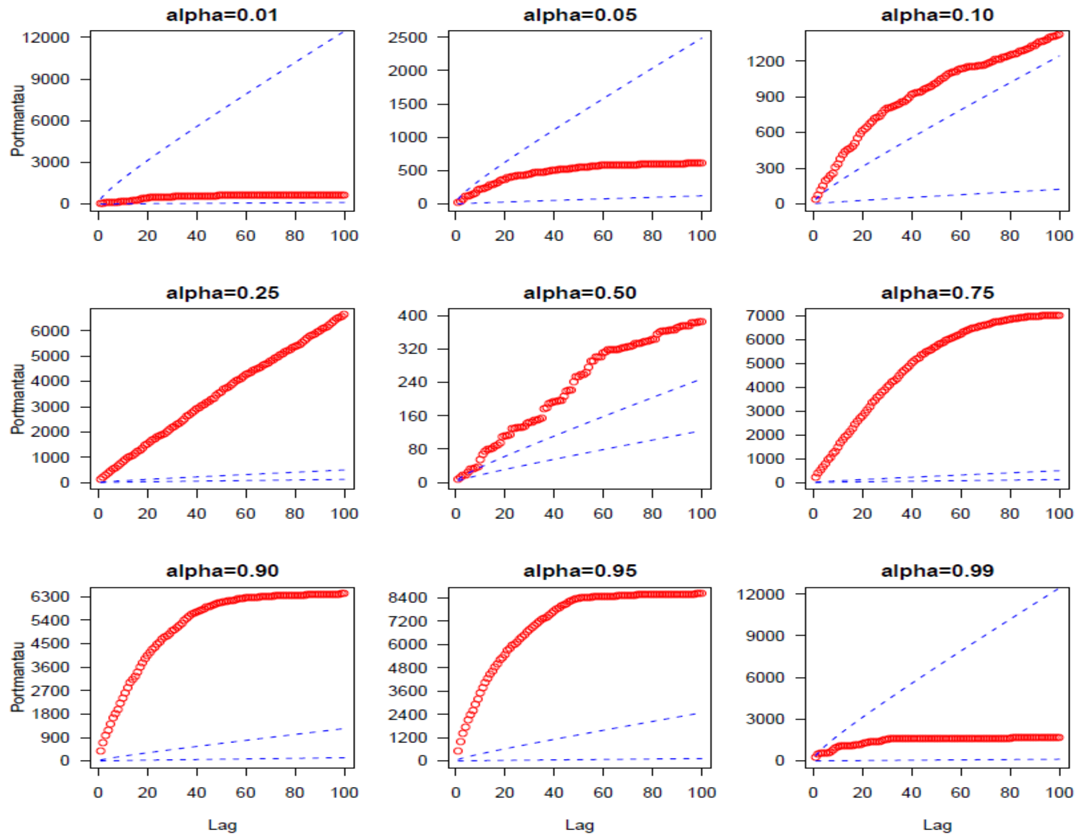


Figure 3(a): Values of $\widehat{\rho}_{\alpha k}$Along With Liberal and Conservative 95% Confidence Intervals for the Returns on Indian Rupee Real Relative to the US Dollar

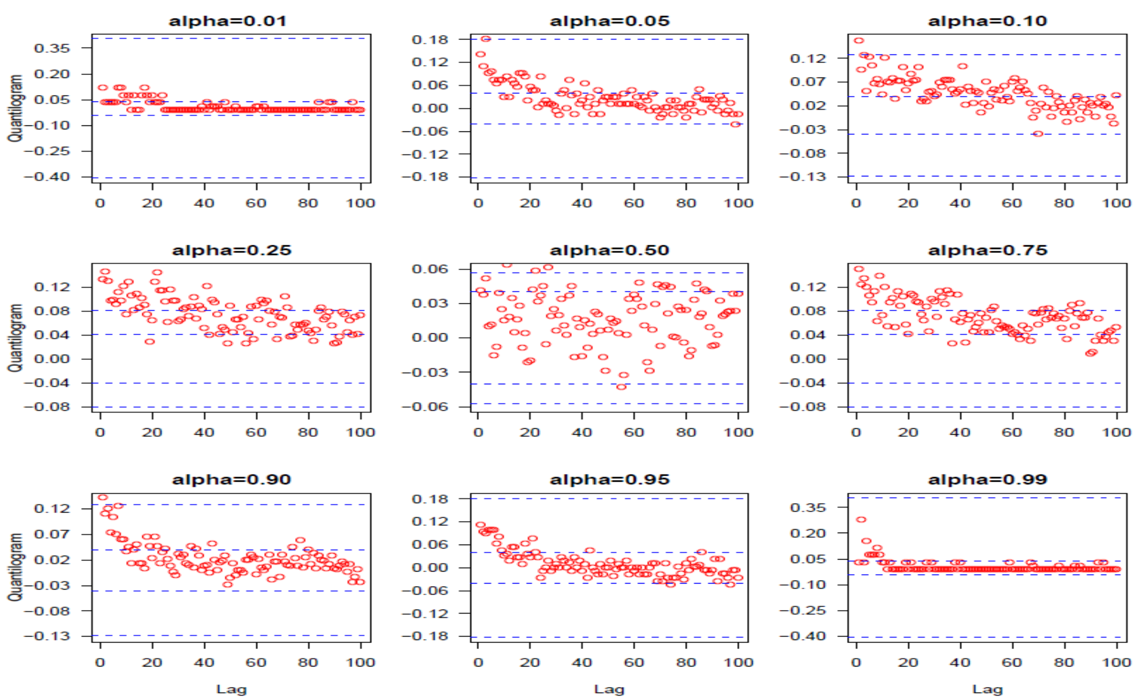


Figure 3(b): Portmanteau Test With 95% Critical Values for the Returns on Indian Rupee Relative to the Us Dollar

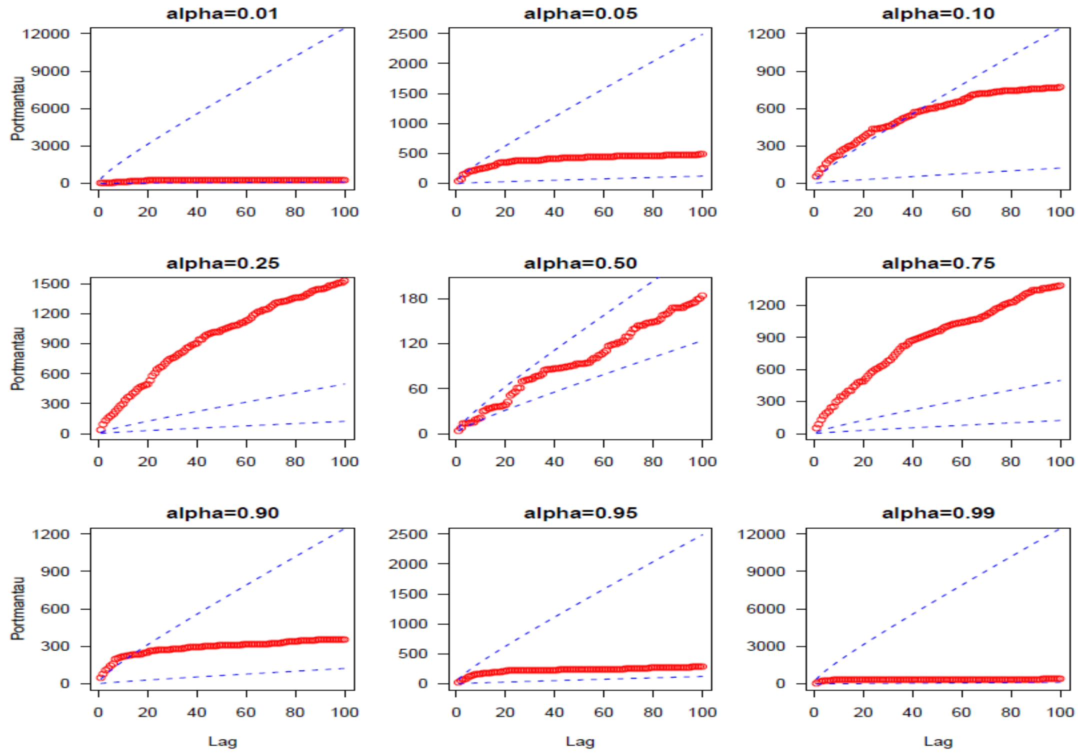


Figure 4(a): Values of $\hat{\rho}_{\alpha k}$ Along With Liberal and Conservative 95% Confidence Intervals for the Returns on Chinese Yuan Relative to the US Dollar

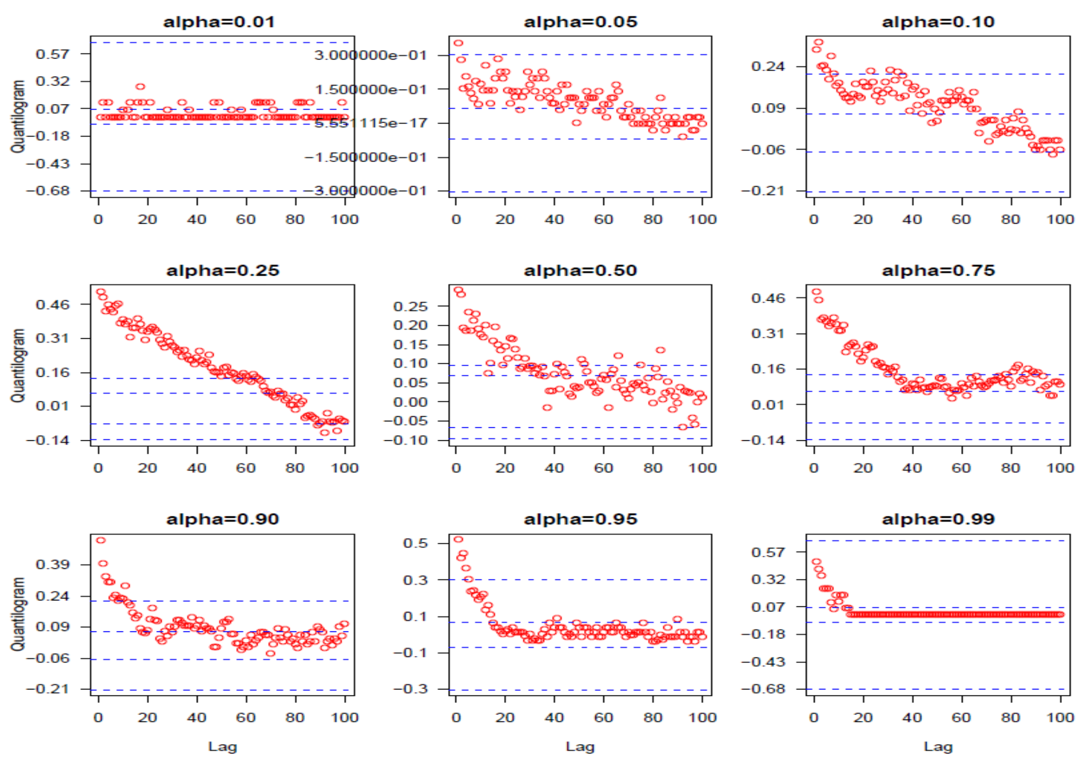


Figure 4(b): Portmanteau Test With 95% Critical Values for the Returns on Chinese Yuan Relative to the Us Dollar

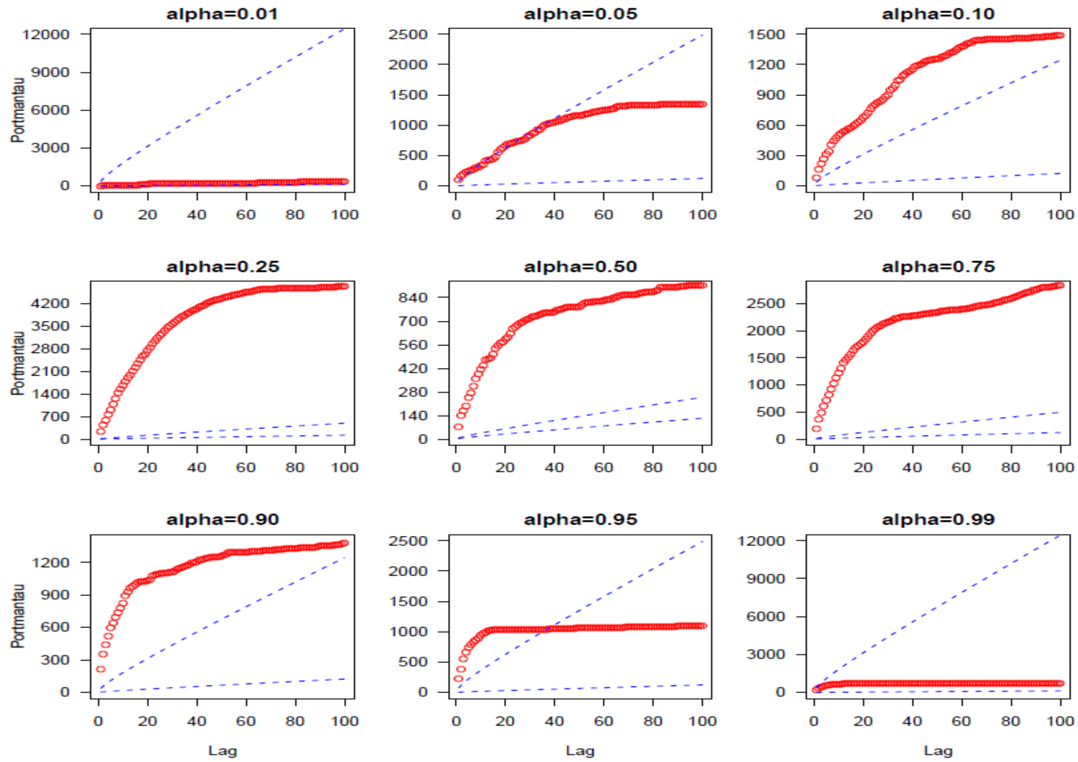


Figure 5(a): Values of $\hat{\rho}_{\alpha k}$Along With Liberal and Conservative 95% Confidence Intervals for the Returns on South African Rand Relative to the US Dollar

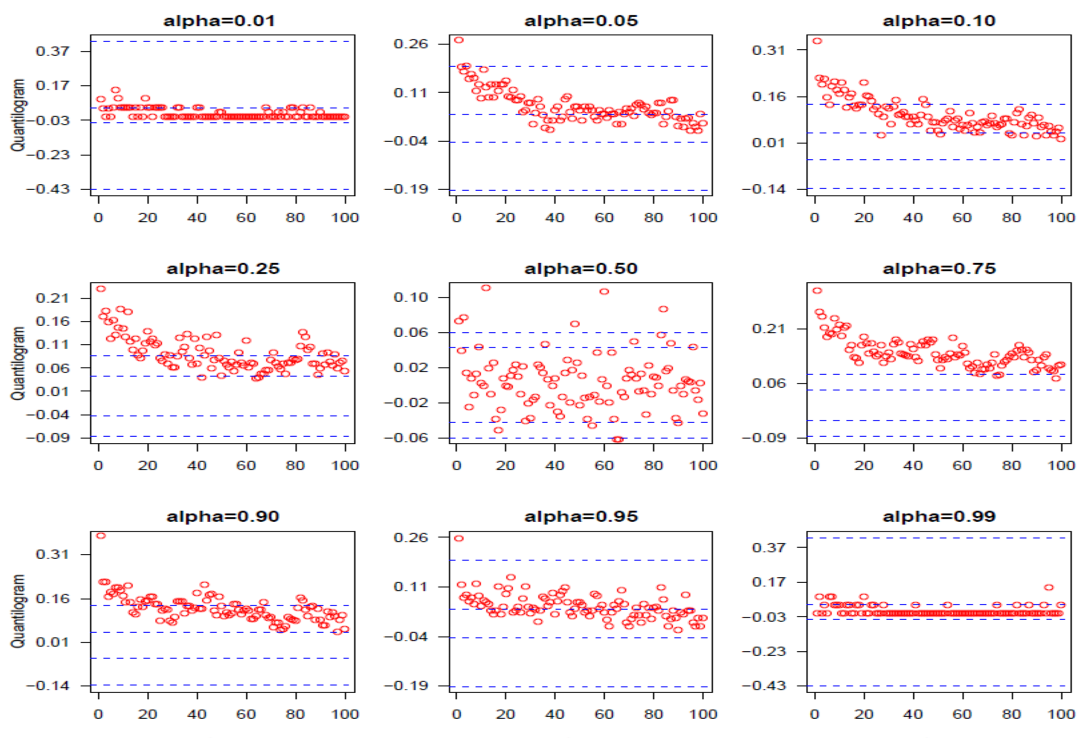


Figure 5(b): Portmanteau Test With 95% Critical Values for the Returns on South African Rand Relative to the Us Dollar

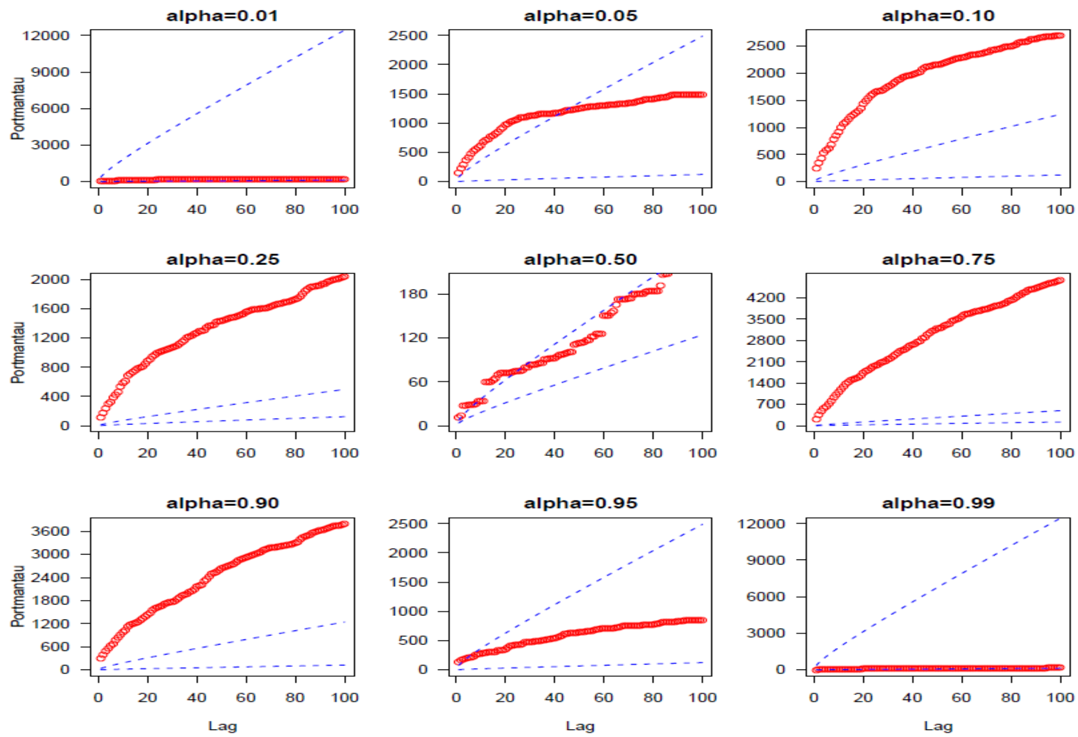


Figure 6(a): Values of $\hat{\rho}_{\alpha k}$Along With Liberal and Conservative 95% Confidence Intervals for the Returns on UK Pound Relative to the US Dollar

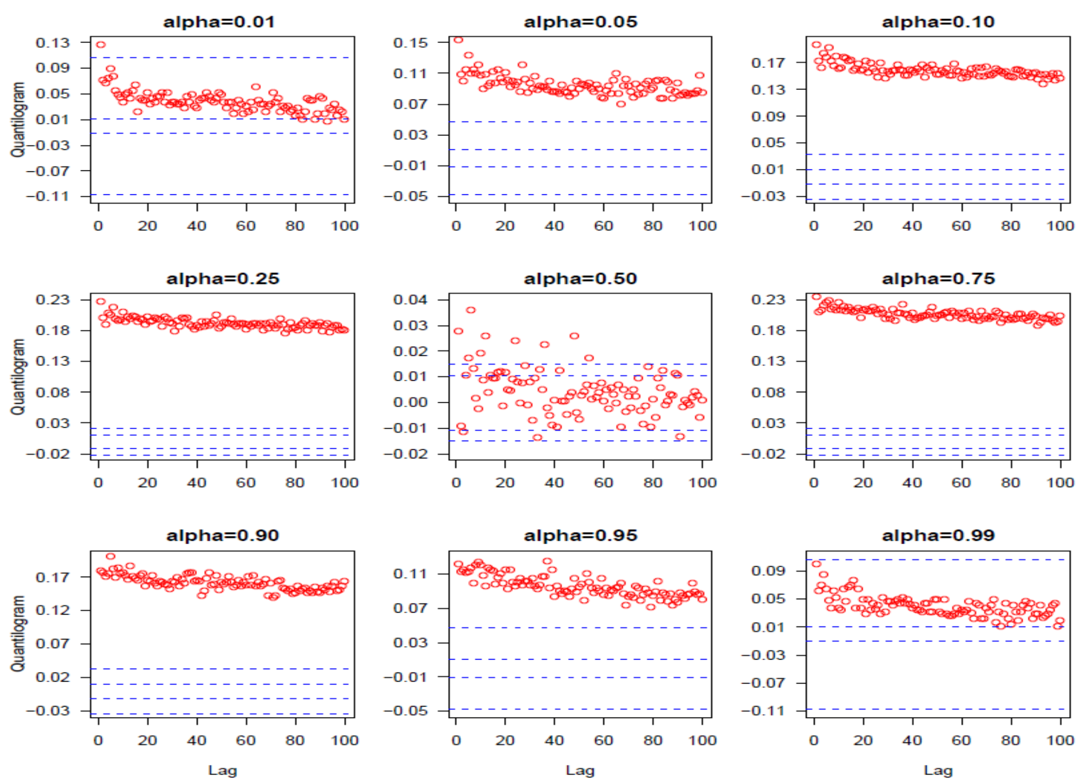
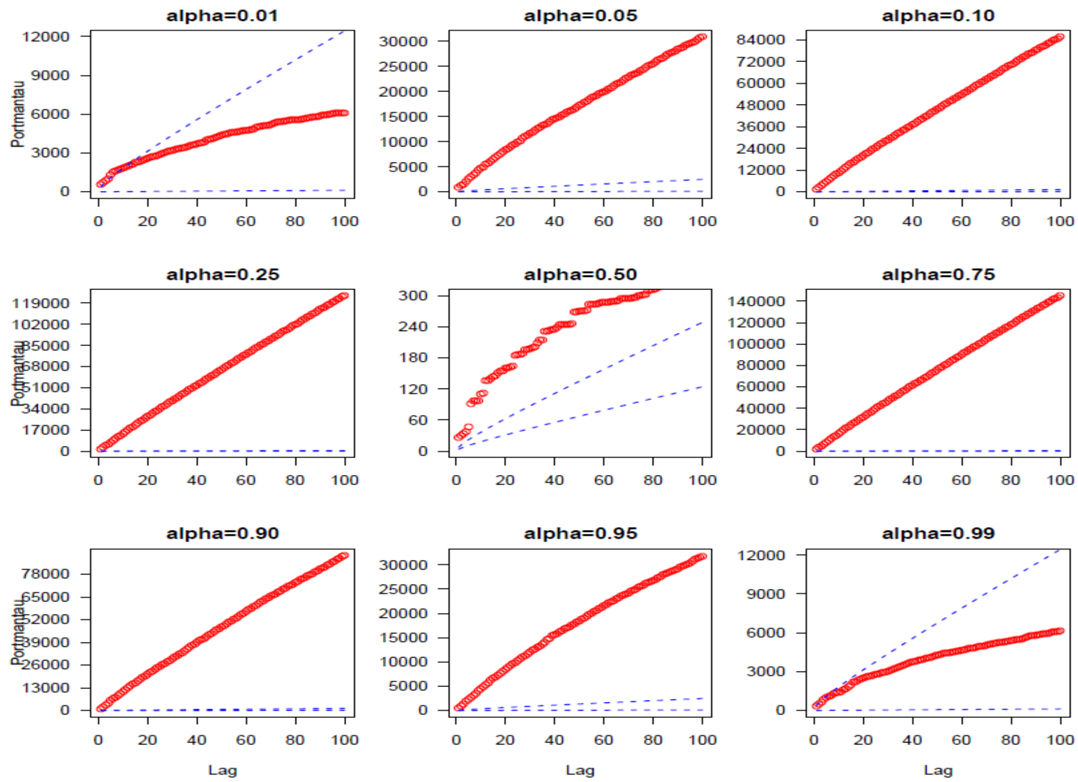


Figure 6(b): Portmanteau Test With 95% Critical Values for the Returns on UK Pound Relative to the Us Dollar



Appendix

Table A1: Summary Statistics

	Country					
Statistic	**BRAZIL**	**RUSSIA**	**INDIA**	**CHINA**	**SOUTH AFRICA**	**UK**
Mean	1.52	1.05	0.15	0.77	0.16	0.04
Median	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	83.94	277.79	84.34	113.25	36.35	61.11
Minimum	-34.05	-127.69	-31.63	-10.34	-27.39	-60.43
Std. Dev.	6.45	11.28	3.14	6.49	2.71	2.58
Skewness	3.41	11.61	10.05	11.53	1.96	0.42
Kurtosis	25.92	258.39	255.54	162.67	42.16	234.57
Jarque-Bera	59019.26	6718544.00	6284248.00	907638.80	135022.30	6095249.00
p-value	0.00	0.00	0.00	0.00	0.00	0.00
N	2476	2452	2350	837	2092	2728

Note: Std. Dev. symbolizes the Standard Deviation; *p*-value corresponds to the null of normality based on the Jarque-Bera test; *N* is number of observations.

Figure A1: Data Plots

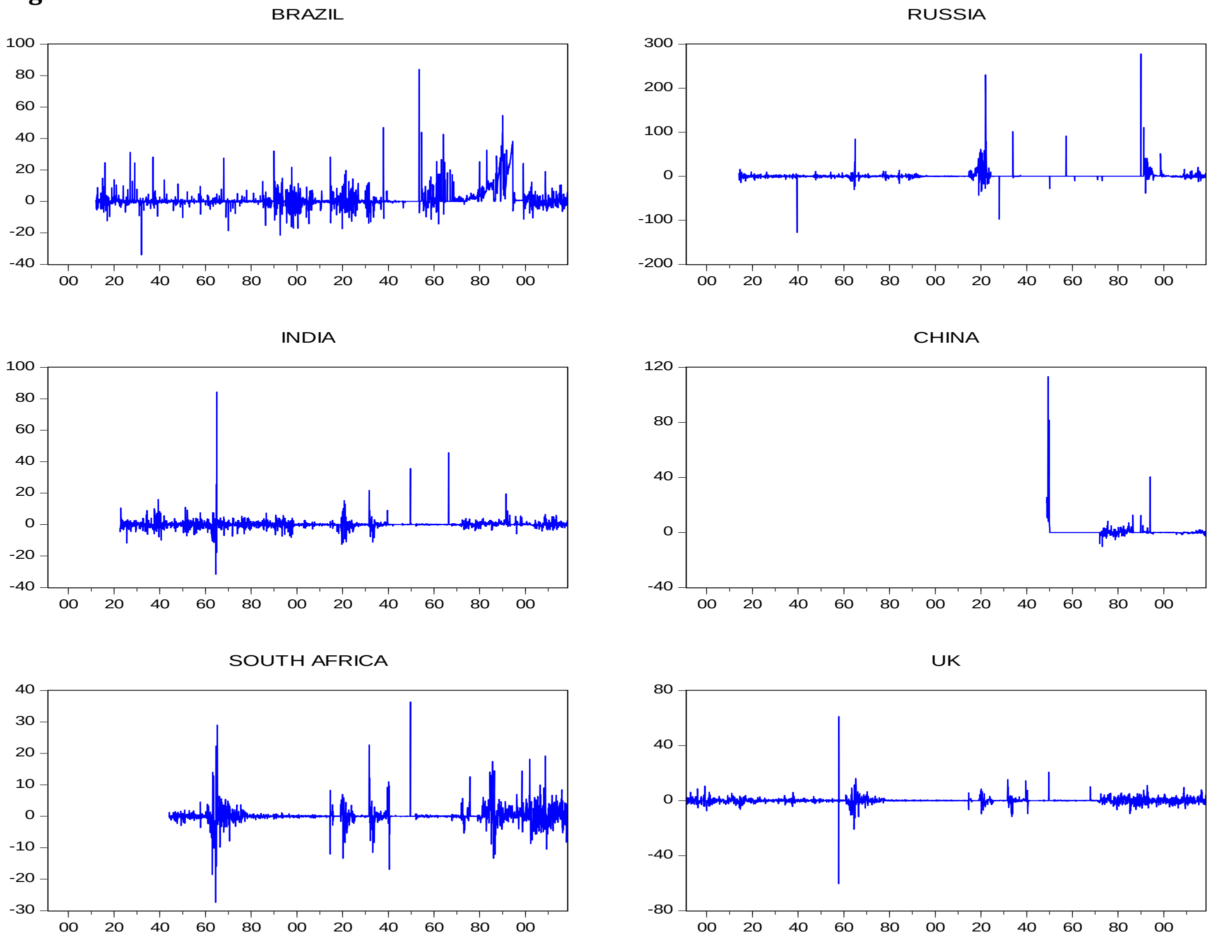


Figure A2(a): Values of $\hat{\rho}_{\alpha k}$Along With Liberal and Conservative 95% Confidence Intervals for the Returns on UK Pound Relative to the US Dollar: Daily Frequency

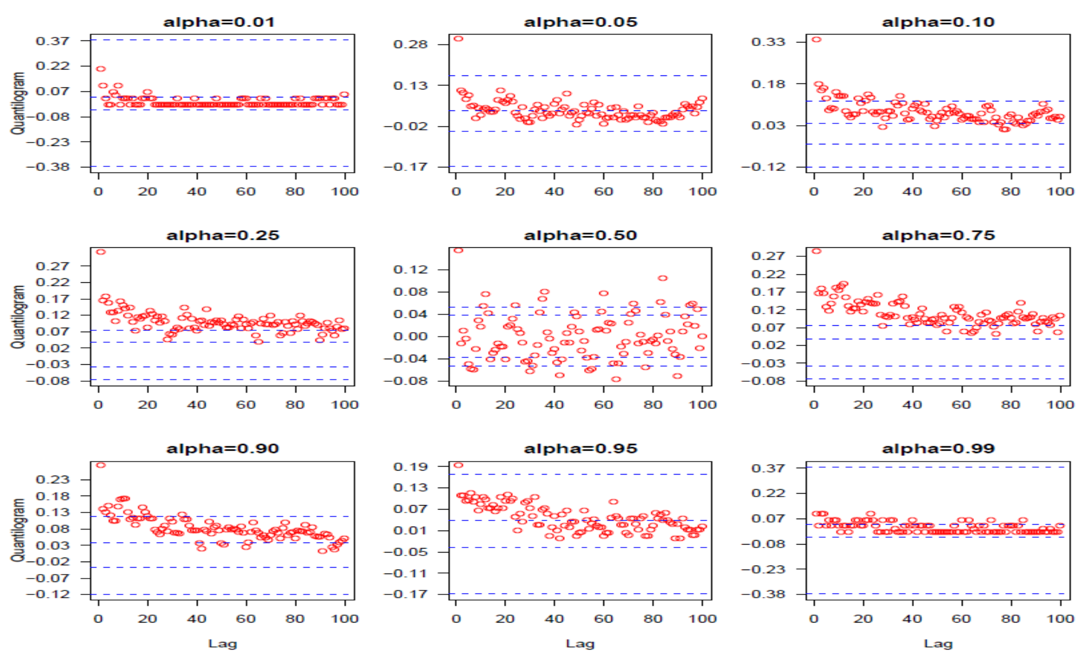
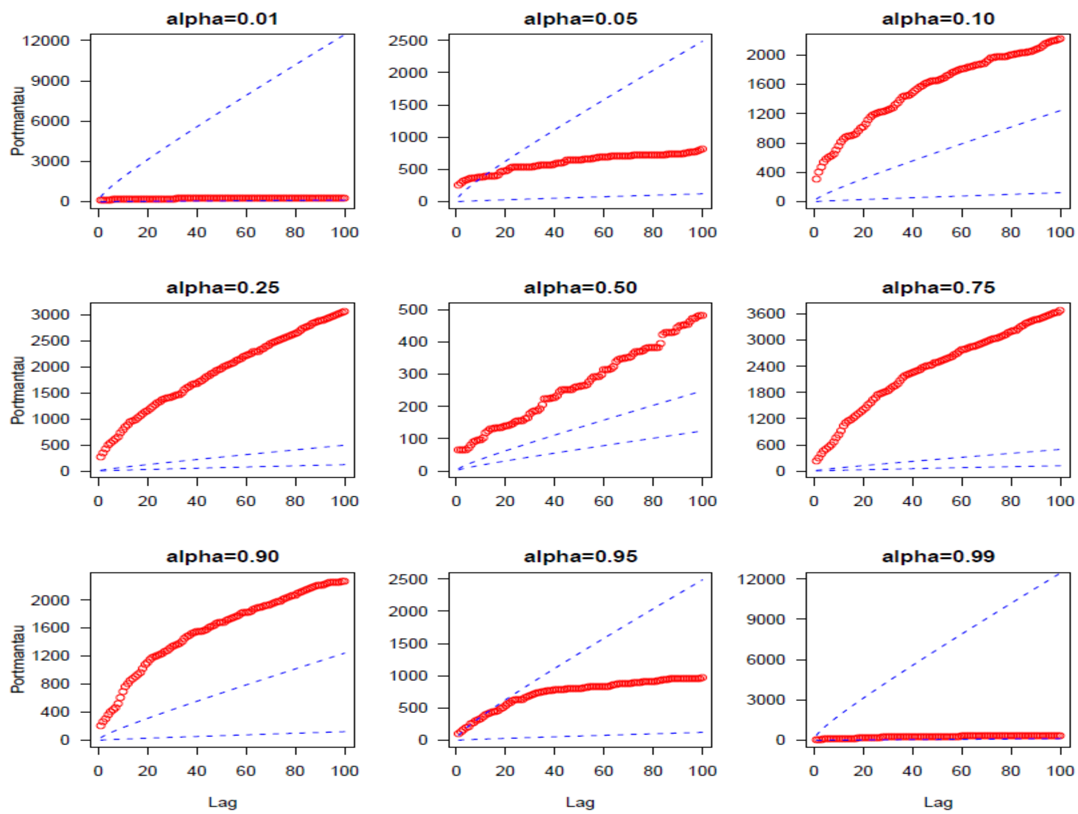


Figure A2(b): Portmanteau Test With 95% Critical Values for the Returns on UK Pound Relative to the Us Dollar: Daily Frequency



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Impact of Credit Demand on the Productivity of Rice Farmers in South West Nigeria

T.O. Ojo*[1], L.J.S. Baiyegunhi[2] & A.O. Salami[3]
[1&2]SAEES (School of Agricultural, Earth and Environmental Sciences), University of KwaZulu-Natal, Pietermaritzburg, South Africa
[3]African Development Bank Headquarter Building Rue Joseph Anoma, Côte d'Ivoire
ojotemitope70@yahoo.com, baiyegunhil@ukzn.ac.za, A.SALAMI@afdb.org

Abstract: Employing cross-sectional data from 360 rice farmers selected from three states in South West Nigeria, the study analyzes the impact of credit demand on the productivity of rice farmers. An Endogenous Switching Regression Model (ESRM) that accounts for both heterogeneity and sample selection biases were used to estimate the impact of credit demand on rice productivity in South West Nigeria. In addition, a Tobit regression model was employed to measure the level of participation of rice farmers in the credit market. The result of the first stage (probit model) of the ESRM revealed that household assets, access to service, climate variables, regional variables, and transaction cost are statistically significant in influencing farmers' credit demand decision. The results of the second stage of the ESRM indicate factors such as household assets and access to service were statistically significant in explaining variations in rice productivity among participants and non-participants in the credit market. Furthermore, the results of the Tobit model showed that the farmers' location income from rice farming experience, interest rate, and distance to the source of credit are statistically significant determinants of the amount of credit received. These findings suggest that facilitating farmers' access to credit will improve rice productivity. Therefore, it is imperative for government and development partner to work together in order to improve the conditions for suitable agricultural credit access to rice farmers, especially a review of interest rates. A necessary addition should be developed to the assistance already being provided under Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) in the form of loan guarantees and other risk-sharing incentives, such as a regulatory environment that supports the modern contractual obligations that are characteristic of well-functioning agricultural financing. This would not only contribute to the intensification of rice production in Nigeria to meet its increasing rice demand, but also improve rice farmers' productivity and their households' incomes.

Keywords: *Credit, Impact, Rice, Productivity, ESRM, Nigeria*

1. Background of the Study

Many policy incentives have been put in place for Nigeria's financial system. This is in a bid to ensure that farmers have access to credit to finance their agricultural activities. Financial institutions such as microfinance banks, commercial banks, and Nigeria's Bank of Agriculture are being motivated to increase the credit supply to the agricultural sector one way of assessing how responsive the activities of the lending institutions have been to analyze credit market participation among farmers. Cultivation of most agricultural products—for example, paddy rice—involves a high cash outlay to meet operating costs during the cultivation season; hence, agricultural credit plays a significant role in increasing farm productivity (Iqbal, Munir & Abbas 2003). The importance of credit in enabling smallholder farmers to master agricultural practices cannot be over-emphasized (Siddiqi et al., 2004). Credit availability could enhance the adoption of technological advances in farming, resulting in increased productivity vis-a-vis increased revenue.

Credit plays an important role in increasing agricultural productivity at both the pre-planting and harvesting stages (Akpokodje, Lançon, & Erensten, 2001); hence, timely access and availability of credit as posited by Saboor, Hussein, & Munir (2009) are critical to farmers' acquisition of the inputs and machinery required to carry out farm activities. Credit is needed not only for farming purposes but also for household consumption, especially during the off-season. Under the Structural Adjustment Programme (SAP), the Nigerian Agricultural and Cooperative Bank (NACB) set up special credit schemes in 1988 to boost rice production. Under the schemes, the number of loans granted for rice production increased from 3,000 to 5,780 approved loans in 1989 (Akpokodje, Lançon, & Erensten, 2001). The government has implemented policies such as the Nigeria Incentive-based Risk Sharing System for Agricultural Lending (NIRSAL) to ameliorate the situation, including a capital injection in 2009 to boost the financing of commercial agriculture.

According to Guirkinger & Boucher, (2008) and supported by Olomola & Gyimah-Brempong (2014), the significant adverse effects of credit constraints on farm productivity of smallholder farmers in the rural areas of developing countries such as Nigeria is alarming. Farm productivity of staple crops, in developing nations such as Nigeria, is low due to traditional methods of farming, poor irrigation facilities, land fragmentation, the impact of climate change, misuse of modern agricultural technology, and less availability of credit (Chandio et al., 2017). Among all the staple crops, rice has risen to a position of eminence in Nigeria. Rice is the most important staple food for about half of the human race (Akinbode, 2013). According to USDA (2016), the annual consumption of rice in Nigeria was about 5 million MT while quantity supplied was 2.7 million MT, with a demand-supply gap of about 2.3 million MT which is today filled in by importation (Obih and Baiyegunhi, 2017). Nigeria still ranks third with Iraq (after the Philippines and China) in the group of major rice importing countries in the world (Awe, 2006). Among many factors that reduce the production of rice in Nigeria, credit constraints, credit market imperfections and stringent conditions for credit accessibility assumed to be strong contributors in making an investment in agriculture unattractive (Holden et al., 1998). It is therefore imperative to assess the impact of credit demand on the productivity of rice farmers in the study area.

The climate change and regional variables capture managerial and environmental differences among farms located in different States. While Alene & Mayong (2007), focused on the effects of education on agricultural productivity in northern Nigeria, Baiyegunhi, Fraser, & Darroch (2010) examined credit constraints and household welfare in the Eastern Cape Province of South Africa, and Awotide et al. (2015) investigated the impact of access to credit on the agricultural productivity of cassava in Nigeria. The current study contributes to the existing literature by extending the discussion to include climate change and regional variables. According to Rejitis et al. (2002), location variable is expected to have an impact on farmers' decisions to participate in the credit market, which encourages investment in the adoption of climate change adaptation strategies. Furthermore, the empirical technique advances the existing literature on the impact of credit demand on rice productivity by using a switching regression that segregates smallholder farmers in line with their participation in the credit market while simultaneously controlling for biases resulting from sample selectivity.

2. Econometric Model

Analyzing the impact of credit demand on rice productivity includes an examination of participation in the credit market and the factors (farmer's characteristics, farmers' assets and institutional factors) that influence the decision of rice farmers to borrow from the credit sources. In addition to the determinants of credit demand, such factors are crucial in understanding the functioning of the credit market and interpreting the prospects for rice farmers' relying on the market for farm financing. This implies that in addition to estimating the impact of credit demand on productivity, a choice model that describes whether a rice farmer decides to borrow is also estimated since the decision to borrow will affect the outcome of participation (rice yield) in the credit market. This study investigates the impact of smallholder farmers' demand for credit on rice productivity. Tiwasing et al. (2018) attempted to evaluate the effect of credit constraints and credit access, respectively, on outcomes by estimating separate production functions for those farmers that have access to credit and those that do not; the estimates were then compared. The major weakness of this particular method is the implicit assumption that all farmers that had access to credit and those that did not are respectively, the same in line with their credit demand situation.

Also, there is the problem of endogeneity, which arises from the assumption that demand for credit is voluntary. Thus, the major source of endogeneity is self-selection into demand for credit. To address this, an approach that explicitly accounts for such endogeneity simultaneously should be used as posited by Hausman (1983). Therefore, this study precisely corrects for any possible sample selection bias that may arise from other interventions that provide multiple services to farmers in addition to credit with the aid of an endogenous switching regression model (Lee, 1978 and Maddala, 1983). Following Lokshin & Sajaia (2004), Nyangena & Köhlin (2008), Asfaw, Mithöfer, & Waibel (2010), and Aravindakshan et al. (2018), this study estimated a endogenous switching regression (ESR) model (Maddala & Nelson 1975; Maddala 1983) to deal with the problems presented by both sample selection bias and endogeneity (Heckman 1979; Hausman

1978), allowing for interactions between credit market participation and other covariates (Alene & Manyong 2007).

This model is divided into two parts: the first correct for endogeneity due to self-selection using a probit selection model in which farmers are sorted into participants and non-participants, while the second part of the model addresses the outcome equations on factors influencing productivity.

$$Y_i^* = \beta Z_i + \varepsilon_i \tag{1}$$

$$Y_i = 1 \text{ if } Y_i^* > 0$$

$$Y_i = 0 \text{ If } Y_i^* \leq 0,$$

Where Y* is the unobservable (or latent) variable for credit market participation; Y is the observable counterpart (equal to one if the farmer participated in the credit market and zero otherwise) and ε represents the random disturbances associated with credit participation. In the second stage, the outcome equation on the impact of credit market participation rice farmers' productivities is estimated through a production function, expressed in equation (2) as:

$$Q = f(Y, \beta, Z) + \varepsilon \tag{2}$$

Where Q is the log form of rice yield; Y refers to credit market participation; β is a vector of parameters to be estimated; and Z is a set of explanatory variables used in the model.

Regime 1 (participants): $Q_{1i} = \lambda_1 H_i + v_{1i}$ (3a)

Regime 2 (non-participants): $Q_{2i} = \lambda_2 H_i + v_{2i}$, (3b)

Where Q_{1i} and Q_{2i} are the logs of rice yield productivities of the farmers in regimes 1 and 2, respectively. H_i Represent a vector of exogenous variables that are hypothetically assumed to determine the rice productivity function. v_{1i} and v_{2i} are the error terms. Finally, the error terms are believed to have a trivariate normal distribution, with zero mean and non-singular covariance matrix expressed as follows:

$$\operatorname{cov}(\varepsilon_i v_1 v_2) \begin{vmatrix} \sigma_1^2 & \sigma_{12} & \sigma_{1\varepsilon} \\ \sigma_{12} & \sigma_2^2 & \sigma_{2\varepsilon} \\ \sigma_{1\varepsilon} & \sigma_{2\varepsilon} & \sigma^2 \end{vmatrix}, \tag{4}$$

Where

$$\sigma_1^2 = \operatorname{var}(v_1);\ \sigma_2^2 = \operatorname{var}(v_2); \sigma^2 = \operatorname{var}(\varepsilon_1); \sigma_{12} = \operatorname{cov}(v_1 v_2); \sigma_{1\varepsilon} = \operatorname{cov}(v_1, \varepsilon i); \sigma_{2\varepsilon} = \operatorname{cov}(v_{2,}\varepsilon_i); \sigma^2$$

Represent variance of the error term in the selection equation and σ_1^2, σ_2^2 represent variance of the error term in the in the outcome equation.

Following Maddala (1983), the existence of latent characteristics related to selection bias indicates that, the error structure is based on the account that the error term (ε_i) of the selection equation (2) is correlated with the error terms (v_{1i} and v_{2i}) of the outcome equations 3a and 3b, the expected values of v_{1i}, v_{2i} conditional on the sample selection are non-zero.

$$E(v_{1i} \mid Y_i = 1) = E(v_{1i} \mid \varepsilon_i > -Z_i\beta) = \sigma_{1\varepsilon}\left[\frac{\theta(Z_i\beta/\sigma}{\varphi(Z_i\beta/\sigma}\right] \equiv \beta_{1\varepsilon}\gamma_1 \tag{5a}$$

$$E(v_{2i} \mid Y_i = 0) = E(v_{2i} \mid \varepsilon_i \leq -Z_i\beta) = \sigma_{2\varepsilon}\left[\frac{-\theta(Z_i\beta/\sigma}{1-\varphi(Z_i\beta/\sigma}\right] \equiv \beta_{2\varepsilon}\gamma_2, \tag{5b}$$

Where θ and φ are the probability density and cumulative distribution functions of the standard normal distribution, respectively. The ratio of θ and φ evaluated at βZ_i, represented by γ_1 and γ_2 in equations 5a and 5b is referred to as the inverse mills ratios (IMRs), which indicate selection bias terms. The IMR shows the correlation between credit participation and rice productivity. Previous studies have used a two-stage method to estimate the endogenous switching model (Lee, 1978; Feder et al., 1989; Fuglie & Bosch 1995; Freeman et al., 1998). In the first stage, a probit model of the criterion equation is estimated and the IMRs γ_1 and γ_2 are derived according to definitions in equations 5a and 5b. In the second stage, these predicted variables are added to the appropriate equation in 3a and 3b, respectively, to yield the following sets of equations"

$$Q_{1i} = \lambda_1 H_i + \beta_{1\varepsilon}\gamma_1 + \phi_i Y_{1i} + \psi_1 \quad (6a)$$

$$Q_{2i} = \lambda_2 H_i + \beta_{2\varepsilon}\gamma_2 + \phi_{2i} Y_{2i} + \psi_2 \quad (6b)$$

The coefficients of the variables γ_1 and γ_2 provide estimates of the covariance terms $\beta_{1\varepsilon}$ and $\beta_{2\varepsilon}$, respectively. Since the variables γ_1 and γ_2 have been estimated, the residuals ψ_1 and ψ_2 cannot be used to calculate the standard errors of the two-stage estimates. In the literature, a two-step ESR procedure involving estimation of the probit selection Perloff et al. (1998) employ model and outcome equation. Heteroskedastic errors are always confounded with the method of inserting IMRs from probit equations manually into outcome equations. According to Lokshin & Sajaia (2004), Full Information Maximum Likelihood (FIML) is an efficient method to analyze the ESRM. Estimators obtained by FIML enjoy all the properties of maximum likelihood estimators. They are consistent and asymptotically normally distributed. The FIML simultaneously fits the selection (equation 1) and outcome (3a and 3b) equations in order to yield consistent standard errors, thus making γ_1 and γ_2 in equation 6a and 6b, respectively homoscedastic.

The FIML's log-likelihood function for the switching regression model employed in this study as proposed by Lokshin and Sajaia (2004) is described below:

$$LnY_i = \sum_{i=1}^{N} \left\| \begin{matrix} Y_i t_i \left[\ln F\left(\dfrac{Z_i\beta + \sigma_{1\varepsilon}(Q_{1i} - H_{1i}\lambda/\phi_1))}{\sqrt{1-\alpha_{1i}^2}}\right) + \ln(f(Q_{1i} - H_{1i}\lambda/\phi_1 \right] + \\ (1-Y_1)t_i \left[\dfrac{\ln(1 - F(Z_i\beta + \sigma_{2\varepsilon}(Q_{2i} - H_{2i}\lambda/\phi_2))}{\sqrt{1-\alpha_{2\varepsilon}^2}}) + \ln(f(Q_{2i} - H_{2i}\lambda/\phi_2 \right] \end{matrix} \right\| \quad (7)$$

According to Fuglie and Bosch (1995), the signs of the correlation coefficients $\alpha_{i\varepsilon}$ and $\alpha_{2\varepsilon}$ have economic meanings. If $\alpha_{i\varepsilon}$ and $\alpha_{2\varepsilon}$ have alternate signs, rice farmers participated in the credit market based on their comparative advantage: those farmers that participate in the credit market have above-average productivity and non-participants have above-average productivity. However, if the coefficients have the same sign, that indicates hierarchical sorting: participants have above-average productivity whether they participate or not, but they are better off if they participate, whereas the non-participants have below-average productivity in either case, but they are better off not participating. Following Awotide et al. (2016), and Danso-Abbeam & Baiyegunhi (2017), this study employed the Tobit regression model to determine the level of participation of rice farmers in the credit market. The level of participation is measured as the amount of credit received from the credit market. Following the literature on the determinants of access to credit, the following explanatory variables were included in the Tobit model age and gender of the head of household, farm size, marital status, household size, years of formal education.

Income from off-farm activities, contacts with extension agent, membership in a cooperative society, farming experience access to climate change information, climate variables, regional variables, and transaction costs for credit. The Tobit regression model developed by Tobin, (1958) is a hybrid of discrete and continuous dependent variables that express the relationship between a nonnegative exogenous dependent variable (Y) and a vector of explanatory variables (X). The Tobit model is relevant in this study because of its ability to avoid the censoring biases that the Ordinary Least Square (OLS) estimator could present. It is obvious from the data collected that some groups of farmers did not participate in the credit market and, hence, the amount received by this group is censored at zero. Thus, the Tobit model censored the decisions of farmers to participate in the credit market at zero. The model supposes that there is a latent unobservable variable Y_i^* that determines the value of the observable variable Y_i (amount received) this unobservable variable Y_i^* linearly depends on X_i (age and gender of the household head, farm size, marital status, household size, years of formal education, income from off-farm activities. Contacts with extension agent, membership in a cooperative society, farming experience, access to climate change information, climate variables, regional variables, and transaction costs for credit), via a parameter (vector) $\beta^{'}$, which determines the relationship between the independent variable (or vector) X_i and the latent variable Y_i^* (just as in a linear model). In addition, there is a normally distributed error term u_i to capture random influences on this relationship the observable variable Y_i is defined to be equal to the latent variable Y_i^* whenever the latent variable is above zero and zero otherwise. Since the threshold for the amount received is zero (cannot be negative), the dependent latent variable can be specified as an index function (Maddala 1983).

$$Y_i =_i \begin{cases} Y_i^* & Y_i = Y_i^* \text{ if } Y_i^* > 0 \text{ and } Y_i^* \leq 0 \text{ otherwise.} \\ 0 & \end{cases} \tag{8}$$

It is assumed that Y_i^* can be specified as follows:

$$Y_i^* = \beta^{'} X_i + \mu_i \;\; \mu_i \approx N(0, \sigma^2), \tag{9}$$

Where Y_i^* is the latent variable of the amount of credit received and the vector of independent variables is denoted by X_i. $\beta^{'}$ is the vector of unknown coefficients and μ_i is an independently distributed error term.

If the relationship parameter $\beta^{'}$ is estimated by regressing the observed Y_i on X_i, the resulting ordinary least square regression estimates will be inconsistent, as they will yield a downward-biased estimate of the slope coefficient and an upward-biased estimate of the intercept. According to Amemiya (1973), the maximum likelihood estimator suggested by Tobin for this model is consistent.

$$V = \prod_0 \Psi_i(Y_0) \prod_1 \Phi_1(Y_i) \tag{10}$$

$$V = \prod_0 [1 - \Psi_i(X_i \beta / \sigma)] \prod_1 \sigma^{-1} \Phi_1[(Y_i - X_i \beta)/\sigma],$$

Where Ψ and Φ are the standard normal density and cumulative distribution functions, respectively. Then the log-likelihood function can be written as

$$LnV = \sum_0 \ln(1 - \Psi(X_i \beta / \sigma) + \sum_1 \ln(\frac{1}{2\prod \sigma^2)^{1/2}}) - \sum_1 \frac{1}{2\sigma^2}(Y_i - \beta X_i)^2. \tag{11}$$

The parameters β and σ are estimated by maximizing the log-likelihood function:

$$\frac{\partial LnV}{\partial \beta} = \sum_0 \frac{X_i \Phi(X_i \beta)/\sigma}{1-\Psi(X_i \beta/\sigma)} + \frac{1}{\sigma^2}\sum_1 (Y_i - \beta X_i) = 0$$
. (12)
$$\frac{\partial LnV}{\partial \sigma^2} = \frac{1}{2\sigma^2}\sum_0 \frac{\beta X_i \Phi(X_i \beta/\sigma)}{1-\Psi(X_i \beta/\sigma)} - \frac{n_i}{2\sigma^2} + \frac{1}{2\sigma^4}\sum_1 (Y_i - \beta X_i)^2 = 0$$

Since the two equations (12) are non-linear the maximum likelihood estimator must be obtained by an iterative process (Greene 2003).

3. Study Area and Method of Data Collection

The study was carried out in the southwestern part of Nigeria. Southwestern Nigeria consists of Lagos, Ogun, Oyo, Osun, Ondo and Ekiti States, collectively known as the South-West geographical zone of Nigeria. The area lies between longitudes 2^0 31^1 and 6^0 00^1East and latitudes 6^0 21^1 and 8^0 37^1N, with a total land area of about 77,818 km^2. It is bounded in the east by Edo and Delta State in the north by Kwara and Kogi States, in the west by the Republic of Benin and in the south by the Gulf of Guinea. The climate of Southwest Nigeria is tropical in nature and is characterized by wet and dry seasons. The mean temperature ranges between 21^0 C and 34^0 C, while the annual rainfall ranges between 150mm and 3000mm. The wet season is associated with the southwest monsoon wind from the Atlantic Ocean while the dry season is associated with the northeast trade wind from the Sahara desert. A multistage sampling technique was used for the selection of the respondents.

The first stage involved a purposive selection of three states—Ekiti, Ondo, and Osun—and the second stage with the same technique was used to select local government areas) from each state based on the predominant smallholder rice farmers in these areas. The third stage involved a random selection of 5 villages each from the four LGAs selected in the second stage. The last stage involved a random selection of 6 smallholder rice farmers in each of the villages to arrive at a total of 360 respondents used for the study. Following Tesfahunegn et al. (2016), at 95% confidence level and 5% margin of error, the sample size of for the study was determined using the sample determination formula as described by Cochran (1977). Based on the total household heads and sample size, the interval size was determined by dividing the total household heads by the sample size. A respondent was then selected within the interval using simple random sampling.

Data were collected using a pre-tested, well-structured questionnaire on socio-economic characteristics of the respondents, adaptation to climate change strategies, determinants of adaptation strategies, and the costs and returns to rice production. In addition, the study also conducted focus group discussions to engender information on the farmers' knowledge about climate change and its related hazards, susceptible groups in the area and existing adaptation strategies. Twelve focus group discussions were conducted in each of the local government areas with the participation of at least 10 farmers from each area. Information sought included climate change-related hazard and adaptation strategies employed to mitigate its effects. Information from the focus group discussions helped in the restructuring of the questionnaire. In line with the climate variables, monthly averages for precipitation and temperature from 1970 to 2014 were obtained from the Nigeria Meteorological Agency (NIMA) at Oshodi in Lagos, Nigeria and the International Institute for Tropical Agriculture (IITA) in Ibadan, Nigeria.

4. Results and Discussion

A brief definition and summary statistics of some variables used in the model are presented in Table 1.

Table 1: Definitions and Summary Statistics of Variables Used in the Model

Variables	Description of variables	Mean	SD
Dependent			
Rice yield	Log of output of rice kg/ha		
Access to credit	Dummy = 1 if HH had access to credit; 0 otherwise	0.57	0.50

Independent			
Gender	Dummy =1 If household head is male; 0 otherwise	0.56	0.50
Age of the head of household	Age of head of household (years)	47.28	7.67
Marital status	1 if head of household is married; 0 if single or widowed	0.80	0.40
Educational status	Years of education of the head of household	6.45	5.70
Household size	Number of people in the household	4.66	1.24
Off-farm income	1 = if household engages in any off-farm activity	0.54	0.50
Farming exp	Years of household experience in rice production	15.73	5.09
Farm size	Total land owned by the household in hectares	7.37	3.04
Acc to climate info	1 if household had climate change information; 0 otherwise	0.36	0.48
Acc to ext contacts	1 if household had access to extension; 0 otherwise	0.53	0.50
Membership	1 if household belongs to Farmers' Association	0.54	0.50
Mean annual tempt	Mean of annual temperature (°C)	27.66	0.05
Mean annual Ppt	Mean of annual precipitation (mm)	111.05	16.09
Location_Ekiti State	1 if household is from Ekiti; 0 otherwise	0.38	0.48
Location_Ondo State	1 if household is from Ondo; 0 otherwise	0.38	0.49
Location_Osun State	1 if household is from Osun; 0 otherwise	0.35	0.48

The results in Table 1 show that household heads' average age and years of education are 47 and six years, respectively. On extension access, about 53% of the respondents have contact with extension agents. Access to credit is a major determinant in choosing adaptation strategies, but only about 57% of the smallholder rice farmers have access to credit. However, there are clear variations in terms of access to information for example about 36% of the farmers who at least adopted a strategy has access to information related to climate change. About 47% of the smallholder rice farmers in the study area are risk-constrained, while 37% of them are price-constrained and 57% are quantity-constrained. The average farming experience of the farmers in the study area is 15 years. The result is in agreement with Hitayezu, Okello & Gor (2010), who posited that farmers' perception and efficient response to the economic conditions is directly related to their resource allocation ability, which is subsequently linked to their human capital endowment.

Determinants of Credit Market Participation: FIML Estimates of the ESRM: This section presents the empirical evaluation of the impact assessment. The correlation coefficients rho_1 and rho_2 of the ESRM are both negative and are statistically significant for both the correlation between the credits market participation equation and the yield of the participants and non-participants in the credit market. This shows that the participants have above-average productivity regardless of whether they participate in the credit market or not, but they are better off if they have access to credit, whereas non-participants have below-average productivity in either case but they are better off as non-participants. The statistical significance of likelihood ratio test at 1% for joint independence of the three equations implies that they should not be estimated separately. The result of the ESRM estimation is in three parts, as presented in Table 2, the first part of the probit model of the determinants of demand for credit.

Table 2: FIML Estimates of the Endogenous Switching Regression Model

	Demand for credit		**Participants**		**Non-participants**	
	Coef.	**Std. Err.**	**Coef.**	**Std. Err.**	**Coef.**	**Std. Err.**
Lnoutput/ha						
Gender	0.1980	0.221	0.005	0.011	0.005	0.011
Age	**0.032**[c]	0.017	-0.001	0.001	0.000	0.001
Marital status	**-1.322**[a]	0.34	**-0.085**[c]	0.014	**-0.093**[a]	0.015

Educational status	**0.059**[b]	0.025	**-0.009**[a]	0.001	**-0.008**[a]	0.001
Farming experience	**0.047**[c]	0.025	**-0.003a**	0.001	-0.001	0.001
Household size	0.029	0.079	**0.011**[a]	0.004	-0.006	0.004
Farm size	**-0.072**[c]	0.042	**0.005**[a]	0.002	0.001	0.002
Off farm income	1.078	0.988	-0.054	0.039	-0.005	0.044
Acc. to extension	**-1.780**[b]	0.896	0.051	0.039	0.010	0.044
Climate Info Acc.	**0.800**[a]	0.267	-0.008	0.014	**-0.061**[a]	0.018
Location_Ekiti	**-0.569**[b]	0.26	0.018	0.015	-0.015	0.013
Location_Ondo	**0.432**[c]	0.247	-0.008	0.015	-0.002	0.013
Location_Osun	**-0.913**[b]	0.364	-0.023	0.016	-0.019	0.016
Annual temp	**-5.607**[b]	2.452	0.025	0.114	0.016	0.118
Annual ppt	**-0.050**[a]	0.016	0.000	0.001	0.000	0.001
Constant	158.104	68.236	6.903	3.176	7.142	3.286
Distance to source	**0.040**[b]	0.018				
Sources	**-1.773**[a]	0.452				
Membership	0.937	1.007				
/lns1	**-2.700**[a]	0.071				
/lns2	**-2.588**[a]	0.051				
/r1	**-1.047**[a]	0.433				
/r2	**-1.138**[a]	0.335				
sigma_1	**0.067**[a]	0.005				
sigma_2	**0.075**[a]	0.004				
rho_1	**-0.781**[a]	0.169				
rho_2	**-0.814**[a]	0.113				

LR test of Independent equations: chi2 (1) = 21.14 Prob > chi2 = 0.0000

Note: a, b, and c represent significance level at 1%, 5%, and 10%, respectively.

Fourteen of the eighteen variables included in the probit model are statistically significant in influencing the choice of credit demand. The results of the probit model revealed that farmers' socio-economic characteristic variables such as the age of the household head, marital status, and educational level are statistically significant. Furthermore, household asset variables, farming experience, and farm size are also statistically significant in influencing the decision to participate in the credit market. Others variable that is significant is access to service, climate variables, regional variables, and transaction costs. As presented in Table 2, the estimates of the second-stage switching regression model for rice productivity (output per hectare) are indicated as participants and non-participants. The coefficients of marital status, educational status, and farming experience are negative and are statistically significant in influencing rice productivity among the farmers that participated in the credit market. In the same vein, the coefficients of marital status, educational status, and access to climate change information are negative and statistically significant in influencing rice productivity among non-participants. The results imply that a unit increase in rice farmers' marital status, number of years spent in school, and access to climate change information will cause a 9.3%, 0.8%, and 6.1% respective reduction in the productivity of rice.

A plausible explanation for the negative relationship between the farming experience and rice productivity could be attributed to the conventional nature of some experienced farmers. Some farmers are so satisfied with their rudimentary method of farming such that they find it difficult to switch to new farming practices, hence, reduce productive efficiency. This finding is in consonance with Danso-Abbeam & Baiyegunhi, (2017) who also found a negative relationship between farming experience and technical efficiency among cocoa farmers in Brong-Ahafo region of Ghana. The number of years spent in school is negatively signed with rice productivity could also be traced to the fact that the number of years in formal education may not necessarily increase one's productive efficiency as compared with the level of knowledge in its production environment. The finding is in line with the studies of (Binam et al. 2008; Onumah et al. 2013) who also estimated education as a decreasing function of productivity. The coefficients of farm size and household size are both positive and statistically significant in explaining variations in the productivity of rice. This is in consonance with both the Rahman (2009) and Benin et al. (2004) studies that showed that crop productivity is positively influenced by farm size. These findings also corroborate the results of Tijani, Alimi, & Adesiyan (2006) and Abdallah (2016), which found a positive relationship between farm size and crop yield. It is thus expected that rice productivity improves significantly when rice farmers have enough land for production.

Family size significantly influences rice production. Benin et al. (2004) noted the significantly positive influence of male members in the family on cereal crop diversity on farms in Ethiopia. The results from Table 2 show that an increase in both farm size and family size will increase rice productivity by 0.5% and 1.1%, respectively. The results of this study show that the coefficient of household size has a positive relationship with rice productivity. This indicates that household size has a positive influence on the output of rice farmers in the study area. The implication is that members of the household contribute significantly to the supply of family labour, which leads to an increase in rice yield (Danso-Abbeam & Baiyegunhi, 2017). This is in consonance with the result of the findings of Okorie et al. (2011), who noted that farmers with increased household size obtained higher yield due to family labour supply. This reduces the production cost since the cost of family labour is not always incorporated in the cost of production cost, especially in developing countries.

Determinants of Rice Farmers' Credit Market Participation

Household Characteristics: Among farmers' household characteristic variables that were included in the probit model, the age of the household head, marital status, and educational level are statistically significant in influencing the decision to participate in the credit market. The coefficient of the age of the household head was found to be positive and statistically significant in influencing the decision to participate in the credit market. That means that with an increase in age, the probability of participating in the credit market increases. This implies that older farmers were more likely to participate in the credit market, which is traceable to farming experience because older farmers are well aware farm management operations (Enete & Igbokwe 2009; Shalmani et al., 2017). The coefficient of the level of education is positive and statistically significant in influencing the decision to participate in the credit market. A probable implication is that educated households are more aware of credit opportunities and the procedures required credit accessibility.

The result of this study is consistent with the findings in the literature (Kumar et al. 2013; Pal & Laha 2015). It also in line with the assertions of Amjad & Hasnu (2007), who reported a positive influence of educational level on households' ability to cope with the stringent procedures required for credit access. Education plays a major role in borrowing decisions and reduces credit transaction costs. Conversely, the coefficient of marital status is negative and statistically significant in influencing the choice of participating in the credit market. This indicates that single-headed household farmers are more likely to participate in the credit market than their married counterparts. This is contrary to the findings of Nnadi & Akwiwu (2008) who noted that being married enhances farmers' concerns for their household's welfare and food security and therefore is likely to have a positive effect on their decision to participate in an agricultural credit market.

Household Assets: Unexpectedly, the coefficient of farm size is negative and statistically significant. This implies that with an increase in farm size, the probability of participating in the credit market decreases. This result is consistent with the findings of Sebopetji & Belete (2009) that there is a negative relationship between farm size and credit access. However, the coefficient of years of experience in rice farming is positive and statistically significant in influencing the decision to participate in the credit market. This implies that years of farming experience significantly increases the probability of participating in the credit market. As opined by Mishra et al. (2002), farming experience helps in making a better decision- in line with farm financing. Results from this study are in consonance with the findings of Sebopetji & Belete (2009) and

Nouman et al. (2013), all of which report a positive relationship between access to agricultural credit and farming experience. As supported by Yehuala (2008), farmers with more farming experience are better positioned with cooperatives and other formal lending institutions.

Access to Services: The coefficient of access to extension service is negative and statistically significant in influencing farmers' decisions to participate in the credit market contrary to the a priori expectation. This implies that an increase in contacts with extension agents reduces the probability of participating in the credit market. This could be attributed to inadequate or unqualified staff members and poor organization, which could limit the efficient dissemination of agricultural extension services (De, Uchiyama, & Ohara, 2005). As a result, credit information might not be disseminated efficiently through extension systems. An individual exposed to climate change information is more likely to take immediate action to cope with risks related to climate change. The coefficient of access to climate information is positive and statistically significant with the decision to participate in the credit market. This implies that the higher the access to climate change information, the higher the likelihood of participating in the credit market. Farmers' access to credit can mitigate the effects of these climate change shocks. This argument is in line with the findings of Diagne et al. (2000) and Luan & Bauer (2016), both of which identify credit as the major instrument of improving climate changes adaptation strategies for farmers.

Transaction Costs: A negative relationship is expected between credit demand and interest rates, but the result of the analysis shows a positive relationship. The coefficient of the interest rate is positive and statistically significant in influencing the participation of rice farmers in the credit market. This result implies that the likelihood of rice farmers participating in the credit market increases as the interest rate increases. This result is in line with Olomola & Gyimah-Brempong (2014), which finds a positive relationship between credit rationing and interest rate in loan demand and rationing among small-scale farmers in Nigeria. In the same vein, the coefficient of distance to the credit source is also positive and statistically significant in influencing the decision to participate in the credit market. As indicated by Balogun & Yusuf (2011), the result implies that regardless of distance or interest rate, smallholder farmers will have demand credit because of their urgent need and limited supply. This is also corroborated by the findings of Karlan & Zinman (2008), who postulate that credit is more critical than interest rates in the case of developing nations. This current study finds that when credit activities are carried out in a motivated manner, availability is of greater importance than the related transaction costs.

Location: The coefficient of location of Ondo State exhibited a positive and significant relationship with participation in the credit market. This shows that locational differences exist in the access of smallholder farmers to agricultural credit, with rice farmers in Ondo State being more likely to be involved in credit market participation than those in both Osun and Ekiti State. Their coefficient is negative but statistically significant in influencing the decision to participate in the credit market. Locational discrepancies in the dispensation of lending institutions as well as other latent locational discrepancies could account for the differences in access to credit (Olomola & Gyimah-Brempong 2014). This could be attributed to the existence of the Ondo State long before the other two locations, which has allowed farmers in Ondo State to benefit more from credit information through Agricultural Development Program system (Afolami et al., 2012).

Climate Variables: The coefficient of mean annual temperature is negative and statistically significant in influencing the rice farmers' participation in the credit market. This implies that the probability of participating in credit falls with a decrease in temperature. This could be attributed to the fact that a decrease in annual temperature may require low investment in the use of adaptation strategies to the impact of climate change. Furthermore, the coefficient of mean annual precipitation is also negative and statistically significant in influencing participation in the credit market. This implies that the probability of participating in the credit market is low. This is rather an unexpected result as farmers respond to drought by investing in adaptation strategies to climate change. Empirical findings have indicated access to credit as a major determinant of climate changes adaptation strategies (Kandlikar & Risbey 2000). Recent studies (Gyinadu, Bakang, & Osei, 2015; Mmbando & Baiyegunhi 2016) also found that insufficient funds or a lack of funds have restrained adoption of farm management practices in developing nations.

Estimation Result of the Tobit Model for Amount of Credit Obtained: The estimated results from the Tobit model explain the level of participation in the credit market. As asserted by McDonald & Moffit (1980), the coefficients of Tobit regression are interpreted in a similar way to OLS regression coefficients; nevertheless, the linear effect is on the uncensored latent variable, not the observed outcome. The result of the Tobit model presented in Table 3 shows that 5 out of 17 variables included in the model are statistically significant with the amount of credit received. The estimated coefficient of revenue from rice production is negative and statistically significant in influencing the amount of credit obtained. This implies that revenue from rice production in the study area has a negative effect on the amount of credit obtained by farmers. The result shows that for a unit increase in rice revenue, there is a 72% decrease for credit obtained by the farmers. The result is corroborated by the findings of Diagne & Zeller (2001) that there is a negative relationship between borrowing and the net farm income of households in Malawi. This could be attributed to the fact that farmers with higher income can self-finance their farming activities and therefore were not in need of agricultural credit (Nouman et al., 2013).

Table 3: Estimation Result of the Tobit Model of Amount of Credit Obtained

Lnamount	Coef.	Std. Err.	P-value
Location_Ekiti	-0.501	0.396	0.207
Location_Ondo	0.199	0.378	0.598
Location_Osun	-1.113	0.412	**0.007** [a]
Gender	0.407	0.363	0.264
Age	0.022	0.024	0.364
Educational status	-0.055	0.039	0.163
Marital status	-0.594	0.614	0.334
Off-farm income	-0.156	1.655	0.925
Household size	0.048	0.138	0.725
Farming experience	0.076	0.044	**0.084**[c]
Membership	-0.052	1.461	0.972
Farm size	0.047	0.081	0.559
Ln revenue	-0.722	0.389	**0.064**[c]
Access to extension	-0.123	1.361	0.928
Annual interest rate	7.714	0.410	**0.000**[a]
Sources	0.791	0.526	0.133
Distance to the source km	0.204	0.018	**0.000**[a]
Constant	5.233	4.646	0.261
/Sigma	2.717	0.144	

Log likelihood = -549.5466
LR chi^2 (17) = 672.35
Prob > chi^2 = 0.0000
Pseudo R^2 = 0.3796

Note: a, b, and c represent significance level at 1%, 5%, and 10%, respectively.

Notwithstanding, this finding refutes Akram, Rime, & Sarno (2008), who found that respondents with relatively higher wages had greater access to credit than their lower counterparts with relatively lower wages. The coefficient of years of experience in rice farming is positive and statistically significant in influencing the amount of credit received. The positive significance of farming experience shows a direct relationship between farming experience and the amount of credit obtained by farmers. This implies that a unit increase in experience of increases the amount of credit obtained by 7.6%. This result is in line with the study of Saqib et al. (2016) who affirmed that farming experience has a significant influence on farm management decisions. Credit received is expected to be negatively dependent on the interest rate, but the results of the analysis indicate a positive relationship. The coefficient of interest rate is positive and statistically significant in influencing the amount of credit received by rice farmers. The result shows that a unit increase in the interest rate will cause a 7% increase in the amount of credit received by rice farmers.

The result is in line with Olomola & Gyimah-Brempong (2014), who found a positive relationship between credit demand and the interest rate in loan demand and rationing among small-scale farmers in Nigeria. Also, the coefficient of distance to the credit source is also positive and statistically significant in influencing the amount of credit received. The result shows that a unit increase in the distance of the credit source will lead to 20% increase in the credit obtained. The coefficient of the location of Osun is negative and statistically significant, indicating that rice farmers in the region are not likely to demand more credit than their counterparts from the other regions. The result shows that being located in Osun State reduces the probability of demanding more loans by 0.7%. This could imply that many farmers are credit averse because they assume they will be denied on the basis of, credit institutions' stringent conditions. Farmers' opinion on the non-transparency of credit processing could be another reason for not applying for credit (Olomola & Gyimah-Brempong 2014).

5. Conclusion and Policy Implications

An improved version of an endogenous switching regression model that accounts for both heterogeneity and sample selection biases was used to investigate the impact of credit demand on rice productivity in Southwestern Nigeria. A Tobit regression model was employed in measuring the level of participation of rice farmers in the credit market. The results of the first stage of the ESRM (probit model) reveal that some farmers' socio-economic characteristic variables, household asset variables, access to service, climate variables, regional variables, and transaction cost variables are important factors influencing the decision to apply for credit. The results of the second stage of the ESRM show that marital status, educational status, farming experience, farm size, and household size are factors affecting rice productivity among the farmers that participate in the credit market. In the same vein, marital status, educational level, and access to climate information are also significant factors influencing rice productivity among non-participants in the credit market. Results of the Tobit model show that the farmers' location, income from rice farming, farming experience, the interest rate, and distance from the source of credit are significant determinants of the amount of credit received.

These findings suggest that facilitating access to credit by farmers is a good strategy to enhance rice farmers' productivity. Access to credit is an important factor in the quest to achieve increased rice productivity. Therefore, to improve the productivity of rice farmers, government and development partners should work together to improve the conditions of access of rice farmers to suitable agricultural credit, including the policy incentives aimed at lowering the cost of borrowing in the Nigerian agricultural sector. It could also be recommended that policies enhancing and strengthening institutional support may also be valuable in improving the productivity of smallholder rice farmers in Nigeria. A necessary addition should be developed to the assistance already being provided under Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) in the form of loan guarantees and other risk-sharing incentives, such as a regulatory environment that supports the modern contractual obligations that are characteristic of well-functioning agricultural financing. This would not only contribute to the intensification of rice production in Nigeria to meet its increasing rice demand, but also improve rice farmers' productivity and their households' incomes.

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Analysis of Herding Behavior in Moroccan Stock Market

Mustapha El hami, Ahmed Hefnaoui
Research laboratory in economic and logistics performance, Morocco
Elhami.mustapha85@email.com, hefnaoui_ahmed@yahoo.com

Abstract: Frontier markets, particularly the Moroccan financial market, are characterized by a narrowness of market, inability to absorb erratic price fluctuations and the low liquidity of securities that encourage investors to herd and imitate those who have all the information about the market. A quantitative research approach was used to analyze the existence of herding n Moroccan stock market. The daily data used in this study concerns the period from 04/01/2010 to 29/12/2017 and contains the daily returns of the MASI and a total of 43 traded stocks. Statistical and econometric methods such as multidimensional scaling and Cross-sectional absolute deviation were used. Subsequently, after the regression models were examined, findings indicated that the first stocks with the highest similarity to the index return are BMCE, BCP, IAM, ATW and CMSR, and the first stocks with the highest dissimilarity are PAP, IBC and SNP, This will have to allow investors to choose profitable alternatives and avoid those that present a possible risk. The results did also show the existence of herding in the Moroccan stock market both upward and downward. This finding was supported by the clear existence of a non-linearity between market performance and CSAD measurement, which confirms the prediction of a non-linear inversion relationship between CSAD and $\boldsymbol{R_m}$. This could be due to the low level of transparency that prevails in frontier stock exchanges and reduces the quality of their information environment, which leads investors not to react rationally and to draw information from the transactions of their peers.

Keywords: *Frontier markets, Herd behavior, Behavioral finance, Information, Moroccan index.*

1. Introduction

In a few years, the efficient market hypothesis (EMH) has become the keystone of the entire financial theory. This hypothesis manifests in two points. The first point states that the market price is the price that reflects the intrinsic value of the assets, in other words, the "fundamentals". The second point indicates that prices include all available market information and that there is no arbitrage opportunity. The Darwinian idea states that in financial markets, only rational investors should remain (Broihanne & Capelle-Blancard, 2018). However, a large number of researchers have rejected this hypothesis in the markets. Grossman & Stiglitz (1980) have vehemently criticized this assumption of market efficiency since the early 1980s, stressing that, if markets were efficient, no economic agent would have an interest in acquiring (bearing the costs of acquiring) information. The two economists George A Akerlof (Nobel Prize winner) and Robert J. Shiller are well aware that the idea that economic crises, like the financial and real estate crisis, are mainly caused by a change in our perception of the world, goes against traditional economic thinking (Évariste LEFEUVRE, 2011). Thus, an understanding of the investor's behavior seems necessary to explain some of the different factors behind these anomalies. Given the importance of this behavior and its implications for financial markets, the literature has developed rapidly in recent years, partly because of the prolonged crisis in US financial markets, which subsequently spread to global markets.

In this context, behavioral finance argues that investors' herd behavior may explain some of the anomalies found in financial markets by assuming that investors tend to abandon their own beliefs and imitate others even when their private information suggests that they should make a different decision (Bikhchandani et al., 1992); (Devenow & Welch, 1996), leading to a deviation of prices from their fundamental values and excessive market volatility. In this study, our interest is first to focus on a small illiquid capital market, which could influence herd behavior. Then, we use a multidimensional scaling approach to transform the data into similarity measures that can be represented by Euclidean distances in the space of unknown dimensions to display the proximities between the stocks and the stock index. Before considering a different approach to herd measurement based on the Cross-Sectional Absolute Deviation. This study covers a sufficiently long period to dilute the biases resulting from point fluctuations in the market. There are many reasons to study the effect of herd behavior on frontier markets, particularly the Moroccan financial market. First, the narrowness of markets and the low liquidity of securities in the frontier markets encourage investors to imitate those who have all the information about the market. Second, investors must understand that this type of market has high growth potential, and low and attractive valuations compared to emerging markets.

In doing so, they will benefit by ensuring a better allocation of assets, combined with risk management and strategic decision-making. The remainder of this document is organized as follows. Section 2 briefly summarizes previous studies on herding in general. Section 3 presents the methodology used in the herd behavior test. Section 4 presents an analysis of the data. Finally, section 5 proposes to give our conclusions.

2. Literature Review

A body of work carried out over time contributes to enriching the literature on herd behavior. Regarding this, we give a brief overview of mimicry in the financial markets. According to Hott (2009) if one player's decisions are positively influenced by the decisions of other players, this is called herd behavior. Christie & Huang (1995) defines herding as a tendency of people to follow the performance of the global market, imitate the actions of others and ignore their own point of view. It could also be defined as a correlation in investor behavior. According to Avery & Zemsky (1996), mimicry is defined as that of an agent negotiating against its initial assessment and instead of following the trend of previous exchanges. There are two types of herd behavior, "spurious" herding and intentional herding. When investors react with the same well-known public information and make the same investment decisions, it can be considered spurious herding (Park & Kim, 2017). While, if investors intend to follow the behavior of others, this can be considered intentional herd behavior and the latter will be the subject of our study. In addition, there are several reasons behind intentional herd behavior.

First, according to Bikhchandani et al. (1992) there is the information cascade, which means that a slight preponderance of public information is sufficient to get people to follow the market leader and neglect their own knowledge. A second reason is the lack of information or the inferior quality of information, which can lead to mimicry based on compensation and reputation (Ren & Wu, 2018). According to Li, Wang, and Rhee (2015), there are differences between institutional and retail investors in herd behavior. Li et al. (2015), according to a measure based on trading volume, found that well-informed institutional investors trade selectively while individual investors are less informed and distribute their investment evenly across assets, as well as individual investors rely more on public information and are influenced by market sentiment and attention-grabbing events. Institutional investors react asymmetrically to market movements up and down, while individual investors do not. Bailey and Ng (2010), using thousands of brokerage accounts of US retail investors, show that behavioral factors influence individual investors' decisions to hold individual stocks rather than mutual funds, including passive index funds.

Nevertheless, Deng et al. (2018) note that the herding of mutual funds deteriorates the quality of the company's information communication. Companies with a high mutual fund herding effect have less private information, less profit transparency, a higher probability of accounting errors and less accounting conservatism. The authors also find that there is a strong predictive relationship between mutual fund herd behavior and stock market crashes. In this regard, there is a wide range of studies analyzing the presence of herding in different markets and its potential impact on asset prices, which do not always come to the same conclusions. Yousaf, Ali and Shah (2018), using the Christie and Huang regression model (1995) and the Chang et al. (2000) model, examine herd behavior on the Pakistani stock exchange under different market conditions, focusing on the Ramadan effect and periods of crisis. They argue that there is no herd effect on the Karachi stock exchange. In addition, they argue that mimicry does not exist during the bull and bear market as well as during high or low volatility in the market. It is detected only during the low trading volume in Pakistan and is not influenced by the month of Ramadan.

Ahsan and Sarkar (2013), using Cross-Sectional Standard Deviation (CSSD) and Cross-Sectional Absolute Deviation (CSAD) techniques, did not detect the existence of a herd effect on the Dhaka stock exchange in Bangladesh for the period January 2005 to December 2011, including the December 2010 crash. However, Ren and Wu (2018), using an innovative and forward-looking method to examine investors' herd behavior and identify false herding driven by fundamentals in the Chinese stock market, indicate that there is real and significant behavior among blue chips. Vo and Phan (2017) examine the presence of herd behavior on the Vietnamese stock market from a sample of 299 companies listed on the Ho Chi Minh City Stock Exchange covering the period 2005- 2015. The study uses the herding measures proposed by Christie and Huang (1995) and Chang, Cheng and Khorona (2000) on a daily, weekly and monthly frequency, therefore, indicates the existence of herding over the entire period studied. Gong and Dai (2017) indicate that rising interest rates and the depreciation of the Chinese currency (CNY) will lead to the formation of mimicry and this phenomenon occurs mainly in bear markets.

The authors Theriou, Mlekanis and Maditinos (2011) used the methodology based on the Lakonishok, Shleifer and Vishny (1992) model to investigate the behavior of managers of mutual funds investing on the Athens stock exchange during the period 2001 - 2006. The study indicated the existence of herd behavior when mutual fund managers trade large-cap stocks or stocks in the most "famous" indexes. Data on herd behavior in frontier markets have generated considerable research interest. Economou (2016) examines herding in two African border markets - Nigeria and Morocco - that have not been analyzed previously, using daily data for the period 2004-2014. The empirical results obtained using the reference model of Chang et al. (2000), do not indicate the presence of herding. However, when he tested asymmetries in mimicry estimates, he identified herd behaviors during days of bear market volatility for Nigeria.

Moreover, there is evidence of mimicry during the global financial crisis only in Morocco. Structural failure tests reveal significant evidence of herding in Morocco for the sub-period from December 2005 to December 2014, with herding being more pronounced on days of high market and volume volatility. According to Guney, Kallinterakis and Komba (2017), Elhami and Hefnaoui (2018) herding is present on African frontier markets, this is attributed to the low levels of transparency that prevail in border exchanges and that reduce the quality of their information environment, as well as it leads investors to consider herding as a feasible option, allowing them to deduce information from their peers' transactions. Similarly, the increased informational uncertainty surrounding small stocks is pushing investors to trade them more under the influence of herding. Balcilar, Demirer and Hammoudeh (2012), when studying the Gulf countries find evidence of herd behavior under the crash regime for all markets except Qatar, where herd effects are subject to low and high volatility regimes.

3. Methodology

This study first focuses on multidimensional scaling analysis developed by F.Cox and A.A.Cox (2000) as a technique developed to measure and predict human judgment. Multidimensional scaling (MDS) is a mathematical technique that allows us to map the distances between points in a high dimensional space in lower dimensional space. This is more useful when we can draw a map in a two-dimensional space because it will help us to visually confirm the different groups of classes (clusters). The result of an MDS analysis is the transformation of data into similarity measures that can be represented by Euclidean distances in *the* space of unknown dimensions (Borg and Groenen, 2005). In the MDS method, a small distance between two points corresponds to a high correlation between two actions and a large distance corresponds to a low or even negative correlation (Nirenberg and Latham, 2003). MDS can be considered as an exploratory technique without any assumption of data distribution. The distances between points on MDS maps are generally not difficult to interpret and can*, therefore,* be used to formulate more specific models or assumptions.

In addition, the distance between two points must be interpreted as the conditional distance at all other distances. Secondly, on the analysis of the relationship between the variables Cross-Sectional Absolute deviation CSAD of equity return rates from the market return rate in period t, the equity return rate i in period t $R_{i,t}$ and the market portfolio return in period t $R_{m,t}$. The daily data used in this study, which contains the daily returns of the MASI (Moroccan all shares index) and a total of 43 traded shares shown in Table 1, cover the period from 04/01/2010 to 29/12/2017. The data set was obtained from the global financial portal and Internet brand[11]. In our study, daily return data calculated on the basis of the closing prices of each share and the index were analyzed using the regression method. Some shares were not included in the analysis

[11] https://fr.investing.com/.

because data on them were not available for the period studied. We applied the logarithmic yield determined as follows

$R_t = \ln\left(\frac{P_t}{P_{t-1}}\right)$ Where P_t, P_{t-1} is the stock price.

This study used a CSAD model of stock returns developed by Chang, Cheng and Khorana (2000), which is a non-linear and growing function of market returns. In formula (1), the CSAD_t variable represents the cross-sectional absolute deviation of stock return rates from the market return rate in period t, the $R_{i,t}$ variable represents the stock return rate i in period t, the $R_{m,t}$ variable represents the market portfolio return in period t and the N variable represents the number of stocks.

$$CSAD_t = \frac{\sum_{i=1}^{N} \left| R_{i,t} - R_{m,t} \right|}{N} \qquad (1)$$

To take into account the possibility that the degree of herding may be asymmetric at the top compared to the bottom of the range, we use the following empirical specification. Two models will be used to measure herd behavior in bullish (upwards) and bearish (downwards) markets, respectively, and will be presented as follows.

$$CSAD_t^{UP} = \alpha + \gamma_1^{UP} \left| R_{m,t}^{UP} \right| + \gamma_2^{UP} (R_{m,t}^{UP})^2 + \varepsilon_t$$

If $R_{m,t} \geq 0$

$$CSAD_t^{DOWN} = \alpha + \gamma_1^{DOWN} \left| R_{m,t}^{DOWN} \right| + \gamma_2^{DOWN} (R_{m,t}^{DOWN})^2 + \varepsilon_t$$

If $R_{m,t} \leq 0$

If, during periods of relatively large price fluctuations, market participants gather around indicators such as the average consensus of all market components, this would result in a non-linear relationship between the CSAD_t and the average market return. Non-linearity would be captured by a negative and statistically significant γ_2 coefficient.

Table 1: The Stocks Analyzed

Action	Code	Action	Code
Afriquia gaz	AGAZ	Label vie	LBV
Auminiummaroc	ALU	Lesieur	LESU
Atlanta	ATL	LafargeHolcim Ltd	LHM
Auto hall	AUTO	Lydec	LYD
Attijariwafabank	ATW	M2M group	M2M
Bcp	BCP	MicroData SA	MIC
Bmce	BMCE	Nexans SA	NEX
Bmci	BMCI	Maghreb oxygene	OXYG
Creditmaroc	CDM	Med Paper	PAP
Cih	CIH	Promopharms.a	PRO
Minieretouissit	CMT	Risma	RIS
Colorado	COL	Saham Assurance	SAH
Cartier saada	CRS	Brasseries maroc	SBM
Cosumar	CMSR	Ciments du maroc	SCM
Ctm-ln	CTM	Salafin	SLF
Delta holding	DHO	Smi	SMI
Dellatre lev	DLM	Stokvis nord	SNA
Disway SA	DWY	Snep	SNP
CreditEqdm	EQDM	Sonasid	SOND

Maroc telecom	IAM	Timar	TIM
IB Maroc Com SA	IBC	Wafa assurance	WASS
Jet Contractors	JET	Moroccan All Shares	MASI

4. Empirical Results

Descriptive Statistics

Table 2: Descriptive Statistics Results

	Mean	Minimum	Maximum	Std. DEV
MASI	0,000083	-0,030338	0,032955	0,006196
AGAZ	**0,000906**	-0,097638	0,060586	0,018205
ALU	0,000139	-0,124669	0,084866	0,020696
ATL	-0,000099	-0,073773	0,095145	0,018579
ATW	0,000304	-0,061824	0,058269	0,011902
AUTO	0,000150	-0,090972	0,088795	0,018612
BCP	0,000422	-0,097061	0,066273	0,011346
BMCE	-0,000116	-0,061875	0,081119	0,014368
BMCI	-0,000018	-0,087706	0,094716	0,020550
CDM	-0,000240	-0,184677	0,175288	0,021527
CIH	-0,000062	-0,078411	0,116460	0,019353
CMT	0,000290	-0,331157	0,128891	0,021944
COL	0,000160	-0,229432	0,182420	0,022721
CRS	0,000340	-0,102573	0,095310	0,021075
CMSR	0,000773	-0,104360	0,095310	0,016935
CTM	**0,000947**	-0,165060	0,227390	0,019713
DHO	0,000017	-0,109972	0,095016	0,020345
DLM	-0,000586	-0,246988	0,116085	0,026367
DWY	0,000084	-0,123629	0,135197	0,021569
EQDM	-0,000387	-0,114959	0,112478	0,018435
IAM	-0,000008	-0,105292	0,058269	0,010656
IBC	**-0,000943**	-0,246652	0,174713	0,029316
JET	-0,000299	-0,146603	0,174576	0,023997
LBV	0,000391	-0,093496	0,094444	0,019070
LESU	0,000254	-0,079354	0,094665	0,016437
LHM	0,000296	-0,104988	0,095065	0,020166
LYD	0,000586	-0,105176	0,090972	0,020487
M2M	-0,000015	-0,105361	0,095283	0,025949
MIC	0,000540	-0,150648	0,115155	0,023576
NEX	**-0,000754**	-0,308122	0,177169	0,024264
OXYG	-0,000268	-0,210162	0,285842	0,023655
PAP	**-0,000852**	-0,430490	0,189882	0,032591
PRO	**0,000939**	-0,174617	0,189791	0,022234
RIS	-0,000364	-0,105171	0,095310	0,025590
SAH	-0,000015	-0,103990	0,094700	0,018733
SBM	-0,000521	-0,165880	0,115513	0,017638
SCM	0,000423	-0,104573	0,094771	0,020145
SLF	0,000392	-0,135126	0,060535	0,015988
SMI	0,000644	-0,143183	0,058269	0,021844
SNA	-0,000638	-0,093578	0,095182	0,021470
SNP	0,000133	-0,210495	0,189937	0,029938
SOND	-0,000599	-0,106336	0,095310	0,025538
TIM	-0,000422	-0,123623	0,095289	0,019773
WASS	0,000725	-0,080864	0,094288	0,019602

The descriptive statistics table shows, for the period from 04.01.2010 to 29.12.2017, the average of the daily returns of the shares and the MASI main index, their minimum and maximum values and the corresponding standard deviations. The average return of the MASI index is 0.0083%. During the period studied, the highest daily return of the MASI index was 3.3% on 23.12.2016 and its lowest daily return was -3% on 21.03.2011. Several factors have come together to drive the market towards this considerable decline, including the effect of the "Arab Spring", the departure of non-strategic foreign investors, the disaffection of local investors, investor arbitrage in favor of other safe investment instruments (bond UCITS, term deposits etc.). Among all stocks, the top three securities generating the highest average daily returns were CTM (0.0947%), PRO (0.0939%) and AGAZ (0.0906%) respectively, while the lowest average daily returns were recorded for IBC (-0.00943%), PAP (-0.0852%), and NEX (-0.0754%).

Multidimensional Scaling Analysis: The multidimensional scaling technique has been implemented in the STATISTICA software. In our study, we used the MDS to allow us to analyze the correlation matrix between each of the two stocks forming a pair (i,j). Stress values are used to indicate model quality and adjustment data. According to Kruskal's model recommendation, stress of 20% or more is considered a bad model, 10% is considered reasonable, 5% is a good model and 2.5% is excellent (Hair et al., 2009). As the value of stress approaches zero, a better quality of adjustment would be achieved. The results of the MDS analysis in Table 3 reveal the following: For k-dimension = 2, the iteration was repeated until the value was 0.2558005 in the 28th iteration. The solution obtained was considered appropriate since the stress value is close to 0, which means that the relationship between the experience data and the distances in the configuration is a monotonous relationship.

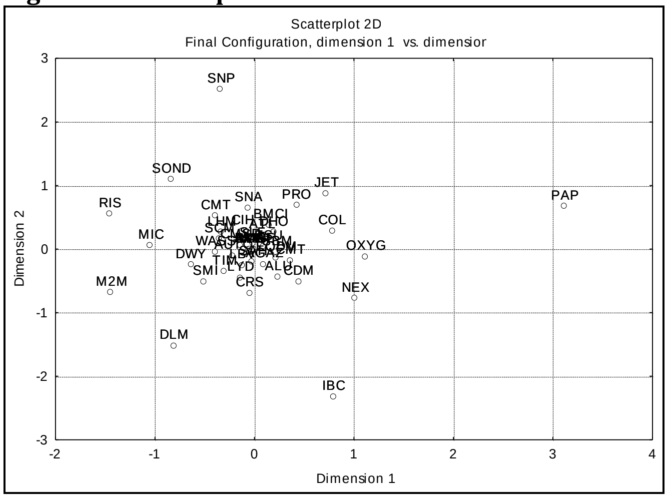
Table 3: Stress Value

44 Vars. from file	
Number of dimensions: 2	
Start config.: (Guttman-Lingoes)	
Last iteration computed: 59;	Best iteration: 28
D-star: Raw stress = 154,5415;	Alienation = 0,2797001
D-hat: Raw stress = 126,6800;	Stress = 0,2558005

The empirical study reveals the first stocks closest and most distant to the index (MASI) return in accordance with variables' values (Euclidean distances) in figure 1. The first stocks with the highest similarity (proximity) to the index return are BMCE, BCP, IAM, ATW and CMSR, while the first stocks with the highest dissimilarity (distance) are PAP, IBC and SNP. Based on the positioning of the stocks in the MDS map, it appears that the returns or losses generated by the stocks that are similar to the performance of the Index will be approximately the same as those of the Index, while dissimilar stocks may produce returns or losses that are different from the Index. In addition, it could be argued that similar stocks could be included as alternatives to each of them in the portfolio construction process, while those that are dissimilar cannot be used as alternatives to each other. A review of the Shepard diagram in Figure 2 suggests that the distances between stocks and the index are linearly related, it identifies a strong correlation between observed distances and disparities (i.e. between initial distances and calculated distances), and thus a good quality of fit.

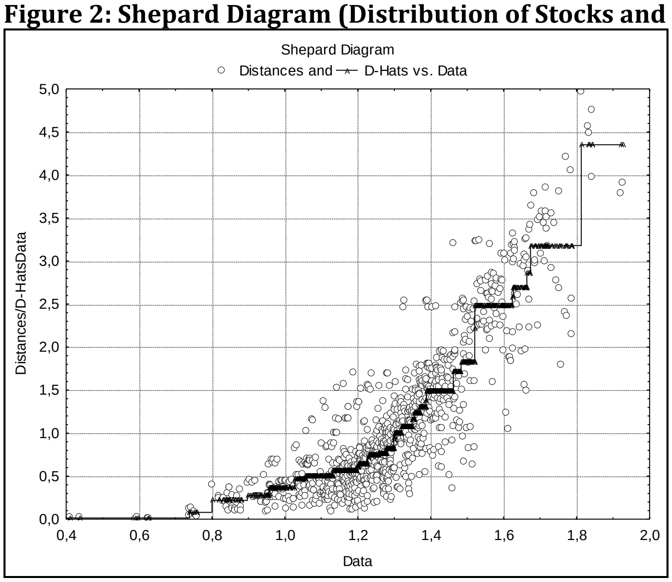
Regression Analysis: Tables present the regression results for Model 1 (upmarket) and Model 2 (down market), between the CSAD cross-sectional absolute deviation and the index returns. Model 1 shows that the parameter γ_1 (up) equal to 0.791 is statistically significant and positive at the 5% level, this result is explained by the fact that an increase in index returns significantly increases cross-sectional variability. The objective of the study was to determine the existence of investors' herd behavior on the Moroccan financial market. The analysis first focused on the multidimensional scaling MDS stipulating the construction of a perceptual space to reveal similarities and dissimilarities between stocks returns and the main stock market index.

Figure 1: MDS Map



In addition, model 1 show that the second parameter $\boldsymbol{\gamma_2}$ (up) equal to -6.29664 is statistically significant and negative at the 5% level this result could confirm the presence of herd behavior in the rising market. The result obtained indicates a non-linear and negative relationship between the cross sectional absolute deviation and the index returns. Since the non-linear term is significantly negative, the $\boldsymbol{CSAD_t}$ increased at a decreasing rate or decreased as the average price movement increases. Therefore, in the case of extreme values in index returns, the cross sectional absolute deviation decreases and the herd behavior is observed during these stressful days. These results confirm the presence of a non-linear relationship and therefore support the argument that herd behavior is a valid phenomenon in the Moroccan financial market.

Figure 2: Shepard Diagram (Distribution of Stocks and Index)



Model 2 (down market) shows results indicating the presence of herd behavior in the market when it is declining. The results obtained by the regression analyses indicate that the parameter γ_2 (down) is negative and statistically significant. It could, therefore, be argued that herd behavior towards the market is valid in the MASI in both bull and bear markets, but not linear. The results obtained are in line with those of other literature studies, in particular the Economou study (2016), which found a clear existence of herd behavior in Nigeria and Morocco in 2005. Given the results we have observed, herding behavior is present on the Moroccan stock market and we attribute it to the low level of transparency that prevails in frontier stock exchanges and reduces the quality of their information environment, which leads investors not to react rationally and to draw information from the transactions of their peers.

Table 4: Market Up Model

	Model 1			
	$CSAD_t^{UP} = \alpha + \gamma_1^{UP} \left\|R_{m,t}^{UP}\right\| + \gamma_2^{UP} (R_{m,t}^{UP})^2 + \varepsilon_t$			
	Coefficient	**Std. Error**	**T-statistic**	**Prob**
α	0,00978	0,000184	53,13630	0,000000
γ_1	0,79085	0,070013	11,29572	0,000000
γ_2	-6,29664	5,002516	-1,25869	0,208411
F-statistic	281.6887			
R-adjust	0.339739			

Table 5: Market Down Model

	Model 2			
	$CSAD_t^{DOWN} = \alpha + \gamma_1^{DOWN} \left\|R_{m,t}^{DOWN}\right\| + \gamma_2^{DOWN} (R_{m,t}^{DOWN})^2 + \varepsilon_t$			
	Coefficient	**Std. Error**	**T-statistic**	**Prob**
α	0,00974	0,000202	48,22467	0,000000
γ_1	0,82055	0,072683	11,28953	0,000000
γ_2	-6,77106	4,674062	-1,44865	0,147786
F-statistic	280.1419			
R-adjust	0.383099			

To further illustrate the extent of non-linearity in the CSAD-Market relationship, in Figure 3 below, we plot the CSAD measure for each day and the corresponding equally weighted market performance for Model 1 and Model 2. The layout of the Moroccan financial market gives an insight into the presence of herd behavior in the market, where the non-linearity between market performance and the CSAD measure is evident. It confirms the prediction of a non-linear inversion relationship between CSAD and R_m, in alignment with Chang et al. (2000).

Figure 3a: Relationship between Cross-Sectional Absolute Deviation (csad) and Market Return R_m,t in Model 1

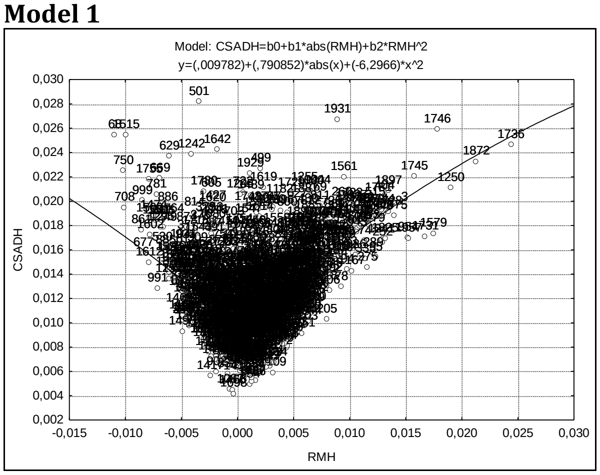
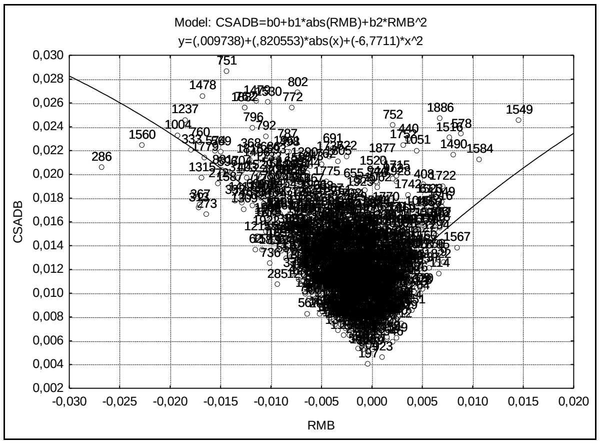


Figure 3-b: Relationship between Cross-Sectional Absolute Deviation (CSAD) and Market Return R_m,t in Model 2



5. Conclusion and Recommendations

The objective of the study was to determine the existence of herding behavior in the Moroccan financial market. The analysis first focused on the multidimensional scaling MDS stipulating the construction of a perceptual space to display similarities and dissimilarities between stocks returns and the main stock market index. This study brought to light that the first stocks with the highest similarity to the index return are BMCE, BCP, IAM, ATW and CMSR, whereas the first stocks with the highest dissimilarity are PAP, IBC and SNP. This will have to allow investors to choose profitable alternatives and avoid those that present a possible risk. This preliminary analysis was supported by the analysis of investors' herd behavior using the CSAD methodology developed by Chang et al. (2000). The results obtained by the regression analysis showed the existence of herd behavior in Moroccan stock market both upward and downward. This finding was supported by the clear existence of a non-linearity between market performance and CSAD measurement, which confirms the prediction of a non-linear inversion relationship between CSAD andR_m, in the spirit of Chang et al. (2000). The results obtained are in line with those of other literature studies, in particular the Economou's study (2016), which found a clear existence of herd behavior in Nigeria and Morocco in 2005.

Given the results we have observed, herding behavior is present on the Moroccan stock market and we assign it to the low level of transparency that prevails in frontier stock exchanges and reduces the quality of their information environment, which induces investors not to react rationally and to draw information from the transactions of their peers. In terms of suggestion, future studies should use a fuzzy logical approach to take into account herding and other behavioral biases to study investors' decision-making process and offer them the opportunity to make an optimal choice of trading strategies in the market. The high presence of herd behavior in African frontier markets suggests that regulatory measures to stem it (e.g. by increasing transparency and investor confidence and allaying investor concerns) are necessary to prevent the emergence of destabilizing outcomes. With the objective to improve the quality of the information environment, such measures will make these markets more attractive to foreign investors and increase their volume, which is essential to the sustainability of these markets and their development towards emerging markets.

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Effect of Corporate Taxation on the Profitability of Firms in NIGERIA

Olaoye, Clement Olatunji, Alade, Elizabeth Oluwatoyin
Department of Accounting, Faculty of Management Sciences, Ekiti State University, Ado-Ekiti, Nigeria
clement.olaoye@eksu.edu.ng, toyinalade02@yahoo.com

Abstract: The paper examined the effect of corporate taxation on the profitability of some selected firms in Nigeria from 2007 to 2016 using secondary data which was sourced from various publications of the firms' financial report. The study employed pooled ordinary least square as the estimation technique. The analytical results revealed that the coefficient of corporate tax on profit after tax was positive with the value of 2.418830 and its P-values were 0.0000, the coefficient of value-added tax was 14.51298 and its p-value was 0.0000. Equally, the coefficient of withholding tax was positive with the value of 7.256489 with p-value 0.0000. Furthermore, education tax result depicts that the coefficient is 36.28245 and it p-value is 0.0000. However, the study concluded that corporate tax rate and education tax as the major taxes paid by companies have positive and significant effects to influence profit after tax. It is also clinched that value-added tax rate and withholding tax being used as other variables that could have effects on profit after tax equally revealed positive and significant effects on profit after tax. Therefore, the study recommended that the government and relevant tax authorities should improve in the administration of corporate taxes to avoid non-compliance

Keywords: *Taxation, Corporate Taxation, Profit after Tax, Education Tax*

1. Introduction

The engagement of government in providing social amenities in developmental projects is a compulsory phenomenon for the improvement of standard of living of the citizenry (Madugba, Ekwe & Kalu, 2015). This however necessitated the government to source for fund from various sources where corporate taxes are not left out. (Madugba, et al., 2015) defined tax as compulsory levies impose by the government of a nation on the income, profit and properties of both individuals and corporate bodies for the administration of the government which has no compensatory benefits. Taxation can either be direct or indirect paid by firm impact heavily on their performance (Nwaobia & Jayeoba, 2016). The direct taxes borne by companies can be company income tax, petroleum profit tax, capital gain tax, education tax, withholding tax etc. equally, the indirect taxes borne by the final consumer for the consumption of goods or services includes value-added tax, and custom and excise duties. However, corporate tax is charged on the profits generated by companies, public corporations and unincorporated associations such as industrial and provident societies, clubs and trade associations (Raza, Ali & Abassi, 2011).

In Nigeria, companies are mandated by law to pay company income tax on profit earned with 30%, education tax of 2%, withholding tax of 10% and value-added tax of 5% in the year/period preceding assessment. Relevant tax authorities includes Federal Inland Revenue Service, State Internal Revenue Service and Local Government Revenue Committee which collect taxes and other charges on behalf of Federal, State and Local government respectively (Madugba, et al., 2015). Corporations embark on corporate tax planning in other to mitigate tax liability legally. This is however expected to result in a positive impact on firm's cash flow and increase its after-tax returns (Nwaobia & Jayeoba, 2016). Heavy tax burdens exerted negative impact on firm's performance. And equally, Afuberoh and Okoye (2014) opined that revenue derived from taxation has been very low and no physical development has actually take place. Kiabel (2009) is of the view that the shocks from oil price contributes to the reduction of revenue generated by government in the recent years, this prompted the urgent need for government to generate revenue through taxation particularly corporate taxes. However, this study designed to examine the effects of corporate taxation on the profitability of some selected firms in Nigeria

2. Conceptual Issues

Taxation: Taxation is process in which society and communities or group of individuals are contributing into an agreed sum for the development and administration of the public (Ogundele, 1999 as cited by Gurama, Mansor and Pantamee, 2015). Soyode and Kajola (2006) equally opined that tax as an obligatory exaction of money by a civic authority for public determinations and prosperity. Whereas, Ojo (2008) stressed that taxation is a concept and the science of imposing a tax on citizens of a nation. Afuberoh and Okoye (2014) also considered taxation as a civic duty of the citizenry.

Corporate Tax: Corporate taxes are taxes regulated by companies income tax act (CITA, 1977). Corporate taxes are taxes directly paid by companies periodically to the government of a particular country or nation where it operates. The government imposes corporate taxes on the net profit of the corporations. Aransiola (2013) is of the view that corporate taxes are taxes paid by corporations based on the amount of profit generated. Corporate taxes are taxed on companies, public incorporations and unincorporated associations such as industrial and provident societies, clubs and trade associations Raza, Ali and Abassi (2011). The incidence of corporate tax on companies reduces the fund available for expansion, dividends re-investment, thereby decreases the goods or services produced by such company and also serves as a disincentive to the investing public Ezugwu and Akubo (2014).

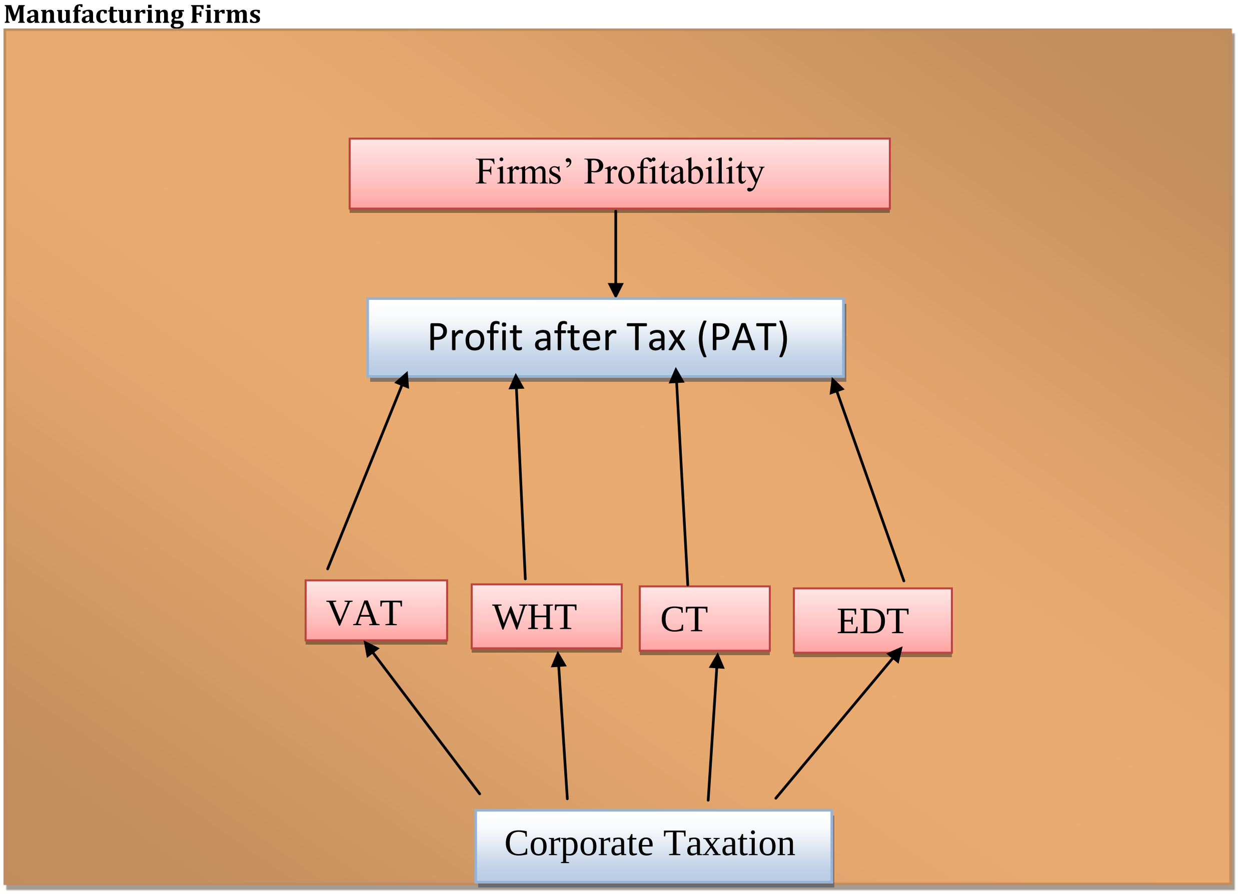
Empirical Review: In the study of Riedel and Dischinger (2008), they examined corporate taxes and the location of intangible assets within multinational firms using Multinational Enterprises in Europe. The study found that the lower a subsidiary's tax rate relative to other affiliates of the multinational group, the higher is its level of intangible asset investment. This effect is statistically and economically significant, even after controlling for subsidiary size and accounting for a dynamic intangible investment pattern. Arnold and Schwellnus (2008) examined the effects of corporate taxes on productivity and investment using a stratified sample of firms across OECD economies over the period 1996- 2004. The study found that corporate taxes have a negative effect on productivity at the firm level. The effect is negative across firms of different size and age classes except for the small and young, which may be attributable to the relatively low profitability of small and young firms. Raza, Ali and Abassi (2011) investigated the effect of corporate income tax and firms' size on investment: evidence by Karachi stock exchange using multiple regression analysis as a statistical technique for Panel financial Data on an annual basis gathered for the period of six years from 65 sample manufacturing companies.

Their results revealed that there is a negative relationship exists between corporate income tax and investment while firm size and investment reveals a positive relationship with each other. Furthermore, Beigi, Rafat and Panah (2013) investigated the analysis of the effect of the tax on profitability indices in listed companies of Tehran Stock Exchange using approach applied descriptive-analytic and the data of 28 companies listed in Tehran Stock Exchange from 2004 to 2010. The results pointed out a negative significant effect on various profitability indices. It equally indicated that the debts ratio to asset and the type of the industry showed a negative effect on profitability and capital ratio to asset and the size of the company indicated positive significant effects on profitability index. Gatsi, Gadzo and Kportorgbi (2013) investigated the effect of corporate income tax on the financial performance of listed manufacturing firms in Ghana. The study used panel data methodology covering ten listed manufacturing firms for over seven years. Their result revealed that there is a significant negative relationship between corporate income tax and financial performance. On the other hand, firms' size, age of the firm and growth of the firm show a significant positive relationship with financial performance.

Ezugwu and Akubo (2014) carried-out the effect of high corporate tax rate on the profitability of corporate organizations in Nigeria. The population of study comprises the selected corporate organizations while the sample size of the study is forty-one (41) using regression analysis. The study depicted a direct positive relationship between corporate tax rate and realized profit. Also, Chude and Chude (2015) examined the impact of taxation on the profitability of companies in Nigeria. Error correction mechanism was used in the study. The result showed that the level of company tax has a significant effect on the profitability, that company income tax (CIT) has a significant effect on profitability. Madugba, Ekwe, and Kalu, (2015) studied corporate tax and revenue generation: Evidence from Nigeria using Pearson correlation and simple regression were used to analyze the data gotten from Central Bank of Nigeria Annual Statistical Bulletin. The result revealed a negative significant relationship between Petroleum Profit Tax (PPT) and Total Consolidated Revenue (TCR) and Companies Income Tax (CIT). Furthermore, the education tax rate result depicts that the coefficient is 36.28245 and its p-value is 0.0000.

Conclusively, several studies have been conducted by previous researchers from developed and developing countries such as Raza, Ali and Abassi (2011); Beigi, Rafat and Panah (2013); Chude and Chude (2015); Maduga, Ekwe and Kalu (2015); Gatsi, Gadzo and Kportorgbi (2013); Riedel and Dischinger (2008); Ezugwu and Akubo (2014); and Arnold and Schwellnus (2008) relating to taxation and corporate taxes on profitability of manufacturing firms. Meanwhile, this study suggested to fill the gap by using Nigeria approved tax rate of 30% of corporate tax, 2% education tax, 5% value-added tax and 10% withholding tax on the profit before tax of the firms under study. Corporate tax and education tax are paid directly by the selected firms while value-added tax and withholding tax are used as other forms of tax that can also influence the profitability of manufacturing firms.

Figure 1: Conceptual Framework that Shows the Linkage between Corporate Taxes and Profitability of Manufacturing Firms



Source: Author's design, (2017)

Where: PAT = Profit after tax, VAT = Value Added Tax, WHT = Withholding Tax, CT = Corporate Tax, EDT= Education Tax. The above figure 1.0 shows the link between dependable variable (profitability) and the independent variables (corporate tax). The proxies for corporate taxes are value added tax, withholding tax, corporate tax and education tax rate while that of profitability of some selected firms is measured by profit after tax (PAT).

3. Research Method

Model Specification: This study modified the work of Ezugwu and Akubo (2014) in examining the effect of high corporate tax rate on the profitability of corporate organizations in Nigeria – A Study of Some Selected Corporate Organization. Their model was specified as:

CP = f (CTR) --1

Where:

CP = Corporate Profitability
CTR = Corporate Tax Rates
This study therefore re-modified as stated below:

$$PAT = f(CT, EDT, VAT, WHT) ------------------3$$

Whereas;
PAT = Profit after Tax
CT = Corporate Tax
EDT = Education Tax
VAT = Value Added Tax
WHT = Withholding Tax

Estimation Techniques: The model specified in equation 3 is estimated with the use of panel method of econometric analysis. The econometric pooled regression form of the model is presented as follows:

$$PAT_{it} = \beta_0 - \beta_1 CT_{it} - \beta_2 EDT_{it} + \beta_3 VAT_{it} + \beta_4 WHT_{it} + \mu_{it} --------4$$

Where:

$$\mu = \text{ Error term}$$
$$\text{i, t} = \text{Company i at time t}$$
$$\beta_0 = \text{ Constant parameter/Intercept}$$
$$\beta_1 - \beta_4 = \text{ Coefficients of independent variables}$$

The estimation techniques employed in this study are in the form of Panel analysis and the techniques included panel unit root and pooled OLS test in order to examine the effects of the corporate tax on the profitability of some selected firms in Nigeria. The reason for adopting this is because the data included time-series and cross-sectional.

Source of Data: The data used were mainly secondary sources from 2007 to 2016 which were sourced from various annual publication reports of the selected firms. The annual publication reports were reliable because firms are statutorily required to be audited before publication by the auditing firms.

4. Interpretation of Results, Findings and Discussion

Panel Unit Root Result: The Levin, Lin & Chu test was employed in order to analyze the stationarity of the variables. This enables us to determine in, comparative terms, the unit root among the time series also to obtain more robust results.

Table 1: Panel Unit Root at Level

Variables	Statistic	Prob.**
PAT	-8.85973	0.0000
CT	-8.29024	0.0000
EDT	-8.29024	0.0000
VAT	-8.29024	0.0000
WHT	-8.29024	0.0000

Source: Authors' Compilation (2018)

Table 2: Order of Integration

Variables	Order of Integration
PAT	1(0)
CT	1(0)
EDT	1(0)
VAT	1(0)
WHT	1(0)

Source: Authors' Compilation (2018)

Tables 1 and 2 present the panel unit root result of variables employed in this study. The reports of the panel unit root test result at level using Levin, Lin and Chu shows that PAT, CT, EDT, VAT and WHT are stationary, which brings that all the variables are integrated of order zero I(0). The implication is that PAT, CT, EDT, VAT and WHT used in this study retain innovative shock for a short period of time after which they let go.

Pooled Ordinary Least Square

Table 3: PAT=f (CT)

Dependent Variable: PAT				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-198977.8	159611.4	-1.246639	0.2146
CT	2.418830	0.029697	81.45121	0.0000
R-squared (R^2)	0.978756	F-statistic		6634.299
Adjusted R-squared	0.978608	Prob(F-statistic)		0.000000

Source: Authors' Compilation (2018)

Table 3 reveals profit after tax as a function of corporate tax. The results of statistical tools reveal that: the coefficient of multiple determination (R^2) is 0.978756 (97.9%) implying that the corporate tax can be accounted for over 97% variation to profit after tax while the remaining per cent is controlled by other factor; the F-test value is 6634.299 and the probability of F-statistic is 0.00000 that is the corporate tax (CT) can influence the dependent variable (PAT). The result also reveals that the coefficient of constant is negative with the value of -198977.8. This means that when the corporate tax is held constant, there will be a negative variation up to the tune of -198977.8 units to profit after tax (PAT). The result equally revealed that the coefficient of corporate tax on profit after tax is positive with the value of 2.418830 and its P-values are 0.0000 which implies that CT has a positive and significant effect on profit after tax in Nigeria that is if there is a unit increase in corporate tax profit after tax will increase with 2.418830.

Table 4: PAT=f (VAT)

Dependent Variable: PAT				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-198977.8	159611.4	-1.246639	0.2146
VAT	14.51298	0.178180	81.45121	0.0000
R-squared (R^2)	0.978756	F-statistic		6634.299
Adjusted R-squared	0.978608	Prob(F-statistic)		0.000000

Source: Authors' Compilation (2018)

The result of profit after tax as a function of value added tax reveals in Table 4 shows that at constant, the value is negative with tune of -198977.8 and its p-value is 0.2146. This implies that when the value-added tax is held constant there is negative and insignificant effect on profit after tax. The coefficient of value-added tax is 14.51298 and its p-value is 0.0000. The implication is that value-added tax is positive and has a significant effect on profit after tax that is, if there is a unit increase in value-added tax, profit after tax will equally increase with the tune of 14.51298 simultaneously.

Table 5: PAT=f (WHT)

Dependent Variable: PAT				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-198977.8	159611.4	-1.246639	0.2146
WHT	7.256489	0.089090	81.45121	0.0000
R-squared (R^2)	0.978756	F-statistic		6634.299
Adjusted R-squared	0.978608	Prob(F-statistic)		0.000000

Source: Authors' Compilation (2018)

Table 5c presented above reveals profit after tax as a function of withholding tax of some selected company. The result showed that the coefficient of withholding tax as one of the proxies for corporate taxation is positive with the value of 7.256489 and its p-value 0.0000 implying that there exists a positive and significant effect of withholding tax on profit after tax of the selected company. However, withholding tax is one of the taxes companies remitted to the government which are being borne by the employee of the company and a unit increase in withholding tax will result to an increase in profit after tax with the tune of 7.256489.

Table 6: PAT=f (EDT)

Dependent Variable: PAT				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-198977.8	159611.4	-1.246639	0.2146
EDT	36.28245	0.445450	81.45121	0.0000
R-squared (R^2)	0.978756	F-statistic		6634.299
Adjusted R-squared	0.978608	Prob(F-statistic)		0.000000

Source: Authors' Compilation (2018)

The Table above revealed profit after tax as a function of education tax (EDT) and the result depicts that education tax coefficient is 36.28245 and its p-value is 0.0000. The implication is that education tax has a positive and significant effects on profit after tax that is, a unit increase in education tax will lead to an increase in profit after tax with the tune of 36.28245.

Discussion: From the analysis, the study found out that the Levin, Lin and Chu unit root result showed that all the variables employed are stationary at level, which brings that all the variables were integrated of order zero I(0). The pooled ordinary least square revealed that the coefficient of multiple determinants (R^2) with over 97%; the adjusted R-square, the F-test and the prob (F-statistic) were statistically significant. Furthermore, the coefficient of corporate tax on profit after tax was positive with the value of 2.418830 and its P-values were 0.0000, the coefficient of value-added tax was 14.51298 and it p-value was 0.0000. Equally, the coefficient of withholding tax was positive with the value of 7.256489 with p-value 0.0000. This implies that manufacturing firms use Tax Avenue to jack up their returns by increasing their product before sales. However, the findings of this study are similar to the work of Chude and Chude (2015); Maduga, Ekwe and Kalu (2015).

5. Conclusion and Recommendations

This study empirically reviews the effects of corporate taxation on the profitability of some selected firms in Nigeria employing corporate tax rate, education tax rate, value-added tax rate and withholding tax rate as the proxies for corporate taxation and profit after tax as a proxy for the profitability of the selected firms. The study, however, concluded that corporate tax rate and education tax rate as the major taxes paid by companies have positive and significant effects to influence profit after tax. It is also clinched that value-added tax and withholding tax being used as other variables that could have effects on profit after tax equally revealed positive and significant effects on profit after tax. Therefore, the study recommended that the government and relevant tax authorities should improve in the administration of corporate taxes to avoid non-compliance being that the taxes paid by the companies are added on the product aside from the prospective gains.

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Appendix

Dated	Firms	Year	PAT	PBT	VAT 5% PBT	WHT 10% PBT	CIT 30%PBT	EDT 2%PBT
1	Flour Mill	2007	7,474,468	9,791,772	489588.6	979177.2	2937531.6	195835.44
1	Flour Mill	2008	6,363,082	9,878,183	493909.15	987818.3	2963454.9	197563.66
1	Flour Mill	2009	3,892,183	5,470,222	273511.1	547022.2	1641066.6	109404.44
1	Flour Mill	2010	13,370,731	19,300,962	965048.1	1930096.2	5790288.6	386019.24
1	Flour Mill	2011	10,095,752	14,264,723	713236.15	1426472.3	4279416.9	285294.46
1	Flour Mill	2012	11,803,161	7,761,629	388081.45	776162.9	2328488.7	155232.58
1	Flour Mill	2013	11,803,161	7,826,082	391304.1	782608.2	2347824.6	156521.64
1	Flour Mill	2014	7,686,943	4,369,300	218465	436930	1310790	87386
1	Flour Mill	2015	7,724,770	8,474,342	423717.1	847434.2	2542302.6	169486.84
1	Flour Mill	2016	11,489,278	14,420,284	721014.2	1442028.4	4326085.2	288405.68
2	Nestle	2007	5,441,899	8,463,788	423189.4	846378.8	2539136.4	169275.76
2	Nestle	2008	9,783,578	11,862,213	593110.65	1186221.3	3558663.9	237244.26
2	Nestle	2009	8,331,599	13,783,244	689162.2	1378324.4	4134973.2	275664.88
2	Nestle	2010	12,602,109	18,244,454	912222.7	1824445.4	5473336.2	364889.08
2	Nestle	2011	16,496,453	18,199,249	909962.45	1819924.9	5459774.7	363984.98
2	Nestle	2012	21,137,275	25,050,172	1252508.6	2505017.2	7515051.6	501003.44
2	Nestle	2013	22,258,279	26,047,590	1302379.5	2604759	7814277	520951.8
2	Nestle	2014	22,235,640	24,445,978	1222298.9	2444597.8	7333793.4	488919.56
2	Nestle	2015	23,736,777	29,322,477	1466123.9	2932247.7	8796743.1	586449.54
2	Nestle	2016	7,924,968		0	0	0	0

3	Unilever	2007	1,296,533	2,013,148	100657.4	201314.8	603944.4	40262.96
3	Unilever	2008	2,596,533	4,144,849	207242.45	414484.9	1243454.7	82896.98
3	Unilever	2009	4,093,822	5,661,052	283052.6	566105.2	1698315.6	113221.04
3	Unilever	2010	4,180,620	6,151,855	307592.75	615185.5	1845556.5	123037.1
3	Unilever	2011	5,491,076	7,983,312	399165.6	798331.2	2394993.6	159666.24
3	Unilever	2012	5,597,613	8,185,987	409299.35	818598.7	2455796.1	163719.74
3	Unilever	2013	4,806,907	6,911,441	345572.05	691144.1	2073432.3	138228.82
3	Unilever	2014	2,412,343	2,873,235	143661.75	287323.5	861970.5	57464.7
3	Unilever	2015	1,192,366	1,771,063	88553.15	177106.3	531318.9	35421.26
3	Unilever	2016	3,071,885	4,106,422	205321.1	410642.2	1231926.6	82128.44
4	Cadbury	2007			0	0	0	0
4	Cadbury	2008	-2,752	-2,848	-142.4	-284.8	-854.4	-56.96
4	Cadbury	2009	-2,752	-2,848	-142.4	-284.8	-854.4	-56.96
4	Cadbury	2010	1,952	1,143	57.15	114.3	342.9	22.86
4	Cadbury	2011	3,670,555	5,053,022	252651.1	505302.2	1515906.6	101060.44
4	Cadbury	2012	3,454,991	5,511,518	275575.9	551151.8	1653455.4	110230.36
4	Cadbury	2013	6,606,013	8,278,526	413926.3	827852.6	2483557.8	165570.52
4	Cadbury	2014	2,137,319	2,385,891	119294.55	238589.1	715767.3	47717.82
4	Cadbury	2015	1,153,295	1,577,412	78870.6	157741.2	473223.6	31548.24
4	Cadbury	2016	-296,402	-562,870	-28143.5	-56287	-168861	-11257.4
5	Dangote Flour	2007	21,478,561	30,660,730	1533036.5	3066073	9198219	613214.6
5	Dangote Flour	2008	21,871,047	30,151,378	1507568.9	3015137.8	9045413.4	603027.56
5	Dangote Flour	2009	13,185,599	19,586,932	979346.6	1958693.2	5876079.6	391738.64
5	Dangote Flour	2010	2,762,142	4,911,885	245594.25	491188.5	1473565.5	98237.7
5	Dangote Flour	2011	623,622	758,742	37937.1	75874.2	227622.6	15174.84
5	Dangote Flour	2012	-2,769,723	-5,602,972	-280148.6	-560297.2	-1680892	-112059.4
5	Dangote Flour	2013	-7,932,996	-8,342,294	-417114.7	-834229.4	-2502688	-166845.9
5	Dangote Flour	2014	-6,219,904	-9,285,013	-464250.7	-928501.3	-2785504	-185700.3
5	Dangote Flour	2015	-14,078,794	-13,789,416	-689470.8	-1378942	-4136825	-275788.3
5	Dangote Flour	2016	12,110,356	11,588,399	579419.95	1158839.9	3476519.7	231767.98
6	First Aluminium	2007	-491,584	-583,106	-29155.3	-58310.6	-174931.8	-11662.12
6	First Aluminium	2008	-298,652	-473,092	-23654.6	-47309.2	-141927.6	-9461.84
6	First Aluminium	2009	48,316	59,621	2981.05	5962.1	17886.3	1192.42
6	First Aluminium	2010	-334,586	-298,070	-14903.5	-29807	-89421	-5961.4
6	First Aluminium	2011	-325,044	-278,223	-13911.15	-27822.3	-83466.9	-5564.46
6	First Aluminium	2012	-1,004,392	-1,053,239	-52661.95	-105323.9	-315971.7	-21064.78
6	First Aluminium	2013	99,170	29,761	1488.05	2976.1	8928.3	595.22
6	First Aluminium	2014	31,742	106,385	5319.25	10638.5	31915.5	2127.7

6	First Aluminium	2015	112,554	43,172	2158.6	4317.2	12951.6	863.44
6	First Aluminium	2016	165,420	271,620	13581	27162	81486	5432.4
7	Guinness	2007	10,691,060	14,884,450	744222.5	1488445	4465335	297689
7	Guinness	2008	11,860,880	17,092,950	854647.5	1709295	5127885	341859
7	Guinness	2009	13,541,189	18,991,762	949588.1	1899176.2	5697528.6	379835.24
7	Guinness	2010	13,736,359	19,988,735	999436.75	1998873.5	5996620.5	399774.7
7	Guinness	2011	17,927,934	26,176,966	1308848.3	2617696.6	7853089.8	523539.32
7	Guinness	2012	14,671,195	21,074,950	1053747.5	2107495	6322485	421499
7	Guinness	2013	11,863,726	17,008,875	850443.75	1700887.5	5102662.5	340177.5
7	Guinness	2014	9,573,480	11,681,560	584078	1168156	3504468	233631.2
7	Guinness	2015	7,794,899	10,795,102	539755.1	1079510.2	3238530.6	215902.04
7	Guinness	2016	-2,015,886	-2,347,241	-117362.1	-234724.1	-704172.3	-46944.82
8	Nigeria Beweries	2007	18,942,856	27,876,336	1393816.8	2787633.6	8362900.8	557526.72
8	Nigeria Beweries	2008	25,700,593	37,519,114	1875955.7	3751911.4	11255734	750382.28
8	Nigeria Beweries	2009	27,910,091	41,399,796	2069989.8	4139979.6	12419939	827995.92
8	Nigeria Beweries	2010	30,332,118	44,880,248	2244012.4	4488024.8	13464074	897604.96
8	Nigeria Beweries	2011	38,408,847	57,118,042	2855902.1	5711804.2	17135413	1142360.8
8	Nigeria Beweries	2012	38,042,714	55,624,366	2781218.3	5562436.6	16687310	1112487.3
8	Nigeria Beweries	2013	43,080,349	62,240,317	3112015.9	6224031.7	18672095	1244806.3
8	Nigeria Beweries	2014	42,520,253	61,461,821	3073091.1	6146182.1	18438546	1229236.4
8	Nigeria Beweries	2015	38,049,318	54,508,368	2725418.4	5450836.8	16352510	1090167.4
8	Nigeria Beweries	2016	28,396,777	39,622,914	1981145.7	3962291.4	11886874	792458.28
9	PZ	2007	3,512,347	5,355,885	267794.25	535588.5	1606765.5	107117.7
9	PZ	2008	3,950,935	5,980,297	299014.85	598029.7	1794089.1	119605.94
9	PZ	2009	4,818,611	7,671,087	383554.35	767108.7	2301326.1	153421.74
9	PZ	2010	5,301,742	7,951,448	397572.4	795144.8	2385434.4	159028.96
9	PZ	2011	5,217,530	8,025,266	401263.3	802526.6	2407579.8	160505.32
9	PZ	2012	2,410,498	4,306,863	215343.15	430686.3	1292058.9	86137.26
9	PZ	2013	4,875,040	7,650,265	382513.25	765026.5	2295079.5	153005.3
9	PZ	2014	4,591,399	6,949,985	347499.25	694998.5	2084995.5	138999.7
9	PZ	2015	4,053,284	6,556,814	327840.7	655681.4	1967044.2	131136.28
9	PZ	2016	1,863,013	3,148,196	157409.8	314819.6	944458.8	62963.92
10	Beta Glass	2007	866,252	1,056,841	52842.05	105684.1	317052.3	21136.82
10	Beta Glass	2008	1,192,690	1,453,360	72668	145336	436008	29067.2
10	Beta Glass	2009	1,384,776	1,813,400	90670	181340	544020	36268
10	Beta Glass	2010	1,472,444	1,832,403	91620.15	183240.3	549720.9	36648.06
10	Beta Glass	2011	1,774,660	2,300,357	115017.85	230035.7	690107.1	46007.14
10	Beta Glass	2012	1,328,580	1,857,089	92854.45	185708.9	557126.7	37141.78
10	Beta Glass	2013	1,560,164	2,138,784	106939.2	213878.4	641635.2	42775.68
10	Beta Glass	2014	2,390,223	3,340,660	167033	334066	1002198	66813.2

10	Beta Glass	2015	1,991,127	3,114,795	155739.75	311479.5	934438.5	62295.9
10	Beta Glass	2016			0	0	0	0
11	Dangote Sugar	2007	21,478,561	30,660,730	1533036.5	3066073	9198219	613214.6
11	Dangote Sugar	2008	21,871,047	30,151,378	1507568.9	3015137.8	9045413.4	603027.56
11	Dangote Sugar	2009	13,185,599	19,587,423	979371.15	1958742.3	5876226.9	391748.46
11	Dangote Sugar	2010	11,282,240	16,146,930	807346.5	1614693	4844079	322938.6
11	Dangote Sugar	2011	7,403,597	10,921,229	546061.45	1092122.9	3276368.7	218424.58
11	Dangote Sugar	2012	10,796,416	16,331,679	816583.95	1633167.9	4899503.7	326633.58
11	Dangote Sugar	2013	13,537,612	20,099,517	1004975.9	2009951.7	6029855.1	401990.34
11	Dangote Sugar	2014	11,908,690	17,472,841	873642.05	1747284.1	5241852.3	349456.82
11	Dangote Sugar	2015	12,659,855	18,144,955	907247.75	1814495.5	5443486.5	362899.1
11	Dangote Sugar	2016	14,395,938	19,614,434	980721.7	1961443.4	5884330.2	392288.68
12	Okomu Oil Palm	2007	139,794	150,794	7539.7	15079.4	45238.2	3015.88
12	Okomu Oil Palm	2008	1,207,460	1,240,038	62001.9	124003.8	372011.4	24800.76
12	Okomu Oil Palm	2009	549,410	661,627	33081.35	66162.7	198488.1	13232.54
12	Okomu Oil Palm	2010	1,629,456	1,971,262	98563.1	197126.2	591378.6	39425.24
12	Okomu Oil Palm	2011	3,446,905	4,181,486	209074.3	418148.6	1254445.8	83629.72
12	Okomu Oil Palm	2012	3,416,288	4,072,185	203609.25	407218.5	1221655.5	81443.7
12	Okomu Oil Palm	2013	2,085,920	2,687,301	134365.05	268730.1	806190.3	53746.02
12	Okomu Oil Palm	2014	1,453,320	1,904,496	95224.8	190449.6	571348.8	38089.92
12	Okomu Oil Palm	2015	2,697,555	2,898,645	144932.25	289864.5	869593.5	57972.9
12	Okomu Oil Palm	2016	4,910,273	5,906,453	295322.65	590645.3	1771935.9	118129.06
13	Glaxosmith	2007	836,876	1,166,449	58322.45	116644.9	349934.7	23328.98
13	Glaxosmith	2008	1,277,441	1,851,364	92568.2	185136.4	555409.2	37027.28
13	Glaxosmith	2009	1,701,829	2,469,596	123479.8	246959.6	740878.8	49391.92
13	Glaxosmith	2010	2,461,395	3,370,886	168544.3	337088.6	1011265.8	67417.72
13	Glaxosmith	2011	2,294,988	3,492,620	174631	349262	1047786	69852.4
13	Glaxosmith	2012	2,823,526	4,171,665	208583.25	417166.5	1251499.5	83433.3
13	Glaxosmith	2013	2,919,170	4,314,829	215741.45	431482.9	1294448.7	86296.58
13	Glaxosmith	2014	1,848,842	2,752,216	137610.8	275221.6	825664.8	55044.32
13	Glaxosmith	2015	965,047	1,157,514	57875.7	115751.4	347254.2	23150.28
13	Glaxosmith	2016			0	0	0	0
14	WEMA	2007	2,554,098	1,878,698	93934.9	187869.8	563609.4	37573.96
14	WEMA	2008	-57,738,739	-68,482,164	-3424108	-6848216	-20544649	-1369643
14	WEMA	2009	-11,668,408	-19,436,874	-971843.7	-1943687	-5831062	-388737.5
14	WEMA	2010	9,689,683	12,964,108	648205.4	1296410.8	3889232.4	259282.16
14	WEMA	2011	-4,228,926	-3,770,021	-188501.1	-377002.1	-1131006	-75400.42
14	WEMA	2012	-5,040,629	-4,942,211	-247110.6	-494221.1	-1482663	-98844.22

14	WEMA	2013	1,596,531	1,947,308	97365.4	194730.8	584192.4	38946.16
14	WEMA	2014	2,372,445	3,093,940	154697	309394	928182	61878.8
14	WEMA	2015	2,327,275	3,045,528	152276.4	304552.8	913658.4	60910.56
14	WEMA	2016	2,560,580	3,245,145	162257.25	324514.5	973543.5	64902.9
15	Julius Berger	2007	1,763,706	3,132,048	156602.4	313204.8	939614.4	62640.96
15	Julius Berger	2008	2,452,427	5,170,401	258520.05	517040.1	1551120.3	103408.02
15	Julius Berger	2009	3,259,122	9,369,147	468457.35	936914.7	2810744.1	187382.94
15	Julius Berger	2010	2,774,825	7,962,201	398110.05	796220.1	2388660.3	159244.02
15	Julius Berger	2011	4,411,998	9,933,147	496657.35	993314.7	2979944.1	198662.94
15	Julius Berger	2012	8,193,543	12,341,492	617074.6	1234149.2	3702447.6	246829.84
15	Julius Berger	2013	8,064,235	16,220,536	811026.8	1622053.6	4866160.8	324410.72
15	Julius Berger	2014	8,088,795	13,134,896	656744.8	1313489.6	3940468.8	262697.92
15	Julius Berger	2015	1,759,889	6,499,973	324998.65	649997.3	1949991.9	129999.46
15	Julius Berger	2016	3,015,014	4,513,043	225652.15	451304.3	1353912.9	90260.86

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Applying Technology Acceptance Model to Investigate the Use of Smartphone Advertising in Malaysia

Muhammad Tahir Jan, Johan W de Jager, Alileche Mohamed Ameziane, Naheed Sultan
[1,3,4]International Islamic University Malaysia, Malaysia
[2]Tshwane University of Technology, South Africa
DeJagerJW@tut.ac.za

Abstract: The rapid development of internet, mobile information technologies and communications keep offering unprecedented concepts in the way people use new technology and communicate information. This also applies to Malaysia where this study was performed. The main objective of this paper is to investigate which factors affect the use of smartphone advertising most. For this purpose, four main services providers, namely, U-mobile, Maxis, DiGi and Celcom, were selected for data collection. A self-administered questionnaire was distributed through a convenience sampling to 400 smartphone users in a pre-defined area of Malaysia. Three hundred and forty usable questionnaires were used for the purpose of the data analysis. First, descriptive analysis is undertaken followed by a reliability test and exploratory factor analysis. Second, a two-step structural equation modelling approach is adopted where confirmatory factor analysis (CFA) was conducted followed by hypotheses testing. The results indicate that perceived usefulness has a stronger impact on attitude towards smartphone advertising followed by subjective knowledge. Furthermore, attitude towards smartphone advertising also resulted in a significant influence on the use of smartphone advertising. The findings of this study not only contribute to the knowledge but could also assist policymakers with informed decisions about market penetration.

Keywords: *Smartphone advertising, TAM, SEM, young consumers, attitude, Malaysia*

1. Introduction

The rapid advancement of internet and mobile information technologies and communications continues to offer unprecedented approaches in the way information is communicated. Limited advertising budgets have forced marketers to seek alternative marketing strategies. This has led online marketing to become among the most attractive channels of information distribution due to its sufficient content provision, good interactivity, precise targeting, and low operating cost. Mobile marketing utilises mobile mediums to encourage and construct a strong link between a company and its clients (Persaud & Azhar, 2012; Kotler & Keller, 2016; Ming, 2017). Sultan, Rohm and Gao (2009) define mobile marketing as the usage of wireless networks to deliver direct content through mobile devices. Kotler and Keller (2016) define mobile marketing as a form of interactive marketing by which marketers can use text messages, software applications and advertisements to connect with consumers via their tablets and smartphones.

This implies the utilisation of mobile telephones to deliver to clients individualized data that promote goods and services, regardless of location. Mobile marketing has managed to secure major global acceptance in a short period. It is regarded as a central utility that customers of all ages need in their everyday lives. Mobile marketing helps marketers to utilise and enhance product and service awareness and build connections between them and customers (Dehkordi, Rezvani, Rahman, Fouladivanda & Faramarzi Jouya, 2012; Tekkanat & Topaloglu, 2016). According to Coursaris, Sung and Swierenga (2010) there will be over 55 million mobile devices in 2020 in use, which will allow consumers besides making calls and sending messages to acquire products and services, at any time and any place. Because of the personal nature of a mobile device, it can function as a path to a strong relationship between the companies and their clients.

Nevertheless, mobile phones remain a place for secure and private communication and interaction. According to the Malaysian Communications and Multimedia Commission (MCMC), the penetration rate of mobile phones was 108.8% in 2010. In the period between June and December 2010, the overall number of short messages (SMS) sent in Malaysia was 89.4 million, which made Malaysia a great market in terms of advertising activities. With the fast-paced development of digital marketing, business will probably shift into this industry due to its strength and fast growth. In 2009, Malaysia was ranked fifth over the twenty-one emerging markets regarding mobile advertising receptivity from consumers (Rozana, 2009). Moriarty, Mitchell and Wells (2012) believe that targeting a specific individual who is most likely to make a purchase of the product, service, or idea is much better than using traditional ways of advertising. With the advancement in wireless network technologies as well as the fast market penetration of smartphones, companies are trying to utilise this medium as a means of marketing communication.

The functionality and the flexibility of smartphone use allow marketers and practitioners to implement their marketing strategies in an efficient manner in order to accomplish the organisational objectives as well as to ensure customer services (Watson, McCarthy & Rowley, 2013; Kotler & Keller, 2016). In addition, there may be groups of consumers who would willingly act upon smartphone advertisements. It is because these groups use smartphones for socialising and information seeking at a very high level. Therefore, smartphone users in Malaysia might be an important target for mobile marketing. It is evident from the fact that, in Malaysia, even children as young as 12 years old have access to smartphones (MCMC, 2017). This research, therefore, is important in order to find those factors that really contribute to the use of smartphone advertising. The main objective of this study is to investigate the use of smartphone advertising by people in Malaysia, using the technology acceptance model (TAM). More specifically, the present research attempts to achieve the following secondary objectives:

- To examine the effect of perceived usefulness (PU) on attitude towards using smartphone advertising.
- To examine the effect of perceived ease of use (PEOU) on attitude toward smartphone advertising.
- To examine the effect of subjective knowledge on attitude towards smartphone advertising.
- To investigate the effect of attitude towards smartphone advertising on smartphone advertising use.

2. Literature Review

Theoretical Background and Hypotheses Development: In this section, the Technology Acceptance Model (TAM) is acknowledged as a departure for this study. However, the extended model developed and tested by Pikkarainen, Pikkarainen, Karjaluoto and Pahnila (2004) has eventually been adapted in the present study. According to Dass and Pall (2011), TAM implies that an individual's adoption of technological innovation is predicted by their intention to use the innovation which is alternatively defined by an individual's inherent beliefs about the innovation. The cognitive beliefs in TAM include Perceived ease of use (PEOU) and perceived usefulness (PU). These are integral in elucidating the variance in innovation adoption intention.

Perceived Usefulness and Attitude towards Smartphone Advertising: The Technology Accepting model (TAM) is based on the Theory of Reasoned Action that focuses on peoples' behaviour and intention particularly with regard to using technology (Davis, 1989; Ramayah & Jantan, 2004). Perceive usefulness (PU) is a key factor used by scholars in researching electronic and mobile commerce adoption or use (see, e.g., Hong et al., 2008). It is defined as, "the degree to which a person believes that using a particular system would enhance his or her job performance and is when individuals tend to use or not use an application or technology, to the extent they believe it will help them perform their job better" (Davis, 1989; Soroa-Koury & Yang, 2010). Perceived usefulness (hereafter, PU) has been found to significantly impact the attitude of consumers in mobile advertising (Chowdhury et al., 2005).

Further, Soroa-Koury and Yang (2010) highlight that consumers tend to accept commercial communications if it involves content that they might not have been able to access otherwise. It is due to the growth of smartphone technology that people carry their smart devices with them accessing all sort of mobile marketing along with valuable information that can be related to the perceived usefulness of mobile phones as an advertising channel (Soroa-Koury & Yang 2010). Marti Parreno, Sanz- Blas, Ruiz- Mafe and Aldas-Manzano (2013) found that mobile messaging is considered favourable compared to other kind of media messages by consumers because they are quick, easy, and cheap to use. Based on the above-mentioned literature, it is, therefore, hypothesised that:

H1: Perceived usefulness (PU) has a positive effect on attitude towards using smartphone advertising.

Perceived Ease of Use and Attitude towards Smartphone Advertising: The Perceived Ease of Use (PEOU) refers to the degree in which people think that using a particular system is easy and will save efforts

(Venkatesh, 2000). Tan, Ooi, Chong and Hew (2014) contends that PEOU describes the degree to which the prospective user believes that utilising the innovation will be free of effort while PU is the degree the which the user believes that utilising the innovation should enhance the performance of an assigned task. The extant literature supports the causal link between perceive ease of use and attitude, both directly and indirectly and is considered as a critical factor for the adoption and use of new technology (Jan & Haque, 2014; Mangin, 2011; Soroa-Koury & Yang, 2010). PEOU as an intrinsic attribute of technology had always played an inevitable role in the diffusion of innovation mainly due to the fact that the degree of complexity negatively impacts people's intention to adopt a particular technology (Singh & Agnihotri, 2015; Soroa-Koury & Yang, 2010). Furthermore, according to Davis (1989) PEOU is specified as "the degree to which a person believes that utilising a particular system would be free from effort".

Moreover, when technological applications have high perceived usefulness, users believe in the existence of a positive use-performance relationship (Soroa-Koury & Yang, 2010). The enhanced functionality of smartphones can presumably extend the scope and ease of use of smartphone advertising. Chun, Lee and Kim (2012) argue that the high degree of technicality significantly impacts the ease of use. This is because latest products with updated technology usually offer a pleasurable experience, hence signifying the role, ease of use. In a similar context, technologically advanced smartphones offers users a high level of ease of use due to the availability of important functions just a few taps away. Such functional attributes allow users to perceive smartphones intensively accessible, eventually contributing to positively affect people's attitude to use these devices (Shin, Shin & Choo, 2011). These findings from the literature clearly highlight the impact of perceived ease of use on consumer's attitude. It is, therefore, hypothesised:
H2: Perceive ease of use (PEOU) has a positive impact on attitude toward smartphone advertising.

Subjective Knowledge and Attitude towards Smartphone Advertising: The knowledge that a consumer possess is vital with regard to his/her behaviour. According to Flynn and Goldsmith (1999), there are three different methods in which a person's knowledge could be measured: objective knowledge, subjective knowledge, and experience. For the present study, subjective knowledge is selected, as it suites the scope of this research. It refers to an opinion about a certain topic, which can be either correct or incorrect. According to Engel, Blackwell and Miniard (1993), knowledge is the information stored within the memory. However, when it comes to product knowledge, Peter and Olson (1996) confirm that consumers are aware of product class, product form, brands and models. This is the result of the accumulations and associations that consumers acquire about the attributes, benefits and needs satisfied when consuming models, brands and forms that are the essence of customer's knowledge. The focus of this study is product class knowledge, which is the largest level of product knowledge. According to Peter and Olson (1996), subjective knowledge can be defined as consumers' perception of the amount of information they have stored in their memory.

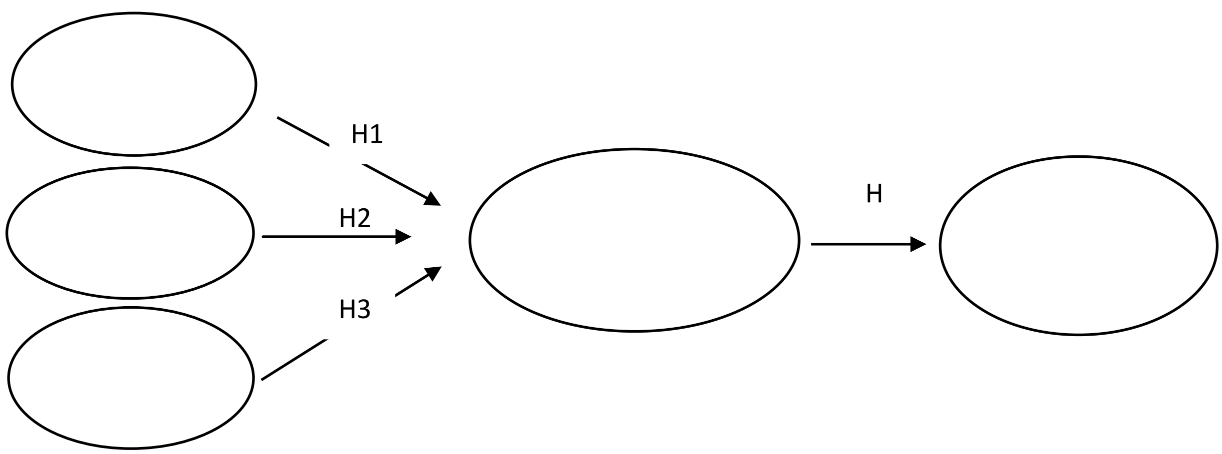
The aforementioned definition is related not only to the knowledge that a consumer has with regard to the buying process but also the knowledge related to a particular product category. There are many informal definitions of subjective knowledge. For example, Engel, Blackwell and Miniard (1993) define subjective knowledge as the consumer's impression of the overall knowledge and familiarity. Furthermore, Brucks (1985) defines it as "what individuals perceive that they know". Furthermore, Park, Mothersbauch and Feick (1994) call it the state of people's perception of what or how much they know about a product class. Lastly, Raju, Lonial, and Mangold (1995) explain that subjective knowledge is the feeling of knowing or a consumer's belief about his or her previous objective knowledge (Spreng, 1990). Subjective knowledge affects consumer's ability to understand the features and usage of smartphone advertising. While smartphone advertising is not complicated once consumers have a certain amount of knowledge about this technology, consumers with a high perception of knowledge about smartphone advertising can be expected to present a positive attitude toward smartphone advertising. Therefore, it can be hypothesised that:
H3: Subjective knowledge has a positive impact on attitude towards smartphone advertising.

Attitude towards Smartphone Advertising and Smartphone Advertising Use: Attitude is a driving factor for people that impact their intention to use a particular thing. This is also true in the case of smartphone advertising. A consumer with a positive attitude toward smartphone advertising tends to positively accept these kinds of advertisements (see Tsang, Ho & Liang, 2004). In a similar manner, Okazaki (2004) argues that people's attitude towards an advertisement plays a pivotal role in their willingness to access advertisements and eventually positively impacting their intention to utilise these advertisements. Studies (see, e.g., Bauer, Barnes, Reichardt & Neumann, 2015) also attest the positive effect of attitude toward advertising on behavioural intention of consumers in mobile marketing. This means that the attitude towards mobile marketing strongly determines the consumers' intention to take part in mobile marketing services.

In addition, a study conducted in Malaysia by Noor, Screenivasan and Ismail (2013) found that a consumer's attitude towards mobile advertisements significantly relates to the intention to buy a product or a service. This is congruent with previous research (see Amen, 2010) where a positive attitude towards mobile advertising is reported for those consumers who are exposed to other forms of advertisements on a daily basis. The positive impact of attitude toward smartphone advertisements on actual use is also true for young consumers due to their usage behaviour, which with the passage of time is getting intense (Dickinger & Kleijnen, 2008; Rettie, Grandcolas & Deakins, 2005). Based on the above discussion, it is hypothesised that:
H4: Positive attitude towards smartphone advertising has a positive effect on smartphone advertising use.

The Conceptual Model: The model developed and tested by Pikkarainen, Pikkarainen, Karjaluoto and Pahnila (2004) has been replicated in the present study. However, it is important to note that many new linkages were tested in the research and some interesting finding also emerged. Basically, in the extended TAM, there are 3 main constructs, namely, perceived usefulness, perceived ease of use, and subjective knowledge, impacting smartphone advertising. In addition, this research also investigates the impact of "attitude towards smartphone advertising" on "smartphone advertising use" (see figure 1).

Figure 1: Research Framework



Objectives of the Study: Based on the aforementioned, the main objective of the study is to investigate which factors affect the use of smartphone advertising most. For this purpose, four main services providers in Malaysia, namely, U-mobile, Maxis, DiGi and Celcom, were selected for data collection.

3. Research Method

Data Collection and Research Instrument: A self-administrated questionnaire was developed to collect data from the users of smartphone in Klang valley located in Malaysia. The questionnaire for this study has been adapted from previous established studies with various sections related to all the variables of the study. In this case, items for perceived usefulness (5 items) were taken from Marti Parreno et al. (2013), perceived ease of use (8 items) were adapted from Davis (1989), subjective knowledge (8 items) were adapted from Ronald and Elizabeth (2006), attitude toward smartphone advertising (8 items) were taken from Noor, Sreenivasan and Ismail (2013) and smartphone advertising use (8 items) were adopted from Noor et al. (2013).

Sampling and Response Rate: The convenience sampling method was used in order to obtain a large number of accomplished questionnaires rapidly and efficiently. Information concerning smartphone advertising use was collected from the smartphone users in the Klang Valley of Malaysia who is generally availing telecommunication services of 4 Malaysian service providers; Maxis, U-mobile, DiGi and Celcom. A total of 400 questionnaires were distributed and 355 have been returned out of which 340 completed questionnaires were used for data analysis purposes. The overall response rate was 82%. This high response rate was due to the huge penetration rate of internet and number of smartphone users in Malaysia.

4. Results and Discussion

Demographic Profile: Of the total usable responses, 51.5% males and 49.4% female, 39.1% are availing Celcom services, followed up by Maxis with 25.6%, then Digi and U-mobile with 22.9% and 12.4% respectively. A total of 74.7% of respondents indicated that their monthly income is less than RM 2000 followed by 17.9% that earn between RM 2001 and RM 4000. Out of 340 respondents, 223 are Malaysian (65.6%) while the remaining 34.4% are foreigners. Followed by descriptive analysis, Cronbach's alpha has been calculated for the instrument in order to analyse the reliability of the questionnaire. The results showed Cronbach's alpha of 0.726%, and this to ensure the instrument's stability.

Exploratory Factor Analysis: After analysing the demographic profile of the respondents, exploratory factor analysis (hereafter, EFA) was undertaken in order to find out the factors underlying the data. For this purpose, first; Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin (KMO) tests were analysed. The results revealed the KMO of 0.731 and Bartlett's Sphericity test significant at $p < 0.001$, indicating the appropriateness of proceeding with EFA. Second, EFA was conducted with the Varimax rotation method along with factors loading greater than 0.5 and eigenvalues greater than 1.0. EFA resulted in five clean factors with 61.02% of the total variance.

Table 1: Exploratory Factor Analysis Results

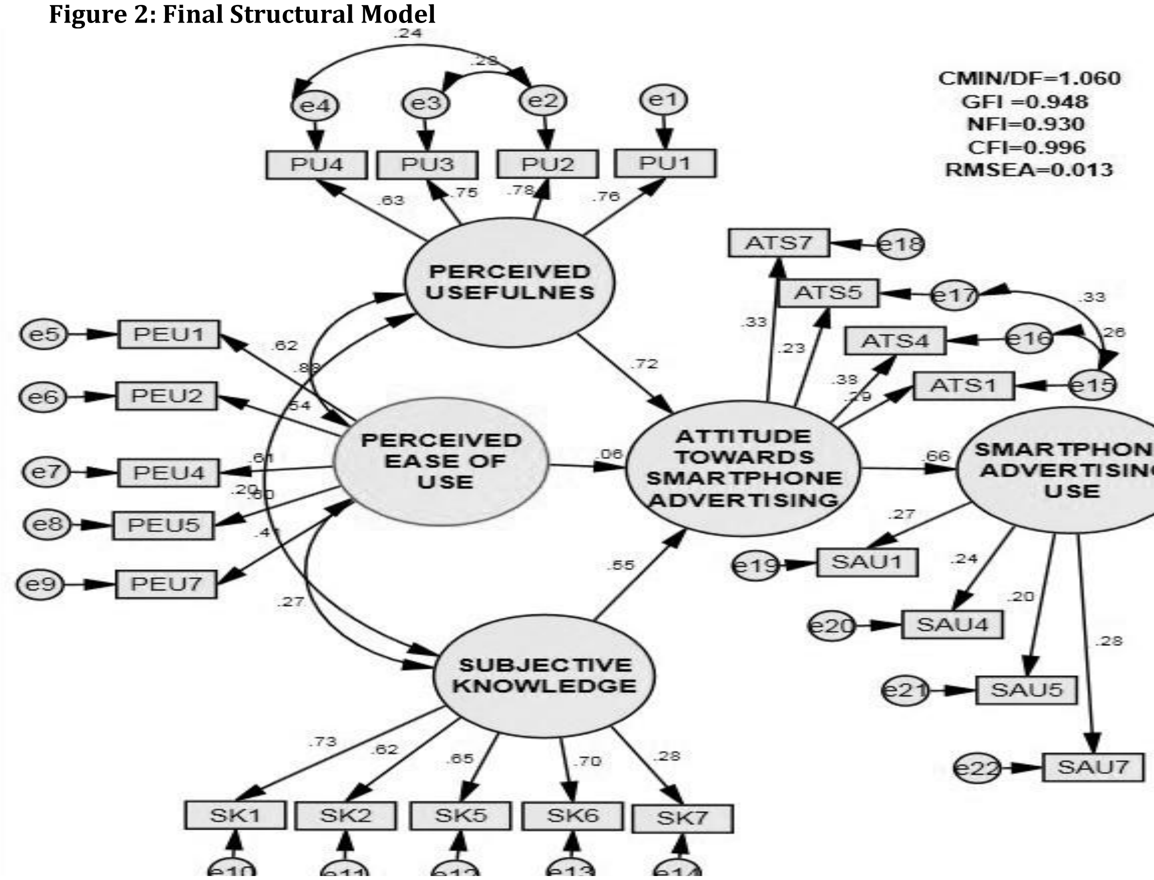
Items	Factors				
	Perceived Usefulness	**Perceived Ease of Use**	**Subjective Knowledge**	**Attitude toward Smartphone**	**Smartphone Advertising Use**
PU1	0.870				
PU2	0.912				
PU3	0.903				
PU4	0.721				
PEU1		0.854			
PEU2		0.665			
PEU4		0.737			
PEU5		0.800			
PEU7		0.683			
SK1				0.857	
SK2				0.641	
SK5				0.751	
SK6				0.651	
SK7				0.647	
ATS1					0.761
ATS4					0.756
ATS5					0.716
ATS7					0.871
SAU1			0.773		
SAU4			0.749		
SAU5			0.781		
SAU7			0.871		
Initial eigenvalues	**3.188**	**2.800**	**2.656**	**2.533**	**2.249**
% of variance	14.491	12.727	12.075	11.514	10.222
Cumulative%	**14.491**	**27.218**	**39.292**	**50.807**	**61.028**

These extracted variables, as envisaged were perceived usefulness, perceived ease of use, subjective knowledge, attitude towards smartphone advertising, and smartphone advertising use. The results of EFA depict that all the items suggested originally for each construct loaded on their respective factor. In addition, all of the factor loadings were greater than the cut-off value of (0.5), attesting strong reliability and validity of the scale. After the data collection, it was analysed using Statistical Package for Social Science (SPSS) and Analysis of Moment Structure (AMOS) computer software.

Confirmatory Factor Analysis: Next step after EFA is to confirm the extracted factors. For this purpose, a two-stage structural equation modelling (hereafter, SEM) approach was used. In this approach, the first stage is confirmatory factor analysis (hereafter, CFA) followed by hypotheses testing. The results of the CFA were based on various fit indices as recommended by many scholars (see Bayne, 2010: Hair & Anderson, 2010; Kline, 2011). These indices include reporting the Normed Chi-Square (CMIN/DF) value, the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA) to evaluate the model (Hair & Anderson, 2010). The threshold values for all the aforementioned fit indices were kept in mind based on the cut-off value of 0.90 for CFI, NFI and GFI and <0.08 for RMSEA and <5 for CMIN/DF. Overall, the measurement model resulted in acceptable fit giving a green signal to proceed with full-fledged modelling and hypotheses testing.

Structural Equation Modelling: After a good fit of the measurement model, full structural modelling was conducted, as depicted in Figure 2. The results reveal that the model fit the data well, with a normed Chi-square (CMIN/DF) value of 1.060, GFI value of 0.948, NFI value of 0.930 and CFI value of 0.996. RMSEA also resulted in a value of 0.013 which is below the cut-off value of 0.08, indicating also a good fit of the model (see Fig. 2).

Figure 2: Final Structural Model



During the process to test the full-fledged model, hypotheses were also tested using Maximum Likelihood Estimates (MLE) method. The result of hypotheses testing is presented in table 2.

Table 2: Testing the Structural Research Model

Hypotheses	Estimate	S.E.	C.R.	P
Perceived usefulness → Attitude toward smartphone advertising	0.257	0.052	4.919	***
Perceived ease of use → Attitude toward smartphone advertising	0.005	0.037	0.137	0.891
Subjective knowledge → Attitude toward smartphone advertising	0.373	0.070	5.359	***
Attitude toward smartphone advertising → Smartphone advertising use	0.668	0.194	3.447	***

Note:
S.E.: Standard error of regression weight
C.R.: Critical ratio of regression weight
P: Level of significance of regression weight, ***Significant at $p < 0.01$

According to the result, 3 out of 4 hypotheses are supported. The 3 supported hypotheses are: H1, H3 and H4 while not enough evidence was found to support H2.

5. Conclusion and Recommendations

This study examined those factors that impact online advertising, particularly, smartphone advertising. In this case, the impact of perceived usefulness, perceived ease of use, subjective knowledge on attitude towards smartphone advertising and attitude towards smartphone advertising on smartphone advertising use among smartphone users in a selected area of Malaysia were measured. The majority of smartphone users in Malaysia are ready to use Smartphone advertising due to several benefits they may get from its usage. Descriptive statistics revealed that Malaysians and foreigners are availing the services of Celcom, Maxis, Digi and U-mobile which means that they are attracted to use smartphone advertising. Based on the results, this research provides evidence that there is a direct relationship between perceived usefulness, and subjective knowledge on attitude towards smartphone advertising, and also a direct link between attitude toward smartphone advertising and smartphone advertising use. These findings are of prime import for the telecommunication industry and also for the policy-makers. The aforementioned bodies have to make sure that if they want the consumers' attitude to be positive towards their ads, they should provide useful information in those ads.

It is because, if the consumers perceive that using smartphone advertising is useful for them, their attitude will positively be influenced. Further, based on the results of the present study, the knowledge that consumers possess about smartphone advertisements also positively influence their attitude and eventually their actual use. Therefore, it is recommended that the players in telecommunication industry focus more on providing and enhancing their customers' knowledge with regard to smartphone advertisements. Future studies conducted in the same milieu should not only consider the direct effect of the model presented in this study but also the indirect effects, particularly, the mediating effect of attitude in the relationship between the independent variables of this study and the actual use. Moreover, future researchers should consider testing the same model with some moderators, e.g., age, gender, income and ethnic groups, as Malaysia has many ethnic groups. Lastly, future studies should expand the scope of the study by using representative samples from the thirteen states and not only one state.

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Is the Public Private Partnership Model the Right Vehicle for Public Infrastructure Delivery in Developing Countries?

Patrick Mabuza
African Development Bank, Abidjan, Ivory Coast
P.Mabuza@afdb.org

Abstract: There has been an increase in the number of governments that adopted public-private partnership (PPP) as an infrastructure delivery model. However, there are still misgivings about the role PPPs play in developing countries' economies. The objective of this study is to address the question of whether the PPP model really benefits the public. This study follows a qualitative approach based on international review of literature on PPP experiences around the world. The results of the study indicate that, the PPP model can be a good vehicle for delivering public infrastructure projects in developing countries. However, for PPPs to meet the expectations of the public sector and the citizens there are certain aspects that need to be in place i.e. transparency, accountability, optimum risk allocation/sharing, and increased competition to name just a few. If a country implements its PPP programme properly, there are massive benefits compared to the public procurement approach that may accrue to consumers and the economy as a whole. Such benefits include reduced prices, which may also increase access to services. The study has elucidated valid from invalid arguments about PPPs and has established whether the PPP model is indeed the right vehicle for delivering infrastructure projects.

Keywords: *Public-private partnership models, traditional public sector procurement approach, concessionaire, private party, cost overrun and efficiency.*

1. Introduction

The increasing need to stimulate economic growth, sustainable development, boost public health, transport, school and safety have led to infrastructure requirements far in excess of currently available financing resources (OECD, 2006 and Quiggin, 1996). The increase in demand for infrastructure services has put a lot of pressure on governments to increase investment in infrastructure (De Bettignies and Ross, 2004). This pressure was worsened by the 2008 financial crisis. Meeting this ever-increasing pressure for infrastructure investment is imperative to reducing the negative impact that it may have in terms of economic growth and development in the long term. As a response to this increasing pressure to provide more and better services to citizens albeit limited budgets, governments have adopted innovative infrastructure delivery mechanisms such as PPPs to deliver the needed public services (Urban Land Institute, 2005; Harris, 2003; De Bettignies and Ross, 2004). There are two schools of thoughts about the role that PPPs can play in developing countries' economies. On the one hand, there are those who argue that PPPs are good because they enable governments to deliver needed infrastructure even if they do not have the budget to do so. It is further argued that PPPs can deliver infrastructure at lower costs due to economies of scale (Moszoro, 2010). On the other hand, they are those who argue against using the private sector to deliver public services (Vining, Boardman & Poschmann, 2004 and Hall, 2015).

Their arguments are that, (i) PPPs are as good as privatisation, (ii) Procuring infrastructure through PPPs is more costly compared to traditional procurement, (iii) PPPs are weak in accountability and transparency, have negative impact on public-sector jobs, lack flexibility and that private companies result in service quality shading in pursuit of profits (McDavid and Clemens, 1995). In contrast to these arguments, those who support PPPs argue that the criticism against PPPs tend to be over-simplified or tell only part of the story. In Africa, PPPs have a presence in the following sectors: water, roads, prisons, energy, government office accommodation, nature reserves, hospitals, tourism to name a few. In South Africa, two PPP approaches or models are currently implemented. Under the first approach (the traditional PPP), the private sector design, finance, construct, operate and maintain the infrastructure asset. An example of where this approach was used in South Africa is N4 and the N3 concessions. The second approach is a hybrid of the traditional PPP and public procurement approaches. The South African National Roads Agency Limited (SANRAL) adopted this approach when procuring the Gauteng road expansion project. Under this approach, the government raises funds to finance the project and the private sector partner provides expertise. Both approaches have their own pros and cons, for example, when the traditional PPP approach is used, government or its agency has limited control on how the project should be implemented as the private sector party has full control of the project.

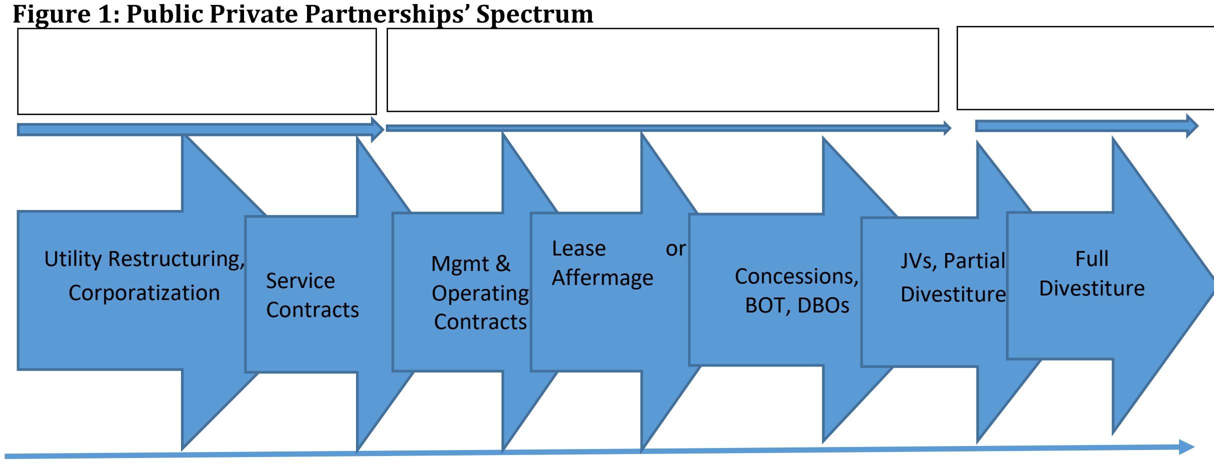
However, under the hybrid approach, the government's agency retains some influence on how the implementation of the project should be carried out as it carries most of the project's risks. The objective of this paper is, therefore, to discuss in detail the arguments for and against PPP projects with the aim of elucidating valid from invalid arguments about PPPs and to establish if the PPP model is indeed the right vehicle for delivering infrastructure projects in developing countries. The paper is organised as follows: section 2 discusses material and methods while section 3 discusses the study research method, section 4 discusses the study results and section 5 gives conclusion and recommendations.

2. Material

PPPs and Economic Development: Investment in infrastructure is imperative for economic growth and development. Infrastructure availability and quality influence a number of decisions related to private sector investment, migration, and other social related decisions (United Kingdom Department for International Development, 2007). Although a lot of research on the relationship between infrastructure and development outcome have been undertaken, the link between these two is still a topic for debate among economists (Snieska and Simkunaite, 2009). A number of empirical studies, such as those conducted by Rives and Heaney (1995), Bafoil and Ruiwen (2010), Kim (2006), Munnell (1992), Yoshino and Nakahigashi (2000), and Boopen (2006) found a strong link between infrastructure availability and economic development; hence infrastructure delivery is a high priority for governments. In the past, public infrastructure delivery was the sole responsibility of the public sector; however, this has now changed as infrastructure delivery is also provided by the private sector, mainly under the PPP arrangement.

Grimsey and Lewis (2005), define PPPs as an arrangement whereby a private party participates in or provides support for, the provision of infrastructure-based service, and such an arrangement results in a contract for a private entity to deliver this infrastructure-based service to citizens. According to the Republic of South Africa's National Treasury (2004), a PPP is, "… a contract between a public-sector institution and/or municipality and a private party, in which the private party assumes substantial financial, technical and operational risk in the design, financing, building and operation of a project". There are a number of partnership models used to deliver public services. On one side of the spectrum, the public sector retains almost all responsibilities in the partnership and carries all the risks associated with the project. On the other side, the private sector carries all the risks and responsibilities associated with the project. PPP projects, therefore, fall into the middle of the spectrum, between the public sector and its private partner according to their strength and weaknesses. Figure 1 below depicts a full spectrum of a PPP structure and the level of private sector participation in a PPP project.

Figure 1: Public Private Partnerships' Spectrum



It can be deduced from Figure 1 and the above definition that, PPPs are expected to deliver high-quality services by taking advantage of the fact that in such arrangements one can draw from the best of the public and private sector's expertise. Indeed, according to Binza (2008), at the heart of every successful project is the concept that better value for money may be achieved through the exploration of private-sector competencies and the allocation of risk to the party best able to manage it. Under the traditional PPP model, the private sector carries more responsibilities than the public sector compared to when the traditional public sector procurement method is used. PPP proponents argue that the foundation of PPPs is the ability of the public sector to be able to contract-out some of the services that are traditionally provided by the public sector. Such an argument is inspired by the belief that contracting-out with the private sector results in reduced service costs and provides a better quality of service compared to public provision. This argument is centred on ex-ante competition, high-powered incentives, optimal risk allocation and economies of scope and scale. These claims are a subject of discussion in this study.

3. Methods

The approach followed in this study entails a detailed assessment of international, continental, regional and local literature. The analysis focuses on PPPs for large infrastructure projects, their success, failures and lessons learnt. The information collected from the international PPP experiences has been used to support or not to support the divergent views on whether PPPs have or have not benefited the public in developing countries. The method used is justified because there is already a lot of literature that exists on this topic, but there is no research that has used the available literature to answer the question of whether the PPP model has really benefited the public?

4. Results

As mentioned earlier, the objective of this study is to use evidence from international literature to assess whether the PPP model has really benefited the public. This section, therefore, focuses on the different arguments about the usefulness of PPPs in addressing socio-economic challenges faced by different countries.

Arguments for and Against Using PPPS as a Vehicle to Deliver Public Infrastructure Projects: This section discusses both economic and non-economic arguments about using PPPs. The rationale for governments to undertake PPPs can be summarised into three broad arguments; namely: (a) minimisation of on-budget government expenditure, (b) to deliver both infrastructure and services at a lower cost due to economies of scale, scope, and (c) makes it easy to impose user fees, and avoid increasing government expenditure (Vining and Boardman, 2006). However, some economists argue against using the private sector to deliver public services.

Economic Arguments for Using PPPs: Following below is a discussion on the economic arguments for using PPPs.

Does the Use of PPPs Minimise On-budget Government Expenditure: PPP opponents argue that PPPs help governments to hide infrastructure capital expenditure by keeping it off the government's official balance sheet (Hall, 2015). Vining and Boardman (2006), argue that hiding capital expenditure in this way carries some political benefit because government budgets will always appear healthy in the face of the voters. While a significant amount of tax is used for PPPs. Engel et al. (2013), also support this argument in that, PPPs have negatively affected governments' balance sheets in many countries such as in the United Kingdom, Portugal, Chile, and Peru. In the United Kingdom, evidence shows that 717 projects in the Private Finance Initiative (PFI) would require a fiscal outlay of between £ 10 billion annually until 2020 to pay capital costs. Portugal also realized that it must divert about 1% of its GDP to pay for its PPP commitments until 2015 and in Chile, the government realized that its maximum exposure to PPPs was around 4% of GDP, while the expected value from the PPP highway project was only 0.2%. Contract renegotiation is another challenge that increases the amount that governments have to pay for PPP projects and that raises concerns about the validity of the PPP model.

For example, according to Guash (2004), the fiscal cost of contract renegotiations as a percentage of initial investment value reached 20.3% in Chile and 26.5% for Peru and over 41 percent of infrastructure concessions in Latin America and the Caribbean have been renegotiated. The argument about minimizing government expenditure may be true in a case where the government pays the PPP project firm for the services rendered and that may increase governments' expenditures related to PPP projects. However, this may not be the case in instances where the private party funds PPP projects and the money invested in constructing the asset is recouped from user tariffs. In such a case, this argument does not hold. Vining, Boardman & Poschmann, (2004) argue that PPPs conceal government debt; therefore, PPPs should not be considered for their potential to generate value for money, but merely as a remedy for cash-strapped governments. It is important to note that other countries especially in the developed economies such as the United Kingdom and in the developing world such as South Africa, do record all costs related.

PPP projects in their Medium-Term Expenditure Frameworks (MTEF, Republic of South Africa National Treasury, 2007). The concealing of debt argument may not be true in all cases. However, the remedy for the cash-strapped government argument may be true. In fact, that is what governments should do, instead of introducing new taxes to fund such projects they should use private capital. Nevertheless, the renegotiation of concession contracts does pose a risk for governments as this has the potential to make PPPs expensive compared with the traditional procurement model. Hall (2015) further argues that PPPs have worsened fiscal problems as evident in countries that made the greatest use of PPPs in the past decades, such as Spain and Greece. He may be underestimating the fact that the fiscal problems faced by these countries may not be solely as the result of PPP projects but may be due to other factors such as macroeconomic policies and political climate faced by these countries.

The effect of PPP projects on the country's finances is also dependent on how the PPPs are structured and managed and how renegotiations of PPP concessions are handled. Where these issues are handled properly and corruption is dealt with decisively, PPPs will not lead to fiscal problems but may help reduce such problems. Based on the above arguments it can be concluded that the opportunity cost argument makes a lot of economic sense while the minimisation of on-budget government expenditure argument is a weak argument because there are other ways that governments can use to minimise government capital expenditure other than using PPPs. The opportunity cost argument is true in that; if the government does not provide the service to consumers because it does not have the money for the project, there would be opportunity costs involved in the economy as a whole. Therefore, there is a strong case to have the project or service provided by the private sector rather than not having it at all.

Are Services' Unit Costs Lower When Provided by PPPs: There are three perspectives to PPPs' cost-superiority argument; namely: (i) Economies of scale argument: Private-sector firms are believed to have economies of scale, scope or learning, compared to the public sector, which usually has less experience with the relevant technology or activity (Bloomfield, 2006). (ii) Learning economies: Given the fact that larger private firms engage in a more similar project, that are global in scope. This gives them exposure to international best practices and helps them utilize learning economics, which is not the case with most governments, which engage in a limited number of projects (Vining et al., 2004 and Moszoro, 2010). Early empirical studies supported this argument and showed that the logarithm of unit cost decreases with the logarithm of a cumulative number of units produced at a uniform rate-the learning rate (Lapre & Van Wassenhove; 2003). This means that the more a firm produces a certain service, the more it benefits from learning economics. (iii) Superior incentives to reduce costs: The private sector has superior incentives to minimise costs, holding all constant, because of the cost-reduction profit incentives build in its business model. Such incentives include but not limited to giving share options and bonuses to senior management including staff members (Vining et al., 2004). As a result, the private sector has a greater incentive to invest in cost-reduction measures ex-ante in order to provide the service at a lower cost that will lead to higher profits. Since PPPs allow bundling up various components of a project and transferring them to a single contracting party.

Therefore, PPPs force the contracting party to focus on the total life-cost of the asset by implementing cost-efficient operational approaches or measures through the project's life cycle. Such measures include good procurement policies and hiring personnel with good project management expertise (Gabriel and Head, 2005). The dimension of superior incentives by private firms to reduce costs is supported by empirical studies. For example, Domberger and Rimmer (1994) reviewed about twenty studies that looked at competitive tendering and contracting (CTC) and concluded that there is broad consensus that CTC leads to a substantial reduction in service costs (Globerman and Vining, 1996). However, those who are against CTC argue that the observed cost savings are a result of decreased service quality not because of improved efficiency. Studies conducted in the United Kingdom and Australia for different years confirmed these private firms' efficiencies. They revealed that if a project is implemented by a private firm, the magnitude of costs savings are around 22% on average, and approximately 80% of all PPP projects are delivered on time (see Gabriel and Head, 2005; Domberger and Jensen, 1997, Boardman et al., 2009; King, 2001). It is worth noting that these studies support the private-sector efficiency argument based only on financial benefits. When other factors such as transaction costs, costs associated with contract negotiation and costs associated with the government's administration of the tender are taking into account, the efficiency superiority of private firms become questionable. For example, recent studies on the cost savings of PPP projects have disputed these findings and concluded that when these costs are taken into account, the savings decrease even further (Domberger and Rimmer, 1994).

The differences in the findings may be exacerbated by the fact that the projects being compared have different legal structures, come from different economic sectors, different legal jurisdictions, operate under different political environments, therefore a comparison of such projects may give inaccurate conclusions. Arguments for, or against, PPPs should take into account the fact that once a service is provided by a private firm, there are a lot of changes that take place, which makes it difficult to compare efficiencies before and after a private provision of a service. Such comparisons are complicated by the fact that public-sector accounting methods rarely capture the full economic costs of service provision (Domberger and Jensen, 1997) and the fact that contracting brings with it changes in the specification of service requirements and quality. Therefore, comparison of the price of a new private-sector service contract with the historical costs of public provision may be misleading, as data on similar costs are normally not available. It is also important to note that private sectors' cost advantages might not be true in all circumstances, as some government departments may be more efficient than some private firms. Therefore, such comparisons may be true only if one considers only the financial benefits and not the overall economic benefits that also take into account project externalities.

Is Borrowing Costs Low for the Public Sector Compared to the Private Sector: Those against PPPs argue that PPP are expensive as they come with a higher price tag compared to traditional procurement because their borrowing costs are higher than governments' borrowing cost? However, those who support PPPs disagree with this assertion and argue that such statements are based on three convictions that do not hold water when tested against economic principles. The first conviction is that the public sector borrows at a cheaper rate than the private sector. This argument is based on the belief that government borrowing is backed by tax revenue and is considered to be risk-free, which leads to low government borrowing costs compared to private-sector borrowing. PPP proponents further backed-up this assertion by the fact that government bonds carry a lower interest rate than corporate bonds (Klein, 1996). However, this argument is challenged by Currie (2000), and argues that when a project is funded by the private sector, investors carry the risk of default and are rewarded accordingly, whereas when funded by the public sector, taxpayers carry the risk but are not compensated for doing so. If taxpayers' compensation is taken into account, the borrowing cost advantage of the public sector may be insignificant or may not exist at all.

Even though the public sector can borrow cheaper to finance investment projects, however, it worth noting that this imposes a residual risk on taxpayers in much the same way as private-sector investors but without rewards. It is, therefore, imperative to consider this liability being imposed on taxpayers as a cost that should be accounted for in any cost-benefit analysis of a project. The second conviction is that, when an investment is made by the private sector, the private sector requires a rate of return that may be higher than what the public sector requires. This exacerbates the concerns that the financial benefits that accrue to the private sector will be more generous relative to the public-funded model; therefore; the borrowing cost advantage of the private sector may not benefit the public. The last conviction is that PPPs involve high up-front transaction costs (bidding costs and lengthy bidding processes) incurred by parties to prepare for the bid, and all these increases the cost of the PPP project. The time required negotiating a commercial agreement and the on-going costs of over-sight hinder competition in the PPP market and put a number of private players off, especially SMEs that, in turn, leads to expensive public services if provided through PPPs (Corry, 2004). It is clear from these arguments that the assertion that public financing of projects is cheaper than private financing is not convincing, especially when all costs associated with the project are taken into account.

Klein's argument that government's borrowing is cheaper because the public sector can raise money easily through taxes should it face financial difficulties, makes more sense only if one ignores the cost of underwriting the debt by citizens (Klein, 1996). As argued by Currie (2000), the citizens or the public underwrites or acts as a guarantor for government loans and receives nothing in return for playing that role, therefore, comparing government's borrowing with private sector borrowing may be misleading if the costs of underwriting the project by the citizens is not accounted for in the cost-benefit analysis. The public sector borrowing costs' advantage is also questionable if one considers governments in countries where there are high political risk, poor public finance management standards and poor tax collection mechanisms. One would find that such countries borrow at a higher interest rate than private-sector firms that have a healthy balance sheet. The argument that governments borrow at cheaper costs than the private sector is only true if one assumes a government with a healthy balance sheet, operating in a politically stable environment and ignore the risk carried by the citizens for underwriting governments' loans.

A convincing argument about the cost advantage of using PPPs is the one advanced by Moszoro (2010). According to Moszoro, the cost savings in a PPP, especially a hybrid PPP arrangement are possible because the SPV achieves optimal capital structure. This is so because, if the cost of capital is lower for public entities (all things equal) and the outlays on building the infrastructure are lower when the investment is made by a private sector, it is possible to reach the lowest total cost of constructing the asset with both public and private capital as part of the shareholding. This is because mixed capital structure enables internalization of both the cost of the capital advantage of the public sector and the knowledge advantage of the private sector. This shows that PPPs have the potential to deliver services at lower costs compared to the traditional approach, however, the allocation/sharing of risks within the SPV is fundamentally important.

Do PPPs Allow Private Firms to Sacrifice Quality for Profits: The main concern for the public or those that are against PPPs is that, the private sector trades-off quality of service for the sake of profits once a private company is awarded a PPP contract (Corry, 2004; Dudkin and Valila, 2005). This argument is not supported by international studies that compared service quality before and after service is contracted out to a private firm. These studies found that it is difficult to make a comparison on service quality after and before a service is contracted out because of non-availability of data on service quality prior to contracts being let. Domberger and Rimmer (1994) examined the quality argument in a sample of 61 cleaning contracts and concluded that, while competition lowered contract prices by between 35 to 50 per cent, cleaning performance was maintained and even enhanced in some instances. Alcazar, Nakasone & Torero (2007) also evaluated the impact of private versus public provision of electricity in Peru using data from a 2005 survey. Their analysis concluded that the management of electricity by the private sector led to a significant improvement in the quality of service. Although these two studies made positive conclusions on the quality of service after contracting out, however, there remain questions about the reliability of data used as service quality data are normally not collected while the service is provided by the public sector.

A study by Domberger and Jensen (1997) that focused on quality shading after contracting out a service summarised a number of studies based on 40 English local authorities and concluded that contracting had led to major changes in the monitoring of services by government. The study found that contracting out the allowed the introduction of explicit inspection processes and implementation of clear performance standards. This implies that if quality deteriorates following contracting, that could be a problem of contract design or implementation, which is not associated with PPPs and can be prevented by applying appropriate output specification measures. Quality shading can happen if the public sector fails on its responsibilities of performing its oversight functions (Monga, Mahta & Ranja, 2009). Another study by Domberger and Rimmer (1994) which summarised findings from ten studies that looked at the impact of contracting out on service quality, concluded that there is no consensus about the impact of contracting out on service quality. This is because all these studies suffered from data availability and quality problems. Given these findings, it is clear that the argument about quality shading is a matter that needs further research. An interesting argument is the one advanced by King (2001). King argues that a decline in quality accompanied by a fall in price may be socially desirable, particularly if the quality of the service being provided by the public sector was unnecessarily high for the recipients in question.

Is Project Risks Managed better in a PPP model than in the Traditional Procurement Model: PPPs proponents assert that PPPS enable governments to shift project risks from taxpayers to the private firm? This argument is based on the belief that the public sector can reduce risks associated with its financial exposure to construction costs, maintenance costs and demand risk by employing PPPs. This is due to the fact that the private sector managing the PPP project has the advantage and ability to spread risks of a project over a number of other similar projects because it normally engages in many similar projects simultaneously (Yescombe, 2007). This argument supports the assertion that private firms benefit from economies of scale and scope. This means that the private sector can manage risks much better than the public sector, given its experience in project management, construction and operation gained locally and from other jurisdictions (Gabriel and Head, 2005). The argument about shifting the project's risks from the public sector to the private sector as a reason for using PPP as argued above is weak and should be rejected. An economic activity that makes economic sense is the one that maximises the welfare of citizens, not the one that shifts or spreads risks from one economic agent to another. Spreading risks from the government to the private sector does not maximise the welfare of citizens, therefore should not be used as an economic justification to use PPPs as an alternative to the traditional procurement method.

As Allen (2001) asserts the main goal of risk sharing is not to maximise the amount of risks transferred from one party to another but is to reduce the overall risk in the economy. Therefore, any risk management strategy should seek to achieve this objective and that should be the objective of PPP projects. Using PPPs to deliver public services has some benefits because the private sector employs highly skilled risk managers and best risk management tools compared to the public sector and that reduces the overall risk of the project (International Monetary Fund, 2004, European Commission, 2003; Sadka, 2007). The reason why the private sector has an incentive to reduce project risks is because, should the risk eventuates, its profits will be negatively affected. It can, therefore, be argued that the low cost and price of services provided through PPPs is due to better risk management, optimal risk allocation and an optimal capital structure rather than risk shifting from the public to the private sector.

Non-Economic Arguments: This section discusses the non-economic arguments for using or not using PPPs.

Does the Use of PPPs Allow Governments to Avoid Accountability: Operating the asset and providing the service is the public face of a PPP project that a government in power would want to keep. What is of concern to governments when the private sector party in a PPP project is given the responsibility of providing a public service, is the loss of control associated with giving the private party certain contractual rights (De Bettignies and Ross, 2004). According to Fourie and Burger (2000) giving the control of the asset to the private party leads to loss of day-to-day democratic control of the project and accountability. This limits the public sector's flexibility to respond on time should the project face challenges that need immediate government's interventions. Before such interventions could be implemented, the state will need to first discuss with the private partner before it can take the necessary actions. The lack of flexibility by the state may negatively affect its effectiveness in dealing with concerns related to the project and that may negatively affect the government's public image. PPP opponents argue that, once a private partner takes over the responsibility of delivering a public service, accountability to elected public officials is lost and the public finds it difficult to hold these officials accountable as they hide behind the PPP firm (TD Economics, 2006).

What makes it even difficult is that, private sector's business practices are geared towards profits, which could be in conflict with government's goal of a high level of transparency, accountability and open public scrutiny. Such practices do not bode well with the private sector whose objective is to remain competitive by keeping its operation confidential. This concern stems largely from not understanding the difference between responsibility and accountability. The two are different in that: when a public sector transfers some responsibilities to the private sector, it does not relinquish accountability. Accountability always remains the responsibility of the public sector, regardless of the method used to deliver the service. According to Domberger and Jensen (1997), contracting can actually enhance accountability in three different ways, namely (a) by prompting reviews of standards and service specifications; (b) by introducing rigorous performance monitoring measures; and (c) by setting up mechanisms for redress in cases individuals or organisations have suffered loss or damage. Should there be a loss of accountability during the project's operation that would not because the project is a PPP, but because the public sector has neglected its responsibilities.

Do PPPs make it Easy to Impose User Fees Compared to When the Service is Provided by the State: According to Vining and Boardman (2006): "... governments believe or at least want to believe that private-sector operations make it politically more feasible to impose user fees, resulting in lower net expenditures for governments". The argument stems from the belief that users (or potential voters) would not have a problem paying for services provided by the private sector because of the understanding that the private firm needs revenue to cover its costs, repay its debt or make a profit. However, they will not accept a public sector charging them for services that, according to their understanding should be provided by the state free. As Vining and Boardman (2006) argue, this argument does have economic justification, especially when there are marginal social costs from public use, for example, when highways are tolled to prevent overuse. However, the public can still refuse to pay for the services as it happened with the Gauteng road improvement project[12], where the public complained about the toll being too high. As a result, the public challenged the government through the courts and the implementation of the user fees was delayed by several months (Serrao and Flanagan, 2011).

A similar incident also occurred in Australia, where the West Gate Bridge was tolled, but due to public pressure, the tolls were removed (the United States of America, Department of Transportation, 2007). Regarding South Africa's case, Brits (2010) articulated clearly that some of the resistance by the public to pay for the tolls was due, to lack of information about the concession agreement and that impacted negatively on user perceptions about PPPs. This implies that improving transparency as well as information availability and accessibility about PPP agreements to potential users is imperative for PPPs to succeed. Information about PPPs' contribution to socio-economic issues like development of SMEs, employment, and the opportunity costs of not having the asset when it is needed can help ease public resistance to pay tolls.

Have PPPS Really Benefited the Public: According to Hall (2015), the UK government claims that 76 percent of PFI projects are completed on time compared with only 30 percent of traditionally procured projects. Another empirical study by Boardman, Laurin, Moore & Vining (2009) concluded that the privatisation of the Canadian National Railways generated welfare gains of about $15 billion. An evaluation by the European Investment Bank (EIB) on PPP projects that it funded came to the same conclusion that, PPP projects were largely completed on time, on specification and on budget (Hall, 2015). With regards to costs of PPP projects, an empirical study by Blanc-Brude; Goldsmith; and Valila (2006) of the EIB, concluded that PPP projects were 24 percent more expensive than public sector road projects. This percentage is of a similar magnitude as the cost overruns typically observed in traditional public procurement in the European road sector. This means that the costs associated with the traditional approach eventually match those of PPPs. Experience in the UK had also shown that, on costs, PFIs performed less well than traditionally procured projects. Although this finding may be true especially in developed economies, given the fact that developed countries' public sector employees may be well skilled and experienced to the level of private sector's employees. Should this be true, the efficiency advantage that PPP projects are believed to have over traditionally procured projects may not exist in developed economies. However, this may not be the case in developing countries where lack of appropriate skills and project management expertise are a challenge.

However, the studies do not tell us as to which PPP model was used to procure these projects, the hybrid or the traditional PPP model? Furthermore, it is not clear from these studies whether the evaluations also took into account the optimal capital structure of a PPP project or not or it was based on basic comparison of projects that had different characteristics, operating within different legal frameworks, and with different contractual structures as all these may have a significant impact on the comparisons' results. According to a study conducted by Ismail, Mabuza, Pillay and Xolo (2014) on selected infrastructure projects including PPPs

[12] The Gauteng roads improvement project is a project that aimed at improving the conditions of all National roads around the Gauteng Province of South Africa using the PPP model.

in South Africa showing their associated costs and time overruns showed that project costs in South Africa overran between 21 and 1329%. Although there were only three PPP projects in the sample of 10 projects, two of the PPP projects showed low percentages of cost overrun. Normally high costs overrun for PPP infrastructure projects, in general, is caused by changes in project scope which were the main reason why most of the projects' had costs overrun in the South African's case, (South African National Roads Limited, 2012). It was difficult to tell whether PPP projects had low costs overrun in general or not given the limited number of PPP projects in the sample and the fact that all these projects were from different sectors and had different contractual structures. What makes it even more difficult to conduct a proper evaluation is that data on projects initial budgets and final project costs are hardly made public in most countries.

Based on the author's knowledge, there is no cross-sector study, which empirically determined whether the PPP model is the right vehicle for procuring public infrastructure projects. However, in the South African electricity industry, using data from the renewable energy independent power project procurement programme (REIPPPP) it is possible to show the benefits of PPP projects. When the programme started in 2011, the prices of electricity for the different renewable energy technologies were high. When the second bidding program was concluded some prices for the same technologies had decreased by up to 40.4% compared with the first bidding round. The third bidding round even saw more reduction in prices of up, to 68% (Eberhard, Kolker, Leigland, 2014). There is no doubt that consumers and the economy as a whole benefited immensely from this programme in terms of lower energy prices. To evaluate whether PPPs are more efficient than traditional procurement is not an easy task. The European Investment Bank (2005) attempted to do this comparison and concluded that such an evaluation/comparison is difficult to make because it needs identification of two projects of similar specification, constructed and operated in the same legal, financial and fiscal framework and subject to the same market conditions. These requirements proved to be very difficult to meet.

5. Conclusion and Recommendations

From the above discussion, it is clear that there are differing views about the benefits that PPPs may render to the public. The discussion on these arguments will continue for a while until comprehensive and comparable data (or projects) on PPPs becomes available that will allow proper evaluation of PPP projects to determine their worth to the public. To say whether a PPP model is the right procurement model for infrastructure delivery for a country or not depends on how a country approaches the implementation of its PPP programme and whether it has the required expertise to drive the implementation of a PPP programme to achieve its objectives. If the PPP program is designed in a way that incentivises PPP participants to be efficient in financing, constructing and operating the project, such as the PPP model (hybrid PPP model) advocated by Moszoro (2010), the public would be able to extract maximum benefits from using PPPs compared to the traditional procurement approach. However, where such incentives are not clear, it may be difficult to extract such benefits and the PPP model may even be inferior compared to the traditional procurement approach. Without such information, it will remain difficult to determine ex-post if the original decision to use a PPP was more cost effective or not compared to the traditional alternative.

Attempts to compare projects coming from different sectors, different countries and different regions or continents may not yield accurate comparison. Therefore, the use of a hybrid PPP model is recommended because the SPV under this model achieves an optimal capital structure that lowers the overall cost of the PPP project. It is also recommended that government authorities need to improve public sector accountability on services delivered through PPP projects to avoid experiencing the same challenges faced by the South African Gauteng road improvement project and the Australian West Gate Bridge. This can be done by; (i) developing PPP frameworks that force public sector PPP implementing agencies to be transparent about their procurement processes, (ii) Public sector PPP implementing agencies must conduct public consultations before a PPP project is implemented. The agency should make public all relevant information to allow a proper engagement with the public on the economic rationale of implementing the project as a PPP. The public sector agency should also demonstrate that the views collected through the public consultation process were considered in the final decision to implement the project as a PPP project and (ii) setting up mechanisms for redress in cases individuals or organisations have suffered loss or damage in the process of implementing the project.

Furthermore, it is recommended that governments should always strive for optimal risk sharing between the PPP firm or concessionaire and avoid the tendency by governments of shifting project risks to the PPP firm even if those risks could be better managed by the public sector. Inappropriate risk sharing between the two parties can compromise the viability and performance of a PPP project. The hybrid PPP model is able to deal with this challenge as it strives for an optimal capital structure that takes the advantages of the two parties' strengths into account in any PPP project. It is also paramount that countries, which are planning to implement and those that have implemented a number of PPP projects, should also put in place an independent PPP Regulator that will balance the interests of the private sector party, the government and the public. The study cannot conclusively say that the PPP model is the right model for delivering public infrastructure projects, as this is depended on many factors as discussed in the paper. However, for PPPs to deliver a project to the satisfaction of the public sector or its agency, it is recommended that the public sector needs to improve transparency about PPP agreements to enhance public acceptance of PPP projects.

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